EUSKO JAURLARITZA GOBIERNO VASCO

HEZKUNTZA SAILA DEPARTAMENTO DE EDUCACIÓN

BASQUE EXCELLENCE RESEARCH CENTRES

2018-2021 PROGRAM

DIRECTION FOR RESEARCH
VICE-MINISTRY OF UNIVERSITIES AND RESEARCH

Ekintza Plana | Plan de Acción | Action Plan

Zentroa | Centro | Centre

BASQUE CENTER ON COGNITION BRAIN AND LANGUAGE
www.bcbl.eu

Donostia – San Sebastián 2017

bcbl
BASQUE CENTER
ON COGNITION, BRAIN
AND LANGUAGE

Contents

1. GENERAL DESCRIPTION AND OBJECTIVES

1.1. Science field and main strategic objectives of the centre

This section should include (Max. 3 pages):
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BCBL, Understanding Language in the Brain.

Rationale of the creation and development of the centre

The BCBL - Basque Centre on Cognition, Brain and Language (www.bcbl.eu) is a **world-class interdisciplinary research centre for the study of cognition, brain and language** founded in September 2008. It is one of the centres of the BERC network (Basque Excellent Research Centres). Its mission is to provide a platform for researchers and professionals to carry out **frontline research, development, innovation, training, education and knowledge and technology transfer** in the area of **language sciences**, complemented with science dissemination and outreach. As detailed in section 3.3 and shown in this figure, the four key processes of the BCBL are:

The main goal of the centre is the study of language from an experimental point of view. Language and reading are the most unique human abilities and involve complex cognitive processes. However, despite current impressive technological and scientific advances we still do not understand the complexities of the cognitive processes involved, or the causes of language disorders, or reading disabilities, or how to remedy them, or what would be the best way to learn a second language in our multilingual, globalised world. The BCBL carries out research using the most advanced techniques in these fascinating areas.

The BCBL is located in Donostia-San Sebastián, an **ideal and unique environment to study language**. It offers access to speakers with a wide range of linguistic profiles (monolinguals, early and late bilinguals) with a combination of languages very different from a typological point of view such as Basque, Spanish, French, and English. As an isolated language, **Basque has unique characteristics** and so provides an unrivalled opportunity to unveil both the specific and the universal characteristics of language. Importantly, to pursue our aims, the centre uses a variety of methods, including **cutting-edge neuroimaging techniques**, behavioural methods and computational modelling in four different labs (see description below). In addition, since the moment we started operations we opened calls for recruiting the best scientists from all over the world (staff scientists, postdoctoral researchers, etc.) and for hiring **highly selective supporting personnel** (managers, technical staff, etc.). We managed to assemble **a unique combination of** outstanding researchers coming from many different labs, universities, **nationalities** (more than **29 different** since the birth of the Centre, and **20 different nationalities currently working at the BCBL**) and backgrounds (linguists, engineers, psychologists, medical doctors, etc.), all chosen through a very competitive process, always under the principles of equity, transparency and concurrence. Every recruitment process is open, efficient, transparent, supportive and internationally comparable, as well as tailored to the type of positions advertised. We have been using the best selection practices with selection committees with diverse expertise, competence, adequate gender balance, external expert assessment, and face-to-face interviews.

Thus, ***the combination of a first class centre equipped with the most advanced research techniques, a unique linguistic environment, and an exceptional combination of different human resources makes this excellence research centre unique in the world***. The International Scientific Advisory Board (ISAB), composed by international highly reputed scientists led by Professor Mangun from the University of California at Davis (founding director of the Centre for Mind and Brain at UC Davis), is actively participating in shaping the Strategy and Scientific decisions of the Centre providing an independent vision of our activities from an international perspective. The full report with recommendations after the last ISAB visit on July 2017, is attached as Annex I.

To achieve the specific aim of our research activity of **understanding the neurocognitive mechanisms involved in the acquisition, comprehension and production of language**, with particular emphasis on reading, multilingualism and language impairments, we designed three research lines:

1. Language, reading and developmental disorders
2. Multilingualism and second language learning

3. Neurodegeneration, brain damage and healthy ageing: language and cognition.

In addition, we were **committed to education, science dissemination, and knowledge and tech- transfer**, with the aim of **contributing to social welfare by applying the knowledge and technology derived from our research**. Some examples are the Master in Cognitive Neuroscience of Language, the PhD programme in Linguistics in collaboration with the University of the Basque Country -UPV/EHU, Neure-Clinic, a clinic for advanced diagnosis of developmental disorders, or the collaboration with neurosurgeons from Hospital cruces to assist them during the surgery and previously with presurgical mapping.

The centre was set up in December 2008, when we began recruiting personnel and creating the necessary research environment, including research equipment. After the planning and start-up phase, on-site research was started in January 2010. Some activities carried out then, among others, included (1) the recruitment of personnel (researchers, technical and administrative personnel), (2) the design of the working area and the laboratories, (3) deciding on and acquiring the equipment, (4) developing procedures for the functioning of the centre, (5) the creation of the webpage and the web *Participa* that allow us to advertise experiments and the participants to book the experiments at a particular time, (6) procedures and campaigns to recruit participants with different profiles (undergraduates, patients, babies), (7) training of research assistants to help create experimental materials in Spanish and Basque and run the experiments (8) creating, in collaboration with the UPV/EHU, a master's and a doctoral programme in Cognitive Neuroscience.

In 2009 the BCBL reached one important milestone: the Centre (together with three universities) received a CONSOLIDER-INGENIO 2010 grant of 4.000.000 € from the former MICINN, led by the scientific director Prof. Carreiras to carry out a very ambitious research programme focused on "Cognition and Education. "This project was completed in collaboration with several universities, aiming to establish links between neuroscience and education on areas such as reading, dyslexia, attention, and ADHD (Attention and hyperactivity deficits). A second milestone came in 2011 when Prof. Carreiras, was awarded the ERC Advanced Grant entitled BILITERACY valued at 2.487.000 € for 5 years to investigate brain changes when learning to read in a foreign language, and a flagship research project under de umbrella of the Human Brain Project to investigate together with research groups from Bordeaux University and the Max Planck Institute for Psycholinguistics. Additionally, the Centre's track record and historic (2010-2016) success ratio of 40 % in competitive programmes like the 7PM/2020 Marie Skłodowska-Curie call for individual fellowships shows the centre's success in attracting and retaining talent. In 2015 the centre was granted with the "**Centre of Excellence Severo Ochoa**" Award, within the subprogramme of Institutional Strengthening of the Spanish Economy and Competitiveness Ministry (MINECO), initially for the 2016-2019 period. Only 25 centres across all disciplines held this very competitive award in Spain.

According to the MINECO's definition,

> The **Centre of Excellence Severo Ochoa** award, within the subprogramme of Institutional Strengthening of the State Plan for Scientific and Technical Research and Innovation, aims to fund and accredit public research centres and units on any areas that demonstrate scientific leadership and impact at global level, as well as active collaboration in their social and business environment. The Centres of Excellence Severo Ochoa are **organisational structures with highly competitive strategic research programmes in the frontiers of knowledge**. They are **among the best in the world** in their respective scientific areas. The evaluation and selection process is carried out by an **independent international committee of prestigious scientists with high impact.**

Their Assessment conclusions at the consensus report (2015) scored the BCBL at 97.63 and stated that:

> This is a young centre (founded in 2008) but it has made remarkable progress. It is now considered **among the five best centres** (see Annex II-benchmarking) for cognitive neuroscience research in Europe, just below the ICN in London. It has developed an excellent international reputation. And, it has two unique attributes among these centres. First, it also focuses on linguistics in addition to cognitive neuroscience. And, it has its own technology which greatly facilitates research in the centre. It has highly productive senior scholars leading the research and the centre`s activities and is at the frontier of research in this area. The strategic plan is ambitious but achievable given the rapid development and successful research to date. The evaluators agreed that the strategic plan is excellent. The plan to consolidate the research and continue to update the technology should help the centre to continue its world-class work. The evaluators believe that the research in this centre will address a number of the critical problems faced arising from multilingual societies, exploitation talent and aging, among others. The research planned will influence the scientific community, social and health sector and technological developments in language (impacting diverse areas of diagnosis/intervention and education).

During the last years, massive effort was devoted to planning and creating all the most favourable conditions to build a first class centre. During 2014-2017, we managed to acquire an excellent reputation in the field by assembling a group of highly motivated and very well trained young researchers and support personnel, which produced outstanding research and standardized protocols in a vibrant hard working but friendly atmosphere. At the end of the period 2014-2017, the BCBL integrates 66 Researchers (Professors, Post-doctoral fellows and PhD Students) from more than 29 different countries with an average age lower than 35 years, supported by a

Lab Staff team (16 members), IT Staff Team (6 members), Tech Transfer team (4 members) and Management Department (10 members). The Centre has passed a long and intense initial set of milestones in a very short time, and is currently recognized in the international community as a hub for fantastic young researchers interested in being productive, high-quality scientists, and as a centre that generates outstanding and original first class research in the field of language.

Mission, vision

The mission of the BCBL is to provide a platform for researchers and professionals from related areas to carry out frontline research, development and innovation in the field of Cognitive Neuroscience of Language .We are a multidisciplinary research centre, within the Basque Country Science Network, dedicated to pursuing excellence in research, training and knowledge transfer within this area.

Aim of our research: The specific aim of our research activity is to unravel the neurocognitive mechanisms involved in the acquisition, comprehension and production of language and language disorders, with particular emphasis on bilingualism and multilingualism. Some of the areas we study include the processes involved in normal child language acquisition and second language learning in adults, as well as, language disorders, developmental disorders and, the language-related effects of brain surgery, brain damage, aging and neurodegeneration and language use in different social contexts.

Our commitment: Our commitment to education and knowledge transfer in the area of Cognitive Neuroscience extends across different contexts, including university, healthcare, social and business environments, with the aim of contributing to social welfare by applying the knowledge and technology derived from our research. To this end, we have forged links with institutions and organisations in both the local and wider communities, to provide expertise, consultancy and technology development services, all to the highest international standards.

Research Agenda: Our research agenda also takes advantage of our centre's location in the bilingual Basque country to study language processing in Basque and Spanish.

Definition of medium to long-term strategies and areas of activity

The BCBL Research Programme for the next term 2018-2021 is two-pronged. (1)Investigations of the Basic processes underpinning language and language impairments; (2) Translating knowledge of basic processes to applied uses in society. To do so, firstly, we have optimised our research lines to address new groundbreaking directions on the research on language. The objective is to continue concentrating our efforts on addressing frontier research on language and language disorders. Secondly, we expect to grow, in terms of high-skilled researchers, incorporating new capabilities and more expertise on different and complementary areas to our current strengths, reinforcing multidisciplinarity and combining theoretical depth in different areas of cognitive neuroscience with expertise in advanced neuroimaging and other methods. We will increase the depth and impact on the research done, spread the training capacities and raise our international visibility. Thirdly, we need to improve and update our facilities, to keep improving our research and to be an attractor for young researchers. Fourthly, we want to play a fundamental role contributing to more applied fields such as (1) Neuroscience and Education, bringing neuroscience to inform education in sensitive areas such as methods for learning to read, to the timing of introducing second language learning or reading in another language, detecting learning disabilities early, and developing software for learning a second language and for diagnosis and remediation of language disorders, and (2) Neuroscience and Health, using neuroscience to improve brain surgery, improving perspectives of brain damage recovery and neurodegeneration, and developing software for training patients with aphasia and neurodegeneration.

Alignment with Basque Science Policy and Regional Research and Innovation Strategies for Smart Specialisation

The Basque Government, in its Strategic Priority Action Plan for Smart Specialisation of **Euskadi RIS3**, has defined 3 priorities of smart specialisation related to advanced manufacturing, energy and **bioscience**, in its bid for diversifying the economy of Euskadi towards areas of great development potential, and to respond to the major challenges our society will face in the future, including those linked to health and population ageing. The BCBL's strategy fits perfectly in the Bioscience field, since it is an active part of the scientific and technological network of high level competences existing in Euskadi, focusing on the human-health segment, including healthy ageing, health and education. Furthermore, the BCBL endeavours to cover the actual gap between fundamental research and the market with technology transfer initiatives, like the aforementioned in the 2.2 subsection of the present report, following the recommendations of the RIS3 priorities classification as the basis for defining the way to address their development within the Strategy for Smart Specialisation of Euskadi 2020, in which one of the priorities with evidence of scientific strengths, but limited business capability, is human health.

2. SCIENTIFIC EXCELLENCE AND RESEARCH QUALITY

2.1. Summary of the recent main activities and achievements for 2014-2017

2.1.1. Research Programme

This section should include (Max. 7 pages):
Main research objective(s) and description of the research activities, projects, lines deployed to meet that/those objective(s). Results achieved: publications, patents, licences…

Main research objectives

The BCBL **research objectives** are the following:

- To unravel the neurocognitive mechanisms involved in the acquisition, comprehension and production of language.
- To uncover the cognitive and brain mechanisms of reading and reading disabilities.
- To develop research and innovation in Cognitive Neuroscience with particular emphasis on language processing in multilingualism and second language learning.
- To investigate language processing and language disorders in connection to brain surgery, brain damage, and neurodegeneration.

To achieve these major research goals we (1) promote scientific research and national and international scientific relations within the field of Cognitive Neuroscience and to transfer the results of this research to the wider socioeconomic community; (2) promote the transfer and dissemination of knowledge about Cognitive Neuroscience of Language by means of organising courses, seminars, national and international conferences and by other appropriate general communication means; (3) participate in undergraduate and postgraduate education and training programmes and encourage the incorporation of young researchers to this field; (4) facilitate the training and development of the BCBL personnel and to promote their collaboration across different lines of research; (5) forge collaborative links and common interest areas with public and private institutions, centres and industries, with the aim of providing research, training, technological and consultancy services to use the work developed in the BCBL to the fullest economic and social advantage.

To fulfil the main research objectives described in the previous section, the research activity of the centre is grouped in 3 research lines as described below:

Description of the research lines

LINE 1-Language, reading and developmental disorders: A major enterprise is to understand how language acquisition, comprehension, production, and reading take place in the human brain. We pay special attention to language disorders and develop computerized tools for their early diagnosis and treatment.

Speaking, comprehending spoken language, reading, and writing are critically important and unique human abilities. A major enterprise is to understand how language acquisition, comprehension and production take place in the human brain. In particular, one major endeavour at the BCBL is to understand the cognitive and brain processes involved in the development of reading, from initial acquisition of reading skills through to skilled reading (e.g., recognizing and integrating strings of characters as words, comprehending those words in isolation and in context). To tackle these challenges, we investigate natural language (e.g., oral language, written language, sign language) across the life span (infants, children, young adults, older adults) and reading in different populations (e.g., children and adults) with typical developmental trajectories, as well as in special populations (e.g., illiterates, deaf, dyslexics, etc.), using a range of specialized methods (e.g., recording infant looking preferences, EEG, fMRI, MEG, eye-tracking, behavioural methods, etc.).

Collectively, the unique insights offered by these investigations are offering an unprecedented set of constraints for shaping a complete picture of human language abilities, not only for typical development, but also for atypical situations. Indeed, contrasting typical and atypical development is a two-way street, which informs both our understanding of the typical system and the atypical system, and offering potential avenues for improving the early detection, specific diagnosis, and preventative or remedial treatments that can prevent or minimize language disabilities. Language and learning disorders have serious emotional, personal, educational, economic, and social consequences, and also entail exorbitant costs for society. We develop computerized tools for early diagnosis and treatment of language disorders.

LINE 2-Multilingualism and second language learning: We investigate the cognitive and brain mechanisms of language acquisition and processing in a second language, taking into consideration the age of acquisition, proficiency and usage. Special attention is being paid to multilingualism within the school system and to the development of new educational technologies for second language learning.

Most of the world's population is fluent in more than one language, and from a societal perspective, enhanced learning of a second language is critical to globalisation, migration of skilled researchers, and integration of newly arrived individuals in society. The second line of research focuses on the cognitive and neural mechanisms underlying language acquisition and processing (comprehension and production) in bilingual and multilingual individuals. To this end, researchers in this line study individuals who acquired a second language at different points during their lives (e.g., from birth vs. as a young adult); who have different degrees of proficiency in their second language; with languages of the same modality (two oral languages) or different modalities (oral and sign languages), and the impact of these factors on cortical plasticity. Special attention is paid to multilingualism within the school system and to the development of new educational technologies. Studies with foreign accented speech during speech perception and studies altering the auditory feedback during speech production to force native-like pronunciation are very helpful to understand the mechanisms of learning a second language and how this process can be improved with explicit, automated feedback. We also investigate the effects of bilingualism and of different second language teaching methods on brain plasticity and other cognitive functions (e.g., executive control). Second language learning and learning to read in a second language are important skills in classroom settings that can benefit from new discoveries on human cognition research in the laboratory. Modern societies increasingly demand education based on rigorous scientific evidence, and this research line provides exactly that. We develop computerized tools informed by scientific findings for second language learning.

LINE 3- Neurodegeneration, brain damage and healthy aging: Language and Cognition: We investigate early cognitive and brain markers related to language for neurodegenerative diseases (Alzheimer, Parkinson). We also investigate neural plasticity and language functions through brain stimulation in the awake patient during surgical brain operations. We develop computerized diagnostic and training tools for aphasic patients and neurodegenerative diseases.

Neurodegenerative diseases are the centre of much attention in the scientific community, not only because of the basic insights they provide into cognition, but also due to their dramatic social implications. Last estimates indicate that in Spain, by 2020, there will be around 1.500.000 Alzheimer patients. It is assumed that the 50 % of all dementias will be diagnosed with Alzheimer disease. In addition, 2 % of the elderly above 65 years are estimated to have Parkinson disease. Similar numbers can be extrapolated to other European countries. Many of these diseases, such as Alzheimer's dementia, Parkinson's disease or semantic dementia, involve a deterioration of many core cognitive abilities, including language abilities. We investigate the neural and cognitive underpinnings of these types of diseases throughout the time-course of their morbidity. In particular, in Alzheimer's disease and in mild cognitive deficit (a milder pre-cursor to Alzheimer's in a large percentage of individuals), language disorders are some of the earliest expressions of the disease and constitute the most frequent cognitive difficulty after memory problems. They could therefore be used as early markers of the disease, enabling earlier treatment not only from a medical perspective (e.g., pharmaceuticals) but also from a cognitive perspective (e.g., training individuals to use their remaining cognitive abilities more efficiently).

We expand our investigations to probe the time-course of cognitive impairments and remediation, as well as the correlated neural plasticity associated with brain damage (e.g., brain tumours, epilepsy, strokes, etc.). In particular, we investigate neural and cognitive plasticity by comparing presurgical and postsurgical language abilities, as well as the intactness of brain regions associated with these abilities (e.g., speaking, reading, etc.). In addition, we study language functions through brain stimulation in the awake patient during surgical brain operations (e.g., tumours resection). We also investigate language processing (e.g., agrammatism) in aphasic patients, and develop computerized diagnostic and training tools for aphasic patients, and for training several cognitive functions in patients with neurodegenerative diseases.

Across these three research lines, we actively promote expertise in advanced research methods, which have fuelled and enabled many recent theoretical advances. One example that we are carrying out is the development of new algorithms to investigate the connectivity between specific brain areas for some language disorders. Another current example to advance research in the BCBL is the development of a high resolution atlas of several nuclei of the thalamus, needed to relate the fMRI signal to the connectivity of specific brain areas (e.g., pulvinar; MGB) of the thalamus with other brain regions. This is not possible with current methods, but accomplishing this aim will have a tremendous impact on the neuroimaging community.

As it has done in the past, the BCBL proactively develops new activities and research teams that complement and extend our three main research lines as the interdisciplinary study of language continues to advance. Currently researchers are grouped into 9 research teams led by senior and staff scientists. To achieve this objective, we take advantage of international calls to attract new talented researchers, giving them the opportunity to develop their research agendas in the BCBL. As the BCBL matures, these efforts concentrate on specific areas that have the greatest benefit for the entire community and that yield the highest impact to science at the international level. Always, we emphasize combining deep theoretical groundbreaking questions with advanced methodological expertise and acting as a hub for world-leading skills in particular areas rather than spreading research lines, overly dispersing the BCBL's resources. To consolidate the BCBL's position as an international leader in language research we analysed our current strengths and weaknesses, as well as anticipated opportunities and

areas of concern that are described in the section devoted to the strategic plan 2018-2021)

Research projects

According to the objectives and the research, we developed several research projects funded by different research agencies. The results of these research projects that addressed questions that stem from the research lines just described were presented in international conferences and published in papers in high impact journals. In addition, different members of the BCBL organised several international conferences and workshops on topics described in the different research lines. Below we present the titles and relevant information of the different projects running and awarded within the 2014-2017 period.

EUROPEAN RESEARCH COUNCIL

PI	Grant	Amount	Period
Carreiras, Manuel	ERC–2011–ADG–295362 - BILITERACY	2.487.000 €	01/05/2012 - 30/04/2017
Frost, Ram	GA 692502 - STATISTICAL LEARNING AND L2 LITERACY ACQUISITION: TOWARDS A NEUROBIOLOGICAL THEORY OF ASSIMILATING NOVEL WRITING SYSTEMS	800.000 €	01/07/2016 - 30/06/2021

EUROPEAN COMMISSION: 7PM Programme

PI	Grant	Amount	Period
Carreiras, Manuel	GA 613465 - ADVANCING THE EUROPEAN MULTILINGUAL EXPERIENCE	306.710 €	01/03/2014 - 28/02/2019

EUROPEAN EXECUTIVE AGENCY (REA): Marie Skłodowska-Curie Programme

PI	Grant	Amount	Period
Roux, Frédéric	IEF-627727- PSLOAHMD PREDICTING SEQUENTIAL LEARNING FROM OSCILATORY ACTIVITY IN HUMAN MEG DATA	166.336,00 €	01/03/2014 -28/02/2016
Bergouignan, Loretxu	IEF- PIEF-GA-2013-625184, NINAME BRAIN DYNAMICS AND PATTERNS OF ACTIVITY SIGNATURE OF INNER SPEECH DURING RECALL AND CONCEPTUAL EMERCENCE IN BILINGUALS	166.336,00 €	01/03/2014 -28/02/2016
Caballero, Cesar	IEF - R&B BRAIN-331042- R&B BRAIN THE RESTLESS AND BILINGUAL BRAIN: NON-STATIONARY DYNAMICS OF FUNCTIONAL BRAIN NETWORKS AT REST IN BILINGUALS	156.957 €	01/06/2013 - 31/05/2015
Iglesias, Eugenio	H2020-MSCA-IF-2014-GA-654911-THALAMODEL MULTIMODAL, HIGH-RESOLUTION MODELING OF THE THALAMUS FOR NEUROIMAGING STUDIES: APPLICATION TO DYSLEXIA	170.121 €	01/06/2015 - 31/05/2017
Giezen, Marcel	H2020-MSCA-IF-2014-GA-654917- BiBiCrossLang LANGUAGE ACTIVATION AND CONTROL IN THE UNIMODAL AND BIMODAL BILIGUAL LEXICON	158.121 €	01/07/2015-30/06/2017
Marín, Eugenia	H2020-PEOPLE-2014-EF-658926, BILMEMBRAIN WHEN LANGUAGE MEETS MEMORY: THE ROLE OF LANGUAGE EXPOSURE IN SEMANTIC-EPISODIC MEMORY INTERACTION IN BILINGUALS	158.121 €	01/09/2015- 31/08/2017
Wilson, Lisa	H2020-PEOPLE-2014-EF-657474- BIOMARK BIOMAKERS OF DISORDERED LANGUAGE IN AUTISM	170.122 €	14/03/2016 - 13/03/2018
López, Rocío	H2020-PEOPLE-2015-EF-65747-VIAWORD FROM SPEECH AND PRINT TO MEANING: AN INTEGRATED ACCOUNT OF WORD RECOGNITION IN YOUNG AND OLDER ADULTS	170.121 €	01/06/2016 - 31/05/2018
De Bruin, Angela	H2020-MSCA-IF-2016-GA-743691 COGNITION, AGEING AND BILIGUALISM: INVESTIGATING AGE-RELATED CHANGES IN BILINGUAL LANGUAGE SWITCHING AND USE	158.121 €	01/09/2017 - 31/08/2019

MINISTERIO DE CIENCIA E INNOVACIÓN/ECONOMÍA Y COMPETITIVIDAD (MINECO)

PI	Grant	Amount	Period
Samuel , Arthur	PSI 2010-17781 - AUTOMATICITY OF SECOND LANGUAGE PROCESSING IN SPANISH-BASQUE BILINGUALS	108.900 €	01/01/2011 - 30/06/2014
Dumay, Nicolas	PSI 2011-24048 – THE IMPACT OF MEMORY RECONSOLIDATION ON VOCABULARY ACQUISITION: A BEHAVIORAL AND NEURAL INVESTIGATION	88.330 €	01/01/2012 - 31/12/2014
Davidson, Doug	PSI 2011-24802 - THE ROLE OF OSCILLATORY ACTIVITY IN THE LEXICAL AND GRAMMATICAL PLASTICITY OF LANGUAGE LEARNERS	96.800 €	01/01/2012 - 30/06/2015
Salillas, Elena	PSI 2011-23995 - NUMBER SEMANTICS IN BILINGUALS	68.970 €	01/01/2012 - 31/12/2014

PI	Grant	Amount	Period
Paz-Alonso, Kepa	PSI 2012-32093 - NEURODEVELOPMENTAL BASES OF EPISODIC MEMORY RETRIEVAL	58.500 €	01/01/2013 - 31/12/2015
Yee, Eiling	PSI 2012-32107 - CONCEPTS IN CONTEXT: USING CONTEXT TO REVEAL THE DYNAMIC NATURE	64.350 €	01/01/2013 - 31/12/2015
Carreiras, Manuel	PSI 2012-31448 - PROCESAMIENTO EN LENGUA DE SIGNOS, DACTILOLOGÍA Y LECTURA EN SORDOS Y EN CODAS: CORRELATOS NEURONALES DE LA CODIFICACIÓN ORTOGRÁFICA	128.700 €	01/01/2013 - 31/12/2015
Duñabeitia, Jon Andoni	PSI 2012-32123 - TRANSLATION RECOGNITION IN BILINGUALS ACROSS LIFESPAN	52.650 €	01/01/2013 - 31/12/2015
Molinaro, Nicola	PSI 2012-32350 - LEARNING A NEW LANGUAGE: THE ROLE PLAYED BY COLLOCATIONAL REGULARITIES	70.200 €	01/01/2013 - 31/12/2015
Lallier, Marie	PSI 2012-32128 - ATYPICAL OSCILLATORY BRAIN ACTIVITY, TEMPORAL PROCESSING DEFICITS AND DEVELOPMENTAL DYSLEXIA: WHAT ARE THE LINKS?	58.500 €	01/01/2013 - 31/12/2015
Caballero, Cesar	PSI 2013-42343-P - MULTIMODAL NEUROIMAGING OF OSCILLATORY NETWORKS DURING WORKING MEMORY	60.500 €	01/01/2014 - 31/12/2016
Baart, Martijn	PSI 2014-51874-P THE HEALTHY AND IMPAIRED MULTISENSORY TALKING BRAIN	57.838 €	01/01/2015 - 31/12/2017
Samuel , Arthur	PSI 2014-53277-P LEXICAL ACTIVATION OF WORDS WITHIN OTHER WORDS	68.728 €	01/01/2015 - 31/12/2017
Davidson, Doug	PSI 2014-53346-P NEUROANATOMICAL AND NEUROPHYSIOLOGICAL CHARACTERIZATION OF DRAVETS SYNDROME EPILEPSY	73.810 €	01/01/2015 - 31/12/2017
Salillas, Elena	PSI 2014-53351-P BILINGUAL MATH: FROM LANGUAGE TO MAGNITUDE	46.585 €	01/01/2015 - 31/12/2017
Martin, Clara and Caffarra, Sendy	PSI 2014-54500-P SPEAKER'S NON-NATIVE ACCENT PROCESSING IN SPEECH	79.981 €	01/01/2015 - 31/12/2017
Molnar, Monica	PSI 2014-54512-P NEURAL AND PHYSIOLOGOCAL CORRELATES OF ATTENTION DEVELOPMENT IN MONOLINGUAL AND BILINGUAL INFANTS	18.150 €	01/01/2015 - 31/12/2017
Iglesias, Eugenio	TEC 2014-51882-P MULTIMODAL, HIGH-RESOLUTION MODELING OF THE THALAMUS FOR NEUROIMAGING STUDIES: APPLICATION TO DYSLEXIA	78.045 €	01/01/2015 - 31/08/2016
Molinaro, Nicola	PSI 2015-65694-P PREDICTIVE CODING AND PREDICTIVE TIMING ACROSS MODALITIES AND COGNITIVE DOMAINS	88.209 €	01/01/2016 - 31/12/2018
Paz-Alonso, Kepa	PSI 2015-65696-P NEURODEVELOPMENT OF MAGNOCELLULAR AND PARVOCELLULAR VISUAL PATHWAYS AND THEIR CONTRIBUTION TO VISUAL RECOGNITION AND TYPICAL AND ATYPICAL READING	72.700 €	01/01/2016 - 31/12/2018
Carreiras, Manuel	APCIN 2015-061 MULTI-LEVEL INTEGRATIVE ANALYSIS OF BRAIN LATERALIZATION FOR LANGUAGE	231.000 €	01/12/2015 - 30/11/2018
Duñabeitia, Jon Andoni	PSI 2015-65689-P THE IMPACT OF MIXING LANGUAGES DURING CONCEPT LEARNING	64.251 €	01/01/2016 - 31/12/2018
Lallier, Marie	PSI 2015-65338-P DICHOTIC LISTENING: A WINDOW ONTO BILINGUAL READING DEVELOPMENT	64.009 €	01/01/2016 - 31/12/2018
Carreiras, Manuel	PSI 2015-67353-R BRAIN MECHANISMS OF READING IN GOOD DEAF READERS	108.900 €	01/01/2016 - 31/12/2018
Giezen, Marcel and Costello, Brendan	PSI 2016-76435-P TOWARDS THE DEVELOPMENT OF EVIDENCE-BASED ASSESSMENT TOOLS FOR SPANISH SIGN LANGUAGE	84.700 €	30/12/2016 - 29/12/2019
Soto, David	PSI 2016-76443-P BRAIN MECHANISMS FOR HUMAN WORKING MEMORY AND METACOGNITION ACROSS DIFFERENT STATES OF AWARENESS	58.080 €	30/12/2016 - 29/12/2019
Bourguignon, Mathieu	PSI 2016-77175-P WHAT KIND OF LISTENER ARE YOU? A DEGENERACY APPROACH TO SPEECH PROCESSING	87.725 €	30/12/2016 - 29/12/2019
Mancini, Simona and Alemán, José	FFI2016-76432-P LANGUAGE ATOMS: AN INVESTIGATION OF MOOD, PERSON AND TENSE FEATURES	54.450 €	30/12/2016 - 29/12/2019
Carreiras, Manuel	BFU2016-81721 ALIANZA SEVERO OCHOA Y MARIA DE MAEZTU: CENTROS Y UNIDADES DE EXCELENCIA ESPAÑOLES	120.000 €	01/01/2017 - 31/12/2019
Carreiras, Manuel	PSI2016-81881 APLICACIONES CLINICAS DE LA NEUROIMAGEN FUNCIONAL	20.000 €	01/01/2017 - 31/12/2019

GOBIERNO VASCO – EUSKO JAURLARITZA

PI	Grant	Amount	Period
Mancini, Simona	PI 2014-1-38 HABILIDADES LINGUISTICAS EN HABLANTES BILINGÜES Y MONOLINGÜES	49.094 €	01/11/2014 - 31/10/2016
Duñabeitia, Jon Andoni	PI 2015-1-27 GARUNA: BILINGÜISMO, NEUROCIENCIA Y TERCERA EDAD	19.004 €	23/09/2015 - 22/12/2016
Martin, Clara	PI 2015-1-25 COPA: COMO EL OYENTE PROCESA EL ACENTO	54.518 €	23/09/2015 - 22/12/2017

PI	Grant	Amount	Period
Paz-Alonso, Kepa	PI 2016-1-12 ATLAS MULTIMODAL DE NÚCLEOS TALÁMICOS Y SU APLICACIÓN AL ESTUDIO DE LA DISLEXIA	55.791 €	16/01/2017-15/01/2019
Molinaro, Nicola	PI 2016-1-14 MARCADORES NEUROBIOLÓGICOS PARA EL DIAGNÓSTICO DE LOS TRANSTORNOS DEL DESARROLLO DEL LENGUAJE	57.260 €	16/01/2017 - 15/01/2019
Soto, David	PI 2017-1-25 LA INTERACCIÓN ENTRE LA MEMORIA OPERATIVA Y LA ATENCIÓN VISUAL A LO LARGO DEL CICLO VITAL	69.600 €	21/07/2017 -20/07/2019
Carreiras, Manuel	ELKARTEK KK-201700103 NEUROMOD: SISTEMA DE NEUROMODULACIÓN EN LAZO CERRADO PARA LA MEJORA DEL SUEÑO Y LA MEMORIA BASADO EN LA REGENERACIÓN Y MANIPULACIÓN NEURONAL	56.569 €	01/03/2017 - 31/12/2018

DIPUTACIÓN FORAL DE GIPUZKOA – GIPUZKOAKO FORU ALDUNDIA

Gipuzkoako Foru Aldundia
Diputación Foral de Gipuzkoa

PI	Grant	Amount	Period
Paz-Alonso, Kepa	EXP.65/15 NEUROBIOLOGIA DE LA PRODUCCIÓN DEL LENGUAJE EN CONDICIONES DE COMPLEJIDAD VARIABLE	35.962 €	01/10/2015 - 30/09/2016
Duñabeitia, Jon Andoni	2016-CIEN-000061-01 ARQUITECTURA DEL CEREBRO BILINGÜE	36.000 €	01/10/2016 - 30/09/2017
Lallier, Marie	99/17 MARCADORES NEUROBIOLÓGICOS PARA EL DIAGNÓSTICO DEL TRANSTORNO ESPECÍFICO DEL LENGUAJE (TEL) EN NIÑOS BILINGÜES	25.620 €	01/09/2017 -31/08/2018

EUROPEAN SCIENCE FOUNDATION

PI	Grant	Amount	Period
Carreiras, Manuel	09-RNP-089 CROSS-DISCIPLINARY APPROACHES TO UNDERSTANDING WORD STRUCTURE IN THE LANGUAGES OF EUROPE	565.000 €	2011 - 2015

QATAR FOUNDATION

مؤسسة قطر
Qatar Foundation

PI	Grant	Amount	Period
Carreiras, Manuel	NPRP 6-378-5-035 LEARNING TO READ IN TWO ALPHABETS: TYPICAL DEVELOPMENT AND READING DISORDERS	339.804 €	01/04/2014 - 31/03/2017

BBVA FOUNDATION

Fundación BBVA

PI	Grant	Amount	Period
Duñabeitia, Jon Andoni	IN[16]_CJS_PSI_0037 CAMBIOS CEREBRALES ASOCIADOS A LA ALFABETIZACIÓN DE ADULTOS	34.000 €	01/10/2016 - 31/03/2018

Publications 2014-2017

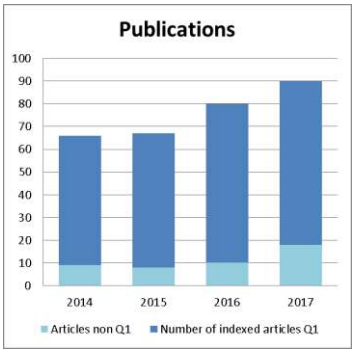
Top journals, number of papers published and impact factors during this period are shown in the table below:

Journal Name	No	IF*	Journal Name	No	IF*
Acta Psychologica	6	1.269	Journal of Experimental Psychology: Human Perception and Performance	2	1.654
Attention, Perception & Psychophysics	1	1.174	Journal of Experimental Psychology: Learning, Memory and Cognition	8	1.907
Behavior Research Methods	4	1.882	Journal of Memory and Language	9	4.044
Behavioral and Brain Sciences	1	0,893	Journal of Neurolinguistics	1	0,711
Behavioral Sciences and the Law	1	0,885	Journal of Neuroscience	1	4.682
Bilingualism: Language and Cognition	5	1.275	Journal of Neurosurgery	1	1.619
Biological Psychology	2	1.907	Journal of Phonetics	1	1.345
Brain and Language	5	2.035	Journal of Psychiatric Research	1	2.182
Brain Imaging and Behavior	1	1.524	Journal of Speech, Language and Hearing Research	1	1.152
Brain Research	3	1.257	Journal of the Acoustical Society of America	1	0,749
British Journal of Psychology	1	1.217	Language and Speech	4	0,939
Cerebral Cortex	5	3.706	Language Learning	5	2.334
Child Neuropsychology	1	1.062	Language Learning and Development	1	1.378
Clinical Linguistics and Phonetics	1	0,550	Language, Cognition and Neuroscience	11	1.161
Clinical Neurophysiology	1	1.379	Lingua	2	0,751

Journal Name	No	IF*
Clinical Psychological Science	1	3.712
Cognition	8	2.778
Cognitive Neuropsychiatry	1	0,791
Cognitive Psychology	3	3.380
Cognitive Science	1	1.794
Cognitive, Affective and Behavioral Neuroscience	2	2.039
Cortex	7	2.234
Current Biology	1	4.143
Developmental Cognitive Neuroscience	1	2.442
Developmental Psychology	2	2.591
Developmental Science	3	2.782
European Journal of Neuroscience	1	1.857
Experimental Gerontology	1	1.584
Experimental Psychology	3	1.126
Frontiers in Behavioral Neuroscience	1	1.745
Frontiers in Cellular Neuroscience	1	2.400
Frontiers in Human Neuroscience	6	1.739
Frontiers in Psychology	18	1.271
Human Brain Mapping	3	2.733
Infancy	1	2.352
International Journal of Psychophysiology	1	1.369
Journal of Cognition and Development	1	1.215
Journal of Cognitive Neuroscience	1	2.414
Journal of Cognitive Psychology	2	1.224
Journal of Deaf Studies and Deaf Education	1	1.025
Journal of Experimental Child Psychology	2	1.960
Journal of Experimental Psychology: General	1	3.549
Medical Image Analysis	1	1.948
Memory and Cognition	1	1.663
Molecular Psychiatry	1	6.917
Movement Disorders	2	2.621
Neurocomputing	1	0,968
NeuroImage	15	3.823
NeuroImage: Clinical	2	2.245
Neuropsychologia	7	1.938
Neuroscience and Biobehavioral Reviews	1	4.520
Philosophical Transactions of the Royal Society B: Biological Sciences	2	2.137
PLoS ONE	8	1.201
Proceedings of the National Academy of Sciences of the United States of America	1	6.321
Psychological Science	4	4.299
Psychonomic Bulletin & Review	7	2.044
Psychophysiology	2	1.540
Quarterly Journal of Experimental Psychology	6	1.320
Research in developmental disabilities	2	1.630
Scientific Reports	5	1.625
The journals of gerontology. Series A, Biological sciences and medical sciences	1	2.794
The Lancet Neurology	1	11.056
The Mental Lexicon	2	0,530
Trends in Cognitive Sciences	4	7.948
Trends in Neurosciences	1	7.270
Vision Research	1	1.040
Visual Cognition	1	0,930
	240	178.503

Note: *Impact factors for 2016, taken from latest SCImago Journal & Country Rank. We list selected Q1 journals, in which BCBL researchers published during the 2014-2017

This graph shows the evolution of the publications during the period 2014-2017.



See the full list of publications in Annex III.

Selected scientific contributions

The ten scientific publications described below conducted by researchers at our centre published in the most important journals of Social Sciences and Humanities show the excellence achieved during the period 2014-2017.

Carreiras, M., Armstrong, B.C., Perea, M. & Frost, R. (2014). **The What, When, Where, and How of Visual Word Recognition.** *Trends in Cognitive Sciences (TICS), 18(2):90-98. DOI: 10.1016/j.tics.2013.11.005 IF:21,965*
SJR 2014: 11,017, Area: Cognitive Neuroscience, Quartile 1, Decile 1

Frost, R., Armstrong, B.C., Siegelman, N. & Christiansen, M.H. (2015). **Domain generality versus modality specificity: the paradox of statistical learning.** *Trends in Cognitive Sciences (TICS), 19(3), 117–125. doi:10.1016/j.tics.2014.12.010*
SJR 2015: 10,075, Area: Cognitive Neuroscience, Quartile 1, Decile 1

Baart, M., & Samuel, A.G. (2015). **Turning a blind eye to the lexicon: ERPs show no cross-talk between lip-read and lexical context during speech sound processing.** *Journal of Memory & Language, 85, 42-59. doi:10.1016/j.jml.2015.06.00*
SJR 2015: 3,538, Area: Experimental and Cognitive Psychology, Quartile 1, Decile 1

Ivaz, L., Costa, A., & Duñabeitia, J.A. (2016). **The emotional impact of being myself: Emotions and foreign language processing.** *Journal of Experimental Psychology: Learning, Memory & Cognition, 42(3), 489–496. DOI: 10.1037/xlm0000179*
SJR 2016: 1,907, Area: Language and Linguistics, Quartile 1, Decile 1

Martin, C.D., Molnar, M., & Carreiras, M. (2016). **The proactive bilingual brain: Using interlocutor identity to generate predictions for language processing.** *Scientific Reports, 6:26171. Doi: 10.1038/srep26171*
SJR 2016: 1,625, Area: Multidisciplinary, Quartile 1, Decile 1

Molinaro, N.*, Lizarazu, M.*, Lallier, M.*, Bourguignon, M., & Carreiras, M. (2016). **Out-of-synchrony speech entrainment in developmental dyslexia.** *Human Brain Mapping, 37, 2767–2783. DOI: 10.1002/hbm.23206 **Equal contribution, corresponding authors.*
SJR 2016: 2,733, Area: Radiology, Nuclear Medicine and Imaging, Quartile 1, Decile 1

Rosenthal, C.R., Andrews, S., Antoniades, C.A., Kennard, C., & Soto, D. (2016). **Learning and recognition of a non-conscious sequence of events in human primary visual cortex.** *Current Biology 26(6), 834–841, Doi: 10.1016/j.cub.2016.01.040*
SJR 2016: 4,143, Area: Agricultural and Biological Sciences (miscellaneous), Quartile 1, Decile 1

Samuel, A.G. (2016). **Lexical representations are malleable for about one second: Evidence for the non-automaticity of perceptual recalibration.** *Cognitive Psychology, 88, 88-114. Doi: 10.1016/j.cogpsych.2016.06.007*
SJR 2016: 3,380, Area: Developmental and Educational Psychology, Quartile 1, Decile 1

Lallier, M., Molinaro, N., Lizarazu, M., Bourguignon, M., & Carreiras, M. (2017). **Amodal Atypical Neural Oscillatory Activity in Dyslexia. A Cross-Linguistic Perspective.** *Clinical Psychological Science, 5(2), 379–401. Doi: 10.1177/2167702616670119*
SJR 2016: 3,712, Area: Clinical Psychology, Quartile 1, Decile 1

Pérez, A., Carreiras, M., & Duñabeitia, J.A. (2017). **Brain-to-brain entrainment: EEG interbrain synchronization while speaking and listening.** *Scientific Reports, 7, 4190. Doi:10.1038/s41598-017-04464-4.*
SJR 2016: 1,625, Area: Multidisciplinary, Quartile 1, Decile 1

Patents, Licences, knowledge transfer

The BCBL has developed several databases that can be used for free by the world scientific community, and any others interested in language research. They are available at our webpage www.bcbl.eu/databases/. See the full list of databases in Annex IV.

Chronset: An automated tool for detecting speech onset.
Roux, F., Armstrong, B.C., & Carreiras, M. (2017). **Chronset: An automated tool for detecting speech onset.** *Behavior Research Methods* (online publication). Doi:10.3758/s13428-016-0830-1
SJR 2016: 1,882, Area: Psychology (miscellaneous), Quartile 1, Decile 1

LSE-Sign: A database of 2,400 LSE (Spanish Sign Language) signs and 2,500 pseudo signs.
Gutierrez, E., Costello, B., Baus, C. & Carreiras, M. (2016). **LSE-Sign: A Lexical Database for Spanish Sign Language.** *Behavior Research Methods,* 48:950–962. Doi:10.3758/s13428-014-0560-1
SJR 2016: 1,882, Area: Psychology (miscellaneous), Quartile 1, Decile 1

The eDom Armstrong, B. C., Zugarramurdi, C., Alvaro, C., Valle Lisboa, J., & Plaut, D. C. (2016). **Relative meaning frequencies for 578 homonyms in two Spanish dialects: A cross-linguistic extension of the English eDom norms.** *Behavior Research Methods,* 48:950–962. DOI: 10.3758/s13428-015-0639-3.**SJR 2016: 1,882, Area: Psychology (miscellaneous), Quartile 1, Decile 1**

ESPAL Duchon, A., Perea, M., Sebastián-Gallés, N., Martí, A., Carreiras, M. (2013). **EsPal: One-stop Shopping for Spanish Word Properties.** *Behavior Research Methods, 45: 1246-1258*
SJR 2016: 1,882, Area: Psychology (miscellaneous), Quartile 1, Decile 1

Some major research outcomes from this period are:

- 272 papers published in high impact journals (243 from Q1 2014- 2017/09/15)
- 626 presentations in conferences and workshops (Full list of oral presentations and posters 2014-2017 in Annex V)
- 168 outreach activities
- 36 projects with 3.100.000 €
- 35 individual fellowships with 4.500.000 €
- 5 grants for scientific equipment with 300.000 €
- 16 grants for scientific conferences and outreach activities with 110.000 €
- 53 students enrolled in the Master on Cognitive Neuroscience of Language conducted by the BCBL
- 4 tools/databases open to researchers all over the world

In sum, at the end of the period 2014-2017 the BCBL is considered one of the best places in the world to carry out advanced studies on language, our most unique human ability, and better understand this capacity which critically shapes an individual's social, economic, and physical wellbeing.

2.1.2. Research Groups

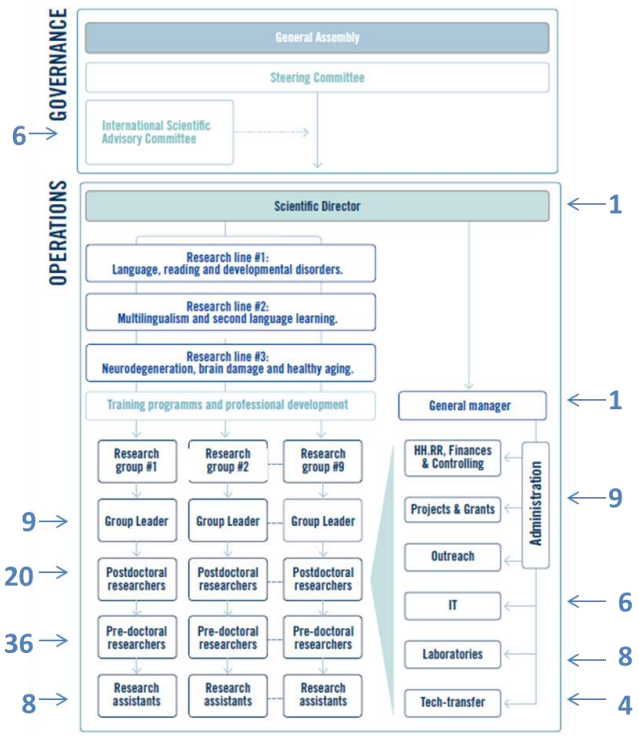
This section should include (Max. 3 pages):
Definition of research structure or organisation of the centre. Strategies and activities to support the attraction and retention of research talent. Expected evolution of the structure of personnel to achieve the strategic objectives of the centre.

Internal Organisation

The **Scientific Director**, **Manuel Carreiras** (Premio Euskadi de Investigación 2015 - the higher recognition that the Basque Government gives to a scientist), is in charge of defining scientific research strategy and activity, strategic planning, representing the centre, managing and coordinating the centre and organisational development and coordinating the **nine research groups** led by the group leaders.

The management team, led by the **General Manager**, Miguel Arocena, supports all research activities, crossing the organisational chart horizontally (see figure). The management team includes Administration (human resources, finance, project management and outreach), Information Technologies, Laboratories and Tech-Transfer

The Organisational chart shows the three strategic research lines as well as the general training and professional development programmes for the nine research groups, and management team supporting all these research activities, crossing the organisational chart horizontally deploying a matrix organisation system.



To carry out the research lines the researchers (staff scientists, postdoctoral researchers and PhD students) were aligned formerly in two research groups lead by the two senior researchers (Manuel Carreiras and Arthur Samuel), both Ikerbasque Research Professors.

In 2016 a major reorganisation of the research structure was carried out to improve the performance of the centre creating nine groups lead by the four senior researchers and the five staff scientists. The updated list of researchers at the BCBL can be found at http://www.bcbl.eu/staff/.

Composition of research groups

Strategies and activities to support the attraction and retention of research talent

Given that the BCBL intends to be an international benchmark in its field of research, the quality of its staff has been a fundamental part of its strategy from the outset. Our core research team was created based on three fundamental principles: **quality team**, **international dimension** and **recuperation of talented researchers**. This philosophy was used to develop the selection and incorporation processes for staff at the various R&D units, as well as the technological infrastructure, as the high levels of investment in infrastructure, equipment and apparatus involved in starting up the BCBL would only make sense if they are accompanied by quality human resources.

The BCBL believes that the process of welcoming the researcher to the centre is crucial. This is why a **welcome plan** is carried out for every single researcher coming to the BCBL for the first time. It includes explanations and thorough information about the city and surrounding area, type of visa, taxes, family advice and assistance with schooling and health, local administration, accommodation, as well as the employee handbook, which includes all topics and the BCBL procedures such as internal organisation, key policies or working procedures. Furthermore, most of the researchers coming from abroad are hosted through the BCBL at the Talent House, a residence for researchers coordinated by the Donostia Town Hall, with which the BCBL has a permanent agreement. On arrival, they meet for working towards getting all the documentation needed to be set up in the city in terms of: registration at the town hall, complete the residence process at the police station, open a bank account and get the health card, for them and their relatives if possible.

In 2016, the board of trustees of the BCBL endorsed the **"European Charter & Code for Researchers"** at the establishment process of the centre and underwent the Internal Analysis process of the "HR Strategy for Researchers" (**HRS4R**) and designed a short and long time Action Plan. As a result, **in January of 2017, the BCBL was awarded with the "HR Excellence in Research" logo** and the recognition of the European Commission. In June 2017, the centre underwent a self-assessment process to review and follow up the implementation of the Action Plan designed in 2016 towards the continuous improvement of our talent recruitment, retention and recognition of careers.

The BCBL has been actively **recruiting, promoting and retaining talent** with both internally and externally funded fellowships. Since its creation, the BCBL has launched yearly calls for PhD students, postdoctoral researchers and staff scientists, with significant success attracting talent from abroad due to the developed talent attraction plan, which includes multiple training and professional development activities, the quality of the research and support teams and the laboratories equipped with cutting-edge technological platforms for research in Cognitive Neuroscience. Our commitment has always been to **recruit the most outstanding personnel in order to become an international benchmark centre** in the field.

The BCBL yearly launches an **International Call programme** for recruiting staff scientists, postdoctoral researchers and PhD Students. Staff Scientists are offered a 5-years contract with the possibility of being on a tenure track. Postdocs are offered a 2 years contract with the possibility of a renewal for 2-3 more years and PhD Students are offered up to 4 years contracts. All the calls are published in the web pages of Ikerbasque, the BCBL and in other webpages of research societies in the field and in some of the main job databases as well (e.g. Sciencecareers, Euraxess). In addition, the calls are disseminated through the BCBL network of contacts (over 4.000 email addresses) and emails from research societies such as Amlap, SEPEX, Society for the Neurobiology of Language, a CNS, a OHBM, Blog Talking Brains -(D. Poeppel & G.Hickok- and research emails lists. This way we ensure that the BCBL calls are known all over the world. The centre has incorporated an e-recruitment tool in its website (http://www.bcbl.eu/jobs) which enables applicants to follow-up every recruitment step process in an accessible way.

The table below displays the calls within the 2014-2017 period as well as some relevant data that shows the BCBL attraction of talent capability and international visibility:

Year	Call	Applications	Slected applicants	% selected female	Nationalities
2014	Postdoctoral for ATHEME Project	19	1	100%	14
2015	Postdoctoral for ATHEME Project	29	2	50%	15
2016	Postdoctoral Computational skills L2STAT pr	2	1	100%	1
2016	Postdoctoral MEG skills L2STAT Project	1	0	n/a	1
2016	Postdoctoral MEG skills Proactive Group	18	2	50%	13
2016	PhD joint position BCAM-BCBL	68	1	100%	24
2016	Staff Scientist Babylab	5	0	n/a	4
2016	Postdoctoral open position	53	4	50%	19
2016	Postdoctoral for Severo Ochoa	41	4	50%	16
2017	Postdoctoral for L2STAT Project	7	In process	n/a	7
2017	PhD MEG skills Proactive Group	22	2	50%	12
2017	Postdoctoral position fMRI skills Consciousn	8	In process	n/a	4
2017	PhD fMRI skills Consciousness Group	10	1	100%	6
2017	Ikerbasque Research Professor	9	0	n/a	7
2017	PhD Presurgical Project position	18	2	100%	6
Total		**310**	**18**	**72%**	**46**

At the same time, the BCBL research community as well as the potential candidates are invited and supported in the process of applying to a wide range of national and international fellowship programmes, such as Ikerbasque, ERC, Marie Curie, Juan de la Cierva, Ramón y Cajal, Basque Government grants or Gipuzkoa Government Grants. The results of these recruitment procedures have been outstanding, given the **significant success obtaining funding for research projects and individual fellowships** by the recruited candidates as shown in the table below (more information in Annex VI).

Funding Agency	Grant	#	Total €
	Ramón y Cajal	5	1.043.000,00 €
	Juan de la Cierva	8	440.000,00 €
	Formación Personal Investigador	11	906.400,00 €
	Personal Técnico de Apoyo	6	216.000,00 €
Subtotal		**30**	**2.605.400,00 €**
	Marie Skłodowska-Curie	12	2.060.947,00 €
Subtotal		**12**	**2.060.947,00 €**
	Predoctoral grant	10	727.400,00 €
Subtotal		**10**	**727.400,00 €**
	Gipuzkoa Fellows Postdoc grant	4	278.817,00 €
Subtotal		**4**	**278.817,00 €**
	Predoctoral grant	3	324.000,00 €
	INPhINIT Predoctoral grant	6	720.960,00 €
Subtotal		**9**	**1.044.960,00 €**
TOTAL		**56**	**6.717.524,00 €**

a) **Retention of the best talent** is crucial for the success of the BCBL. The policy in the BCBL is that PHD students and postdoctoral researchers would be retained only temporarily, while group leaders should be offered a tenure track option to end up with a permanent contract after being evaluated by Ikerbasque and the BCBL. The group leaders/staff scientist should hold a personal grant such as Ikerbasque Fellow, MINECO's "Ramón y Cajal", or similar. Group leaders, in addition to access to all the facilities just described, are provided to start their groups with two positions, one postdoctoral and one predoctoral, plus a bursary of money for minor running costs and travelling to start their groups. They are expected to increase their groups by bringing additional funding to the centre to hire new researchers. Additionally, it is important to note, that given our policy of "open lab", researchers have access to use all the lab facilities and techniques, and run as many experiments as needed free of charge, as long as these experiments have been approved by the ethical and the scientific committees. "Open lab" policy means that regardless of achieved grants or personal/group funding, there is no need to pay for the resources or materials, nor for the participants, and additionally the experiments are run by the lab personnel. The BCBL, in turn, will retain 50% of the Direct Costs from all achieved grants to cover these Open Lab costs.

Additionally, it should be noted that some of our researchers are supported and hired by the Basque Foundation for science IKERBASQUE and by other external international agencies such as Capes Brazil, CNPq Brazil, Fundación Carolina Uruguay, Swiss Science Foundation and NWO Netherlands, among others.

Funding Agency	Grant	#
	Research Professor	3
	Research Fellow	3
	Associate researcher	1
	Visiting Researcher	2
Subtotal		**9**
Other Funding Agencies	Predoctoral grant	3
	Postdoctoral grant	2
Subtotal		**5**
TOTAL		**14**

Since most of the members of the BCBL´s research staff are international, in order to retain the talent, it is important that they feel at home here. With the objective of facilitating the integration into the city, in January 2010 we began to offer Spanish classes at the centre, aimed at all the staff researchers who needed them and wanted to attend on a voluntary basis. Given the success obtained, in January 2011 we also began to offer Basque courses on a regular basis.

2.1.3. Internationalisation plan

This section should include (Max. 3 pages):
Agreements and collaboration frameworks with international entities that help in the internationalisation of the centre. Composition and role of the International Scientific Advisory Committee (ISAC). Highlight European and International projects/networks the centre coordinates or in which it takes part. Detail the research outputs of these collaborations: publications, patents, licences…
Visiting researchers, hosted or going abroad

Agreements and collaboration frameworks with international entities

During the 2014-2017 period the researchers of the centre carried out several research projects funded by different international agencies that in most cases entailed top class collaborations. The projects funded by international agencies and their partners have been listed in section 2.1.1.

The following table shows some running collaborations with Universities, Labs and Research Centres worldwide as well as the research outputs related:

BCBL RESEARCHER	INSTITUTION OF COLLABORATION	COUNTRY	PI	RESEARCH OUTPUTS
Arthur Samuel	University of Exeter	UK	Dr. Nicolas Dumay	Posters, Research Stays
Cesar Caballero	Danish Research Centre for Magnetic Resonance	Denmark	Prof. Hartwig Roman	Ongoing H2020 proposals
Cesar Caballero	Brain Products GmbH	Germany	Dr. Robert Störmer	Ongoing H2020 proposals
Cesar Caballero	Deutsche Interessengemeinschaft Phenylketonurie (PKU) und verwandte angeborene Stoffwechsel	Germany	Dr. Tobias Hagedorn	Ongoing H2020 proposals
Cesar Caballero	Erwin L Hahn Institute for MRI	Germany	Prof. David Norris	Ongoing H2020 proposals
Cesar Caballero	Max Planck Institute for Human Cognitiva & Brain Sciences	Germany	Prof. Dr. Harald Möller	Ongoing H2020 proposals
Cesar Caballero	UniversitätS-klinikum Münster	Germany	Dr. Josef Weglage	Ongoing H2020 proposals
Cesar Caballero	BrainCarta BV	Netherlands	Dr. Vincent Kersten MSc, Dr. Dick van Luijk	Ongoing H2020 proposals
Cesar Caballero	Philips Medical Sistem	Netherlands	Dr.ir. Kim van de Ven, Dr.ir. Liesbeth Geerts, Prof.dr.ir. Marcel Breeuwer	Ongoing H2020 proposals
Cesar Caballero	SEIN - Stichting Epilepsie Instellingen Nederland	Netherlands	Dr. M. Zijlmans, Dr. J. W. Sander	Ongoing H2020 proposals
Cesar Caballero	University Medical Centre Utrecht	Netherlands	Prof. Natalia Petridou	Publications, Ongoing H2020 proposals
Cesar Caballero	Dislebi	Spain	Dr. Isabel Molina Zelaia, Dr Jule Abad Aspiazu	Ongoing H2020 proposals
Cesar Caballero	Siemens Healthineers	Spain	Dr.Teresa Arias, PhD, Dr.Ignacio Vallines, PhD, Dr. Tobías Kober, PhD	Ongoing H2020 proposals
Cesar Caballero	SKOPE	Switzerland	Dr. Christoph Barmet, PhD, Dr. Bertram Wilm, PhD	Ongoing H2020 proposals
Cesar Caballero	The University of Nottingham (Sir Peter Mansfield Imaging Centre)	UK	Prof. Penny A. Gowland, Dr. Karen Mullinger, Dr. Matthew Brookes	Publications, Ongoing H2020 proposals
Cesar Caballero	National Institute of Mental Heath	USA	Dr. Javier Gonzalez Castillo, Dr. Robert W. Cox, Dr. Richard C. Reynolds	Publications
Clara Martin	Bar-Ilan University	Israel	Prof. Moshe Bar	Publications submitted, Oral presentations, Posters
Clara Martin	Stockholm University (Centre for Research on Bilingualism)	Sweden	Dr. Jose Aleman Bañon	Publications in preparation, oral presentations
Clara Martin	University of Manchester (Neuroscience/Aphasia Unit)	UK	Prof. Matthew Lambon Ralph, Dr. Francesca Branzi	Funded Project
Clara Martin	Johns Hopkins University (School of Medicine, Neurology and Neurosurgery)	USA	Prof. Nazbanou Bonnie Nozari	Publications in preparation, Posters
Clara Martin	University of California (Speech Neuroscience Laboratory)	USA	Prof. John Houde	Publications in preparation, Invited Talks, Posters
David Soto	Imperial College London	UK	Dr. Paresh Malhotra, Dr. Paul Bentley	Publications
David Soto	University of Oxford	UK	Dr. Clive Rosenthal	Publications
Jon Andoni Duñabeitia	Ghent University	Belgium	Prof. Marc Brysbaert	Research Project
Jon Andoni Duñabeitia	Universidad Iberoamericana	Dominican Republic	Dr. Laura Virgnia Sánchez Vincitore	Publications, Research Stays, BBVA Foundation Project
Jon Andoni Duñabeitia	Konstanz University	Germany	Dr. Eva Smolka	Publications
Jon Andoni Duñabeitia	SISSA	Italy	Dr. Davide Crepaldi	Publications
Jon Andoni Duñabeitia	Max Planck Institute	Netherlands	Prof. Kristin Lemhöfer	Research Project
Jon Andoni Duñabeitia	Trondheim University	Norway	Prof. Mila Vulchanova	Research Project
Jon Andoni Duñabeitia	Universidad Europea del Atlántico	Spain	Dr. María Luisa Sámano	Research Project
Jon Andoni Duñabeitia	Universitat Jaume I	Spain	Dr. Azucena García Palacios	Research Project
Jon Andoni Duñabeitia	Universitat PompeuFabra	Spain	Prof. Albert Costa	Publications
Jon Andoni Duñabeitia	UPV/EHU	Spain	Dr. Jon Anasagasti	Publications
Jon Andoni Duñabeitia	Bangor University	UK	Prof. Guillaume Thierry	Publications, Research Stays, MINECO Project
Jon Andoni Duñabeitia	Lancaster University	UK	Dr. Aina Casaponsa	Publications, Research Stays, Master thesis
Jon Andoni Duñabeitia	University of Reading	UK	Dr. Christos Pliatsikas	Publications
Jon Andoni Duñabeitia	Chicago University	USA	Prof. Boaz Keysar	Research Project

BCBL RESEARCHER	INSTITUTION OF COLLABORATION	COUNTRY	PI	RESEARCH OUTPUTS
Kepa Paz-Alonso	University of Kaiserslautern	Germany	Prof. Daniela Czernochowski	Publications, Oral presentations, Invited talks, Posters, Research Stays
Kepa Paz-Alonso	The Hebrew University of Jerusalem	Israel	Prof. Ram Frost	Publications, Oral presentations, Invited talks, Posters, Research Stays
Kepa Paz-Alonso	University of Castilla- LaMancha	Spain	Prof. Ricardo Insausti	Publications, Oral presentations, Invited talks, Posters
Kepa Paz-Alonso	University of Granada	Spain	Dr. Ana B. Chica, Prof. Charo Rueda	Publications, Oral presentations, Invited talks, Posters, Thesis, Research Stays
Kepa Paz-Alonso	National Yang-Ming University	Taiwan	Dr. Ovid Tzeng	Publications, Oral presentations, Invited talks, Posters, Research Stays
Kepa Paz-Alonso	University of Stirling	UK	Dr. Yee Lee Shing	Publications, Oral presentations, Invited talks, Research Stays
Kepa Paz-Alonso	Haskins, Yale University	USA	Prof. Ken Pugh	Publications, Oral presentations, Invited talks, Posters
Kepa Paz-Alonso	Purdue University	USA	Dr. Joaquin Goñi	Publications, Research Stays
Kepa Paz-Alonso	UC Berkeley	USA	Prof. Silvia Bunge	Publications, Oral presentations, Invited talks, Posters, Research Stays
Kepa Paz-Alonso	UC Davis	USA	Prof. Simona Ghetti, Prof. Gail S. Goodman	Publications, Oral presentations, Invited talks, Posters, Research Stays
Kepa Paz-Alonso	UC San Francisco	USA	Prof. Fumiko Hoeft	Publications, Oral presentations, Invited talks, Posters, Research Stays
Manuel Carreiras	European Dyslexia Association	Belgium	Dr. Michael Kálmar	Ongoing H2020 proposals
Manuel Carreiras	Danish Autism Association	Denmark	Dr. Cecilia Brynskov	Ongoing H2020 proposals
Manuel Carreiras	Syddansk Universitet	Denmark	Dr. Teresa Cadierno	Ongoing H2020 proposals
Manuel Carreiras	CNRS	France	Prof. Jonathan Grainger	Publications, Research Stays, 7PM Collaborative Project
Manuel Carreiras	The Hebrew University of Jerusalem	Israel	Prof. Ram Frost	Publications, Research Stays, ERC AdV
Manuel Carreiras	University of Leiden	Netherlands	Prof. Lisa Cheng	Publications, Research Stays, 7PM collaborative Project
Manuel Carreiras	Norges Teknisk-Naturvitenskapelige Universitet	Norway	Dr. Mila Vulchanova	Ongoing H2020 proposals
Manuel Carreiras	Federação Nacional de Cooperativas Solidariedade Social	Portugal	Dr. Sandra Marques	Ongoing H2020 proposals
Manuel Carreiras	Qatar University	Qatar	Prof. Batoul Khalifa	Publications, Research Stays, Qatar Foundation Project
Manuel Carreiras	Universitat PompeuFabra	Spain	Prof. Albert Costa	Publications, Research Stays, 7PM Collaborative Project
Manuel Carreiras	UPV/EHU	Spain	Prof. Itziar Laka	Publications, Research Stays, 7PM Collaborative Project
Manuel Carreiras	Academia Sinica	Taiwan	Prof. Ovid Tzeng and Denise Wu	Publications
Manuel Carreiras	Aston University	UK	Dr. Joel Talcott	Ongoing H2020 proposals
Manuel Carreiras	British Dyslexia Association	UK	Dr. Kate Saunders	Ongoing H2020 proposals
Manuel Carreiras	University College of London	UK	Dr. Andrew Nevins	Publications
Manuel Carreiras	University of East Anglia	UK	Dr. Kenny Coventry	Ongoing H2020 proposals
Manuel Carreiras	Haskins Laboratories	USA	Prof. Ken Pugh and Jay Rueckl	Publications
Manuel Carreiras	University of San Francisco	USA	Prof. Fumiko Hoeft	Publications
Mari Cruz Rodríguez-Oroz	Toronto Western Hospital and Research Institute	Canada	Dr. Antonio Strafella	Publications
Mari Cruz Rodríguez-Oroz	Fundación Arturo López, Nuclear Medicine and PET/CT Center	Chile	Dr. Horacio Amaral, Dr. Vasko Kramer	Publications
Mari Cruz Rodríguez-Oroz	Universidad Catolica de Chile	Chile	Dr. Carlos Juri	Publications
Mari Cruz Rodríguez-Oroz	Universidad de Burdeos	France	Dr. Erwan Bezard, Dr.Pierre Olivier Fernagut	Publications
Mari Cruz Rodríguez-Oroz	Università di Perugia	Italy	Dr. Paolo Calabresi, Dr.Tommaso Beccari	Publications
Mari Cruz Rodríguez-Oroz	University of Groningen	Netherlands	Dr. Leenders	Publications
Mari Cruz Rodríguez-Oroz	CENIR au sein de l'hôpital de la Salpêtrière	France	Dr. Stephan Lehericy	Publications
Marie Lallier	Laboratoire de Psychology et Neurocognition	France	Prof. Sylviane Valdois	Publications
Marie Lallier	SCALAB	France	Dr. Gwendoline Mahé, Dr. Séverine Casalis	Publications
Marie Lallier	Münster University	Germany	Dr. Joachim Gross	Publications
Marie Lallier	University of Cadiz	Spain	Dr. Eduardo Onochie-Quintinilla	Publications
Marie Lallier	University of Vic	Spain	Dr. Sergi Grau Carrión	Research Stays
Marie Lallier	UPV/EHU	Spain	Dr. Joana Acha	Publications
Marie Lallier	Bangor University	UK	Dr. Marie-Josèphe Tainturier Guillaume Thierry	Publications
Marie Lallier	University of de la Republica	Uruguay	Prof. Juan Valle Lisboa	Fondo Sectorial de Educación funded project, Research Stays
Nicola Molinaro	Ecole Normale Supérieure Paris	France	Dr. Mikel Lizarazu	Publications in preparation
Nicola Molinaro	Universidad Complutense (Instituto Pluridisciplinar)	Spain	Dr. Jose Hinojosa	Expected publications
Nicola Molinaro	Universidad Complutense-Lab. Cognitive/Comp. Neuroscience	Spain	Prof. Fernando Maestú	Publications in preparation, Research Stays
Nicola Molinaro	New York University	USA	Dr. Jean Remy King	Publications in preparation, Research Stays

Composition and role of the International Scientific Advisory Board (2014-2017)

The International Scientific Advisory Board (ISAB) of the BCBL is an external strategic body consisting of renowned international researchers, all high profile scientists with extensive experience in the management and evaluation of top-tier research centres. The main role of the International Advisory Board is to advise on the centre's orientation and overall strategy providing an independent vision of our activities from an international long term perspective. The fact that these high profile scientists who were/are directors of international research centres accepted to be part of our ISAB evidences the drive of the BCBL to play in the international arena. The members of the ISAB during the 2014-2017 period who were appointed when the centre started:

- **Anne Cutler, Ph.D.** Research Professor, The MARCS Institute, Western Sydney University, Australia and Director Emeritus, Max Planck Institute for Psycholinguistics, The Netherlands
- **George R. Mangun, Ph.D. (Chair).** Distinguished Professor of Psychology and Neurology. University of California, Davis, U.S.A.
- **William Marslen-Wilson, Ph.D.** Honorary Professor of Language & Cognition, Department of Experimental Psychology and Director Emeritus, MRC Cognition & Brain Sciences Unit, University of Cambridge, U.K.
- **James L. McClelland, Ph.D**. Lucie Stern Professor in the Social Sciences, Department of Psychology and Director, Center for Mind, Brain and Computation, Stanford University, U.S.A.
- **Michael Posner, Ph.D**. University of Oregon and Sackler Institute, U.S.A.
- **Timothy Shallice, Ph.D.** Professor and Director Emeritus, Institute for Cognitive Neuroscience, University College London, U.K. and Professor Emeritus, Scuola Internationale Superiore di Studi Avanzati, Italy

In addition to the annual reports, the BCBL submits a comprehensive research activity and management report to the ISAB every 4 years.

Visitors programme

As a first step to attract talented researchers the BCBL has promoted short or midterm visits of international researchers at different levels.

One is the ***Visiting Fellow*** programme funded by Ikerbasque that aims to attract to the BCBL leading international scientists to cooperate with in the BCBL Research Lines. This programme funds contracts for periods between three months and one year. So far two researchers benefited from this programme and are now the BCBL research affiliates: Ram Frost from The Hebrew University of Jerusalem and George Zouridakis from University of Houston.

In a second programme, internationally leading scientists are invited to the BCBL for short term visits to disseminate and convey their ideas and recent and ongoing research through ***seminars***. See full list of Invited talks in Annex VII.

The BCBL hosts and sends young PhD students from/to other institutions around the world for **short stays** of one month up to one year to carry out some collaborative research with researchers at the BCBL. The BCBL researchers performing international short visits with external funding are shown in the table.

Year	Funding Agency	BCBL Researcher	Institution, Country
2015	GOBIERNO VASCO	A. Bastarrika	University of Nottigham, UK
2015	GOBIERNO VASCO	M. Oliver	McGill University, Canada
2016	MINECO	N. Fariña	University of Massachusets, USA
2016	MINECO	L. Ivaz	University of Chicago, USA
2016	EMBO	G. Lerma	Standford University, USA
2016	GOBIERNO VASCO	E. Antón	University of Washington, USA
2016	GOBIERNO VASCO	A. Antzaka	Université Grenoble Alpes, Francia
2016	EUROPEAN COMMISSION	M. Giezen	Radboud University Nijmegen, Netherlands
2017	GOBIERNO VASCO	J. A. Duñabeitia	Bangor University, UK
2017	EMBO	S.Mancini	Institute of Advanced Studies Pavia, Italia
2017	EUROPEAN COMMISSION	E. Marín	University College of London, UK
2017	MINECO	L.Ivaz	Universitat Pompeu Fabra, Spain
2017	GOBIERNO VASCO	S. Schoffel	Universität Salzburg, Austria

Finally, the BCBL hosted along 2014-2017 period, 15 visiting researcher for short stays, and 39 visiting researchers for stays longer than one month. These visiting researchers came from Universities and research institutions around the world, such as: Universidad de Navarra, University of Geneva, University of Milano-Bicocca, Universidad de Santiago de Compostela, Ghent University, Hamad Medical Corporation, Université du Quebec, RWTH Aachen University, University of Trento, University College London, Technical University of Denmark, Freie Universität Berlin, Universidad Pompeu Fabra, Universitat Autònoma de Barcelona, University of Trento, Universidad Nacional Autónoma de México, Utrecht University, McMaster University, Georgetown University, Carleton College, University of Pisa, National Institute of Mental Health, Universidad de Granada, University of Otago, Universidad de la Laguna, University of Colorado, Universidad Complutense de Madrid, San Francisco State University, University of Nottingham Ningbo, McGill University, University of Montreal, Universidad de Chile, Queen's University, Fondazione Marica De Vincenzi ONLUS, Hebrew University of Jerusalem, Tilburg University, Universidad de Valencia, Universitat de Vic – Universidad Central de Catalunya, University of Waterloo, Vilnius University and Universidad de Buenos Aires, CONICET.

The full list of visiting researchers is included in Annex VIII.

2.1.4. Training activities

This section should include (Max. 1 page):
Training activities for researchers and support staff in all the different career stages, designed to recruit, strengthen and retain the talent and personnel.

As an excellence research centre, the BCBL cares for the **permanent learning and quality training** of its members and cares about the long-term learning and quality training of **researchers and support team**. Training is a key point of success, as the BCBL team needs to be aware of recent theoretical and methodological developments and also of new ideas that could challenge and/or reinforce theoretical developments. In addition, training is critical to expanding and staying at the forefront of methodological knowledge related to a particular technique. This is why it is important to allocate a significant part of the budget to the development, implementation, and organisation of training events.

Research Team oriented training: the BCBL facilitates the training and ongoing development of the BCBL researchers to promote their collaboration across different lines of research and to create links and exchanges with researchers from other reference centres. A Personal Career Development Plan is designed for all researchers in the centre that includes (1) Training through individually personalised research projects under senior supervision, (2) Exchanging knowledge to the scientific community and the general public, (3) Network-wide training in theory and methods, (4) Complementary training courses, (5) Involvement in proposal writing, task coordination and (6) Development of skills for the organisation of training and scientific events. Our agenda for training in-house is mainly organised around the following axes and consolidated initiatives such as:

- **Conferences**: The BCBL has organised 10 international scientific meetings and conferences in the period involving the most influential researchers in the field of "cognitive neuroscience of language". These events are a great opportunity for the BCBL´s researchers to attend lectures, to discuss their work with other attendees and, of course, to expand its network (more information in section 2.1.5.).
- **Workshops and Summer Schools**: We are promoting the organisation of two thematic workshops per year. This way the BCBL researchers can obtain updated information of the particular field and can present their work to researchers coming from all over the world, including the invited speakers who represent the top-tier of that area, as well as offer an opportunity to informally interact with them, promoting the exchange of new ideas.
- **External speakers series**: World-leading external speakers are invited every other week to present their latest research at the BCBL, as well as to participate in the Irakurraldi journal club. During their stay at the BCBL, the possibility for all researchers to discuss their work with the speakers in individual and/or interactive meetings is offered. During the period 2014-2017, the BCBL has organised 73 seminars, inviting external speakers from the most prestigious research groups and centres all over the world (see Annex VII)
- **Weekly lab meetings:** Each researcher should present their findings at least once per year in the lab meeting. In addition, at the beginning of the meeting, we allow the first 5 to 10 minutes for raising questions related with the functioning of labs or any other relevant operational issue
- **Specific training courses** on several tools (Matlab, Presentation, Fieldtrip Presentation) and methods (MEG, Qualified User on the MEG, fMRi, Safety Users on the fMRI, Qualified User on the fMRI eyetracking) (i) internal working and training groups such as SLIG (spoken language interest group), Language disorders group, Reading group, Keinu group (sign language) MEG group, Methods in Neuroimaging Group and Irakurraldi group (predocs and external speaker journal club).
- BCBL **Postgraduate Courses:** Concerning training, the BCBL runs two programmes in collaboration with the UPV/EHU (University of the Basque Country). The master programme "Cognitive Neuroscience of Language" and the PhD programme in Linguistics (more information in section 2.1.5).
- The centre also offers both **Spanish and Basque language free courses** for our researchers to integrate them with the local community and facilitate research involving those languages.

All the internal training information is available on our internal wiki, where anyone can review the available training sessions and also offer suggestions for future improvement or new training activities. Finally, all researchers in the BCBL have travel money provided by the BCBL to attend at least to one international and one national conference per year. These are major training opportunities for young researchers.

Support Team oriented training: In order to seek for the growth and improvement of our top-tier administration, laboratory and IT team and keep it highly motivated a Personal Career Development Plan is individually designed for each of them that includes (1) Personalised training activities, (2) Network-wide training, (4) Complementary training courses under request. The BCBL allocates a training budget for the support team and the participation in training actions can take place because of the active request of the employee or as a consequence of the Personal Career Development Plan summary.

2.1.5. Other activities

This section should include (Max. 3 pages):
Other complementary actions, such as dissemination, technology surveillance, knowledge transfer activities, etc.

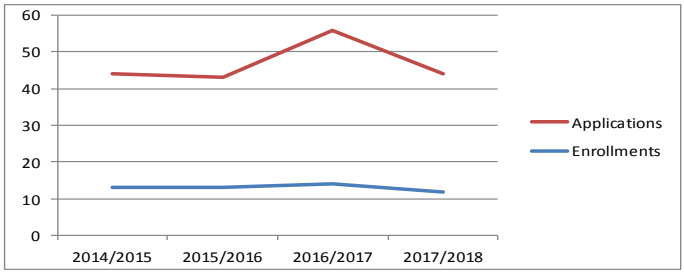
See outlined in the section below the activities that have not been included in the previous items, despite being relevant to the BCBL:

University Teaching

(1) The **Master's in Cognitive Neuroscience of Language** has been taught since the academic year 2011-2012. One of the aims of this graduate programme is to train interdisciplinary researchers in the Cognitive Neuroscience of Language to advance further and transfer this knowledge to the areas of Health and Education. The programme allows the degree holder to pursue a research career by developing a PhD thesis.

The duration of the programme is one academic year, with 60 ECTS credits. The students develop research skills through the mentorship of experts and by completing the Master's Research Project at the end of the programme. The BCBL has offered several scholarships to those students considered to have the best profile in the evaluation process.

The graph shows the evolution of the applications and enrollments to the Master's, in which the interest for the programme at international level is reflected. There is always a **maximum number of 15 enrollments** for students with the best academic records, therefore ensuring the teaching quality through personalised attention.



So far, 86 students from 26 different countries have participated in this Master's throughout its 6 editions, 23 of whom have joined the BCBL to complete their doctoral training. Others have joined a wide range of international centres such as New York University, Saarland University, Donders, Max Planck Institute for Psycholinguistics or University of Jyväskylä among others.

(2) In 2013, together with the UPV/EHU, the BCBL launched a **PhD programme in linguistics** approved by the ANECA (Spanish National Agency for quality and accreditation). The BCBL's new PhD students are enrolled in this programme. As in the master programme, PhD students are based in the BCBL mentored by two advisors. In the 2014-2017 period, 15 Thesis have beed defended.

Student	Type of PhD	Supervisor	Theis title	Defense date
Saioa Larraza	Internacional	Arthur Samuel	Listening to Dialectal Variation in a Second Language: Not just Unavoidable but Necessary	01/07/2014
Ileana Quiñones	Nacional	Manuel Carreiras	The neural network involved in agreement processing	24/04/2016
Aina Casaponsa	Internacional	Manuel Carreiras	Bilingualism and visual word recognition	21/09/2016
Myriam Oliver	Internacional	Manuel Carreiras	Neural correlates of bilingual reading: Effects of orthographic depth and age of acquisition of a second language in	05/12/2016
Cristina Gil	Nacional	Elena Salillas	Number representation in bilinguals. The role of early learning in the mental number line representation	19/07/2016
Carlos Romero	Internacional	Albert Costa	The effects of foreign-accented speech on language comprehension and retrieval processes	19/12/2016
Mikel Lizarazu	Nacional	Nicola Molinaro	Speech-brain synchronization: a possible cause for developmental dyslexia	10/03/2017
Lorna García	Nacional	Manuel Carreiras	Caracterización neuroanatómica de la red cerebral en bilingües	08/05/2017
Garikoitz Lerma	Internacional	Kepa Paz-Alonso	Multimodal MRI characterization of visual word recognition: an integrative view	01/06/2017
Jui-Ju Su	Nacional	Nicola Molinaro	The processing of gender information in languages of distinct morpho-syntactic gender marking systems	10/07/2017
Eneko Antón	Internacional	J.Duñabeitia	The search for a bilingual advantage in executive functions: a developmental perspective	06/07/2017
Ainhoa	Internacional	Doug Davidson	Changes in brain activity during language learning in adults measured by magnetoencephalography	08/09/2017
Alejandro	Nacional	Elena Salillas	EEG and MEG evidence of a predominant number code in bilinguals and its significance for developmental dyscalculia	11/07/2017
Mirian Sanchez	Nacional	Ana Mª Aransay	Identificación de variantes genéticas implicadas en el desarrollo de dislexia y falta de atención: Estrategias de caso-	10/03/2017
Noemi Fariña	Nacional	Manuel Carreiras	Lectura y comprensión en personas sordas	16/09/2017

We also envision starting a new **PhD programme in "Cognitive Neuroscience",** which will have a more interdisciplinary flavour (see section 2.2.7).

Organisation of International Conferences

From the beginning, the BCBL has played an active role in the promotion of research in Cognitive Neuroscience and Language, organising international conferences and workshops annually and involving the most influential researchers in the field of cognitive neuroscience of language. These conferences are a natural environment for excellent research, the first step to internationalisation, and the best opportunity for young researchers to learn and interact with the world leaders in the field. These events are a great opportunity for the BCBL's researchers to attend lectures, discuss their work with other attendees and, of course, expand their network.

The BCBL organised and hosted 10 international conferences and workshops during the period 2014-2017:

YEAR	CONFERENCE	KEYNOTES	ORAL PRESENTATIONS	POSTER PRESENTATIONS	DELEGATES
2014	International workshop on Learning, Memory and Consolidation	5	19	16	100
2014	NEUROGUNE. Second meeting of the BASQUE RESEARCH COMMUNITY IN NEUROSCIENCE	1	12	70	97
2015	Interdisciplinary Advances in Statistical Learning	5	38	97	205
2016	IWORDD. International Workshops on Reading and developmental dyslexia	5	12	46	115
2016	IWORDD. IWORDD - From Theory to Practice	5			125
2016	AMLAP. Architectures and Mechanisms for Language Processing	3	33	276	300
2017	WILD. International Workshop on Infant Language Development	2	26	50	115
2017	Interdisciplinary Advances in Statistical Learning	3	34	79	150
2017	Cognitive neuroscience: new developments and future challenges	5			42
TOTAL		**34**	**174**	**634**	**1249**

In particular, the BCBL launched the "WILD" and "Statistical Learning" conferences, of which 2 editions have already been held. Furthermore, we have enriched the format of the "IWORDD" congress by introducing an additional section designed for practitioners who deal with dyslexia on a daily basis.

Science Communication and Outreach

The BCBL has performed several dissemination activities both for the scientific community through conferences, seminars and congresses and for the citizenship and society at large through various media outlets. Regarding the latter, our communication activities have pursued the following main objectives:

1. To publicize the existence of the BCBL and position it at the local, national and international levels as the Research Centre of Excellence in Cognitive Neuroscience and Language.
2. To make the knowledge generated in the BCBL broadly available by disseminating the scientific advances achieved among the wider society.

Additionally, the BCBL has created and developed a complete programme of scientific dissemination activities. One of the most remarkable events celebrated during this period was the "Brain Awareness Week". This science week has already been held on three occasions with outstanding success and high level of citizen participation. The aim of these events is to popularize "Cognitive Neuroscience of Language" and make it more comprehensible to society at large, using less scientific jargon than in regular conferences.

The BCBL promotes open scientific conferences for the general public called **"Brain Talks"**. The aim of these events is to popularize Cognitive Neuroscience of Language and make it more comprehensive to society at large, using less scientific jargon than in regular conferences. Furthermore, the Brain Talks are filmed in video and uploaded to the BCBL's Youtube channel: http://www.youtube.com/user/OutreachBCBL. Most of the open talks for the general public were organised taking advantage of the presence of the invited speakers in the scientific conferences we held in San Sebastián. We have organised so far seven Brain Talks, with 1.370 attendees and we have participated in six talks organised by other institutions with 500 attendees ("Week of Science", "FASICAM", PrisMA", "Educación para el futuro" and "International University of Andalucía").

Special mention should also be made of the TED Talk the director of the BCBL, Manuel Carreiras, gave in Argentina in 2017, with over 70.000 views.

Additionally, the following scientific dissemination initiatives should be noted:

- Promotion of cognitive neuroscience of language in campus
- Web portal of scientific outreach
- Pint of Science
- The Innovation Week
- Events to thank and feedback the participants
- The Innovation Week, Donostia WeekINN 2016
- Donostia 2016- Olatu talka: "Háblame despacio que quiero volar" exhibition

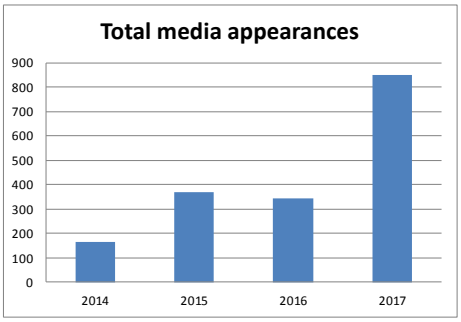
Moreover, throughout the 2014-2017 period, the BCBL has consolidated an open doors policy especially designed for visiting school groups. During those visits, secondary, high school or university students benefit from a masterclass on Neuroscience, get the opportunity to learn about the specific projects of our researchers, visit the labs and understand the academic trajectory required to work in the research field.

BCBL in the media

In addition to disseminate the knowledge generated, the BCBL made a qualitative leap in 2014-2017 thanks to its presence in national communication media and its entry into the social networks. The benchmarks of dissemination and communication achieved by the BCBL are as follows:

Traditional Channels:

After starting with sporadic appearances in local media, a fortnightly presence in the local and national communication media has been achieved during this period. In addition to achieving certain public recognition in the communication media, the BCBL is regularly consulted by different media as an expert adviser in cognitive neuroscience, management in the scientific field and promoting scientific vocation among the youth. In this regards, the BCBL had significant presence in national and international communication media and generated audio-visual material about the research outcomes during the 2014-17 period.



Regarding online press, written press, radio and TV, the BCBL produced 1.732 impacts over the 2014-17 period.

Social networks:

Social networks provide an alternative to the communication media to inform society about the centre's activity.In general, the activity of the centre in social media follows a positive trend both in the number of followers and the interactions achieved. Having a growing social media community is positive for the centre, as it facilitates dissemination of the message to a broader public. Given the statistics of the shared contents, the strategy of disseminating contents from third parties has proved to be a great success, as it is helping to enlarge our followers' database, which is beneficial for us when publishing contents of the centre or looking for participants for studies.

Below there are some figures with information about the activity and evolution of followers on Facebook and Twitter. In general, results are positive and confirm the existence of a digital community that follows the activity of the centre through social networks.

Nowadays, the Twitter account of the BCBL has 2.004 followers, compared to the 1.137 followers in 2014. At present, the Facebook account of the BCBL has 3.700 followers, compared to the 1.635 followers in 2014. This account shares information daily about neuroscience and it is always reviewed by experts of our centre, thus becoming a reference in the field of Neuroscience.

The BCBL also has a Youtube channel which hosts 63 videos that have generated 13.779 views since its creation. The contents are predominantly disseminative, divided into contents created by the researchers at the BCBL and talks and presentations related to the research lines of the centre.

2.2. Strategic Plan for 2018-2021

2.2.1. Research Programme(s)

This section should include (Max. 7 pages):
Main research objective(s) and description of the research activities, projects, lines deployed to meet that/those objective(s). Outcomes foreseen: publications, patents…

Research objective(s) and description of the research activities

The main goal of this 2018-2021 Strategic plan is to advance our knowledge on the cognitive processes involved in language and in reading, and of the neural circuits that serve these capacities, and of the causes of some language disorders and reading disabilities to design tools to remediate them, paying special attention to bilingualism.

The best predictor of future performance is past performance. This is why we have set up an ambitious vision for the future, which we believe is realistic because our track record.

The novelty, relevance and potential impact of the BCBL Research Programme is to generate new knowledge in the frontiers of knowledge in three research lines, using the advanced technology at the BCBL and the methods that we will improve and develop to expand the frontiers of science, and generate knowledge to transfer to society. Specifically, we will strengthen and expand the current research lines to refine the diagnosis and intervention of language disorders (e.g., dyslexia), to create tools for the learning of a second language and for learning disabilities, to improve the brain mapping in patients with tumours and epilepsy, and brain stimulation in the awake patient during surgery, the rehabilitation of patients with aphasias, the training of patients with neurodegeneration, and the development of an atlas of the thalamus. Thus, the present Research Programme addresses the consolidation of the current research areas, the generation of new priorities within the research lines and the expansion of the BCBL research teams' size and quality as well as its scientific output.

Description of the research lines

The optimised research lines are the following:

Line 1- Language, reading and developmental disorders

Natural language and reading are two critically important and unique human abilities. A major enterprise is to understand how language acquisition, comprehension and production take place in the human brain. Another major endeavour is to understand the cognitive and brain processes involved in reading (decoding and comprehension) and in learning to read. To tackle these challenges, we investigate natural language (e.g., oral language, sign language) across the life span (infants, children, adults) and reading in different populations (e.g., children and adults) with standard trajectories but also special populations (e.g., illiterates, deaf, children with atypical development, etc.).

In addition, the study of developmental disorders and learning disabilities has always been a source of information about the cognitive and brain processes involved in language and learning processes (e.g., learning to read): Understanding atypical development and functioning can inform understanding of typical function.

Developmental and learning disorders such as Specific Language Impairment (SLI), dyslexia and dyscalculia entail serious emotional, personal, educational and social consequences, as well as important costs for society. Research into these disorders will facilitate improved tools for diagnosis, early detection and treatment. More importantly, research on neuro-markers from a very early age (e.g., infants) for precocious detection of developmental disabilities can open possibilities for developing interventions that could prevent or minimize the impact of these. Studies of this kind could also inform the educational community for designing educational policies and training plans, since learning and education are intimately related to the development of neural mechanisms.

The study of various disorders, such as SLI, dyslexia and dyscalculia, permits a comparative analysis of numerous components and aspects of language development. In addition, longitudinal studies of typical and atypical development from infancy might uncover potential early markers of language disorders and learning disabilities that may appear at school age (e.g., dyslexia). The combined expertise of different groups of the centre is thus brought to bear on populations with problems in language development, resulting in knowledge with important applications.

We also take advantage of information technologies for the development of computerized diagnostic and training tools for children with different learning disabilities (i.e. dyslexia, dyscalculia, SLI). The aim is to develop computerized tools with tasks designed according to the latest research-knowledge on language, reading and

other cognitive processes. We investigate effects of training packages on cognitive functioning and brain activity of children with special educational needs in monolingual and multilingual contexts.

Line 2- Multilingualism and second language learning

Research on cognitive and brain mechanisms of language acquisition and processing (comprehension and production) in bilingual and multilingual individuals, with different ages of acquisition of their second language (e.g., native or late learners), with different degrees of proficiency in their second language, with languages of the same or different modalities (e.g. oral and sign languages), and the impact of these on cortical plasticity is the main focus of this line. Special attention is paid to multilingualism within the school system and to the development of new educational technologies.

Phonology, morphology and syntax are the aspects of language most difficult to master when a second language is learned late in life. The specific characteristics (e.g., morphological and syntactic) of Basque and Spanish offer a unique opportunity to investigate the acquisition, processing and the underlying brain mechanisms of the two languages as a first or second language. In order to investigate these and other questions, studies of the cortical representation in monolingual and bilingual participants at different ages (infants, children, young adults and the elderly) and different levels of skill, ranging from beginner learners to fluent speakers, are carried out using behavioural and neuroimaging techniques.

Children can learn two or more languages at very early ages, and people continue learning new languages throughout life, so we are all increasingly multilingual. This multilingual education involves, among other things, learning to read and calculate in L1 and L2. We investigate the relationship between specific cognitive functions and the changes in neural activity that take place in the course of learning to read and math learning in L2, with specific attention to individual differences and the effects of L1. We also investigate when and how it is optimal to introduce a second language at school, particularly when L1 and L2 have very different orthographies (e.g., English –a deep orthography and Spanish– a shallow orthography). In addition, we investigate the effects of different second language teaching methods on brain plasticity and cognition. Modern societies increasingly demand education based on scientific evidence. Second language learning and learning to read in a second language are important skills in classroom settings that can benefit from new discoveries on human cognition research in the laboratory.

Language switching and language control are essential in multilinguals. Several studies have suggested that being bilingual, and the practice in language control that comes with it, improves general cognitive control capacities, even in non-verbal tasks. However, recent data do not seem to replicate these findings. We investigate the cognitive and brain mechanisms underlying language control and general cognitive control by comparing monolinguals and bilinguals (balanced and unbalanced bilinguals) in several paradigms using different techniques. More generally, we investigate the consequences (if any) of being bilingual or multilingual for mind and brain.

Line 3- Neurodegeneration, brain damage and healthy aging: Language and Cognition

Neurodegenerative diseases are the centre of much attention, not only because of their scientific interest, but also due to their social implications. Among these disorders, Alzheimer and Parkinson's diseases are perhaps the best known. Symptoms in various forms of dementia, such as Alzheimer's, Parkinson's disease or semantic dementia, include important cognitive aspects such as language. The phases of deterioration in dementia of the different components of language and potential biomarkers linked to language are being investigated.

In particular, in Alzheimer's disease and in mild cognitive impairment, language disorders are some of the earliest expressions of the disease and constitute the most frequent cognitive difficulty after memory problems. Language deterioration is also present in Parkinson's disease. Some components of language could therefore potentially be found as early markers of these diseases. Language components that may be most sensitive to decline in different types of dementia (Alzheimer Disease, Parkinson's disease, Semantic Dementia, etc.) and that could be susceptible to training and intervention are being researched.

In addition, deterioration of some components of language and other cognitive abilities (e.g., executive control, memory, cognitive reserve) is also present in normal aging, and this deterioration of cognitive abilities, including language, could be potentially modulated by bilingualism or second language learning. We investigate the relationship between specific cognitive functions and the changes in neural activity that take place in healthy aging bilinguals and monolinguals. This research line examines whether learning a new language and/or training other different cognitive processes such as attention or math processing will affect these changes.

We also investigate cognitive effects and brain plasticity related to brain damage (e.g., brain tumours, epilepsy, strokes, etc.). In particular, we investigate grey and white matter plasticity by comparing presurgical and postsurgical mapping of language and other cognitive functions such as mathematical cognition and executive

control. Furthermore, we study language functions through brain stimulation in the awake-patient during surgical brain operations (e.g., tumour resection). We also investigate language processing (e.g., agrammatism) in aphasic patients, with special attention to bilingual patients of languages typologically very different in terms of morphology and syntax (e.g., Basque and Spanish). We also develop computerized diagnostic and training tools for aphasic patients that include tasks that are designed taking into account the specific features of the language in question.

On the other hand, across these three research lines, we will actively promote expertise in advanced research methods, which have fuelled and enabled many recent theoretical advances. One example is the development of new algorithms to investigate the connectivity between specific brain areas for some language disorders. Another example to advance research in the BCBL is to create a high resolution atlas of several nuclei (e.g., thalamus) needed to relate the fMRI signal to the connectivity of specific brain areas (e.g., pulvinar; MGB) of the thalamus with other brain regions. This is not possible with current methods, but accomplishing this aim will have a tremendous impact on the neuroimaging community.

In sum, the Strategic Plan for 2018-2021 addresses the consolidation of the three current research lines described earlier, with a special commitment to some specific content and methodological areas, the generation of new research sub-lines, and the expansion of the BCBL research teams' size and quality as well as its scientific outcome. This strategic plan also aims to increase the participation on competitive public projects at regional, national and international levels. We will increase the number of publications in peer-review journals both in the area of Cognitive Neuroscience of Language, including the development of advanced methods, and in allied fields (e.g., health, education). We will also substantially increase the number of publications in the first quartile of WoS. In addition, another key potential impact of our research is to transfer new generated knowledge to the areas of education and health, including local, national and international entities. The novelty, relevance, and potential impact of the BCBL research programme is based on the enrichment of three different research lines, with special attention to the following sublines and related tech transfer:

Line 1: Language, reading and developmental disorders

- Language acquisition from birth in bilingual settings
- Language and learning disorders: earlier and sensitive diagnosis of learning disabilities

Line 2: Multilingualism and second language learning

- Second Language learning: auditory feedback alteration to shape native-like pronunciation
- Learning to read in different orthographies: transparent and opaque

Line 3: Neurodegeneration, brain damage and healthy aging: Language and Cognition

- Functional brain mapping and brain stimulation: Presurgical brain mapping procedures with high temporal resolution
- Cognitive biomarkers for early detection of cognitive impairment in dementia (Alzheimer and Parkinson)

Based on the strategic development of these lines of investigation, and in order to improve the competitive position of the centre, a SWOT analysis has been performed (strengths, weaknesses, opportunities, and threats) in order to consolidate the BCBL's position as an international leader in language research we analysed our current strengths and weaknesses, as well as anticipated opportunities and areas of concern:

Therefore, based on the SWOT analysis, we aim to: (1) Promote groundbreaking research in the three research lines with some specific priorities and "understanding language in the brain" as the common goal; (2) Encourage close collaboration of researchers with different technical expertise with researchers more oriented to answer specific research questions; (3) Update the technical facilities; (4) Ally ourselves with top-tier international and national research bodies; (5) Integrate ourselves in two local sectors: education and health; (6) collaborate with companies and professionals with expertise to develop computerized games for developing the diagnosis, treatment, learning and training tools. In addition, as a result of this analysis, the centre has designed a supplementary expansion and improvement plan:

Future expansion plans

Moving beyond consolidating our research lines and our existing internal and international networks of researchers, if the grant is awarded to the BCBL, the proposed expansion that the centre would achieve would allow for major new expansions into relatively untapped areas:

1) ***The language learning disorders community***: Currently, the BCBL has a small group of researchers producing new insights into the brain underlying mechanisms of dyslexia, that have also provided basic connections with the language disorders and the applied language community. However, as part of our proposed expansion, we aim to continue producing new knowledge in the field while at the same time to fully integrate ourselves with these communities, which will require additional support to hire additional researchers, send investigators to on-site locations such as schools to recruit data and build ties with these communities, have internationally renowned researchers visit the centre, host additional conferences on this issue, etc. The BCBL has had tremendous success in the two iterations (2013 and 2016) of a conference focused on dyslexia, and has one additional conference planned in this vein for 2019. These conferences are helping to put the BCBL on the map as a centre interested in dyslexia. We would like to aim to have this conference as a permanent part of the BCBL's scientific activities and use it to disseminate our knowledge directly to the top researchers in the field, and to entice these researchers to come work at the BCBL and collaborate with our researchers as visiting scientists or as permanent staff.

2) ***Language acquisition***: A small research group is investigating how language is acquired in bilingual settings. There are very few laboratories in the world that are investigating language acquisition in bilingual infants. Here we have a unique setting in the world, given the mixture of three facts (1) a unique combination of languages that are typologically very different (Basque and Spanish); (2) a very well equipped laboratory with behavioural, EEG and NIRS set up; (3) an incredible positive answer from parents that are willing to bring they babies to the lab thanks to our coordinated efforts with the hospital. We are in the process of recruiting new researchers in this field, enhance our ties with other world lead researchers in the field, and, bring them for short visits to collaborate with them. We will also continue to organise international theme workshops related to acquisition. In fact, in 2013 we organised the first WILD (Workshop in Infant Language Development) that was very well received by the community. There was not a forum in Europe for language development. The second was hold in Stockholm in 2015, and WILD returned to San Sebastian in 2017. It will be desirable that that WILD is attached to the BCBL every other edition.

3) ***Second language learning and learning to read***: The BCBL currently has small laboratory set-ups and a few portable experimental set-ups (e.g., for EEG) that can be sent into schools. However, these arrangements are more suitable for proof of concept experiments, with detailed assessments with our best equipment requiring a trip to the BCBL's main facility. With the potential renewal of the grant we aim to greatly enhance our reputation on this front by hiring additional investigators and expanding our experimental set-ups to have a full-fledged field lab that can engage in research in a range of local schools. Such types of arrangements —particularly in the context of our unique multilingual population of Basque and Spanish speakers— is almost unheard of and will situate the BCBL as a world leader for this type of ecologically valid interactions with students and direct connection between science and education. Our aim is to have the world look at the BCBL whenever they have a question about how best to provide language learning and learning to read.

4) ***Functional brain mapping and brain stimulation****:* The BCBL currently has a small group of researchers focused on presurgical mapping, brain stimulation of awake patient during an operation, and brain plasticity comparing presurgical and postsurgical mapping, both from a basic science and clinical perspective. One aim is to expand this group to include a very tight and permanent arrangement with a neurosurgeon, who could provide part time input on the BCBL's scientific aims while at the same time seeing patients to maintain medical knowledge and identify patients that are scientifically relevant to the BCBL. This will help the BCBL integrate with the international medical community, have its work advertised at medical conferences, allow its work to be publish in medical journals, etc.

5) ***Neurodegeneration and brain damage:*** Another small group is addressing the search for early markers for neurodegeneration (Alzheimer and Parkinson) linked to language processes. They also are investigating training programmes linked to bilingualism for these populations and for aphasic patients. We have an important potential to make outstanding contributions in early markers, training and rehabilitation related to language. We will increase the number of researchers devoted to this line of research and bring leaders in the field to the BCBL to be able to increase our international impact.

6) ***Brain atlases****:* One of the methodological avenues consists on building an atlas of the thalamic nuclei using ex vivo images that will be incorporated into FreeSurfer. The software that combines neuroimaging with information from histology will be made available (probably as part of FreeSurfer), and this is expected to have a huge impact in the Neuroimaging and the Cognitive Neuroscience Community.

7) ***Software development****:* Additionally, the BCBL aims to improve its internationalisation via language training software, and software for diagnosis, training and rehabilitation of language disorders, neurodegenerative diseases and patients with brain damage (e.g., aphasia). The BCBL currently has pilot software running for the diagnosis, treatment, and training of language disorders and for the training of second languages. Our researchers have the basic scientific knowledge that is critical for making a rigorous piece of software that is even broader and more comprehensive than these pilot pieces of software with specific targeted applications. However, to do so, we require direct interactions and permanent relationships with a group of programmers that can devote most or all of their time to building, maintaining, and upgrading our software as research unfolds. The renewal and potential increase of the grant budget would provide the funding necessary for that expansion. The resulting software will promote the BCBL to the public at large for use in a range of applied settings, as well as create a hub for gaining new data that can advance the BCBL's scientific objectives in ways that are not possible currently (e.g., by rapidly testing language training protocols on tens of thousands of individuals via an automatic update to our software).

8) Related to the aim of detecting early markers of language learning disability or language impairment following brain disease, we have recently made great strides in the fields of ***biometrics***. Specifically, we have discovered computational methods that allow for individuals to be uniquely identified by their brain's electrical activity and we can still identify them six months later based on an original recording (the longest time-frame tested to date). This has important applications, for instance, related to tracking neural markers of how diseases unfold in individuals, and in integrating with our language training software to provide tailored language instruction based on the parts of a language that their brain activity shows them to be doing well at or having more difficulty with, even if those effects are not very clear in their behaviour. The renewal and potential upgrade of the grant budget would provide the funding necessary for promoting the international expansion of this new area and for finding partners interested in developing these ideas and transfer them to the market.

Research projects (already active for 2018-2021 and expected applications).

EUROPEAN RESEARCH COUNCIL

Running grants	PI	Grant	Amount	Period
1	Frost, Ram	GA 692502 - STATISTICAL LEARNING AND L2 LITERACY ACQUISITION: TOWARDS A NEUROBIOLOGICAL THEORY OF ASSIMILATING NOVEL WRITING SYSTEMS	800.000 €	01/07/2016 - 30/06/2021
Expected applications	**PI**	**Grant**	**Amount**	**Period**
14	BCBL Researchers	2 ERC Advanced Grants 4 ERC Consolidator Grants 8 ERC Starting Grants	n/a	2018-2021

EUROPEAN COMMISSION: 7PM Programme

Running grants	PI	Grant	Amount	Period
1	Carreiras, Manuel	GA 613465 - ADVANCING THE EUROPEAN MULTILINGUAL EXPERIENCE	306.710 €	01/03/2014 - 28/02/2019

EUROPEAN COMMISSION Marie Skłodowska-Curie Programme

Running grants	PI	Grant	Amount	Period
1	Wilson, Lisa	H2020-PEOPLE-2014-EF-657474- BIOMARK BIOMAKERS OF DISORDERED LANGUAGE IN AUTISM	170.122 €	14/03/2016 - 13/03/2018
2	López, Rocío	H2020-PEOPLE-2015-EF-65747-VIAWORD FROM SPEECH AND PRINT TO MEANING: AN INTEGRATED ACCOUNT OF WORD RECOGNITION IN YOUNG AND OLDER ADULTS	170.121 €	01/06/2016 - 31/05/2018
3	De Bruin, Angela	H2020-MSCA-IF-2016-GA-743691 COGNITION, AGEING AND BILIGUALISM: INVESTIGATING AGE-RELATED CHANGES IN BILINGUAL LANGUAGE SWITCHING AND USE	158.121 €	01/09/2017 - 31/08/2019
Expected applications	**PI**	**Grant**	**Amount**	**Period**
44	BCBL Researchers, Potential newcomers	2 European Training Network 1 Cofund Grant 1 Researchers Night 40 MSC Individual Grants	n/a	2018-2021

MINISTERIO DE CIENCIA E INNOVACIÓN/ECONOMÍA Y COMPETITIVIDAD (MINECO)

Running grants	PI	Grant	Amount	Period
1	Molinaro, Nicola	PSI 2015-65694-P PREDICTIVE CODING AND PREDICTIVE TIMING ACROSS MODALITIES AND COGNITIVE DOMAINS	88.209 €	01/01/2016 - 31/12/2018
2	Paz-Alonso, Kepa	PSI 2015-65696-P NEURODEVELOPMENT OF MAGNOCELLULAR AND PARVOCELLULAR VISUAL PATHWAYS AND THEIR CONTRIBUTION TO VISUAL RECOGNITION AND TYPICAL AND ATYPICAL READING	72.700 €	01/01/2016 - 31/12/2018
3	Carreiras, Manuel	APCIN 2015-061 MULTI-LEVEL INTEGRATIVE ANALYSIS OF BRAIN LATERALIZATION FOR LANGUAGE	231.000 €	01/12/2015 - 30/11/2018
4	Duñabeitia, Jon Andoni	PSI 2015-65689-P THE IMPACT OF MIXING LANGUAGES DURING CONCEPT LEARNING	64.251 €	01/01/2016 - 31/12/2018
5	Lallier, Marie	PSI 2015-65338-P DICHOTIC LISTENING: A WINDOW ONTO BILINGUAL READING DEVELOPMENT	64.009 €	01/01/2016 - 31/12/2018
6	Carreiras, Manuel	PSI 2015-67353-R BRAIN MECHANISMS OF READING IN GOOD DEAF READERS	108.900 €	01/01/2016 - 31/12/2018
7	Giezen, Marcel and Costello, Brendan	PSI 2016-76435-P TOWARDS THE DEVELOPMENT OF EVIDENCE-BASED ASSESSMENT TOOLS FOR SPANISH SIGN LANGUAGE	84.700 €	30/12/2016 - 29/12/2019
8	Soto, David	PSI 2016-76443-P BRAIN MECHANISMS FOR HUMAN WORKING MEMORY AND METACOGNITION ACROSS DIFFERENT STATES OF AWARENESS	58.080 €	30/12/2016 - 29/12/2019
9	Bourguignon, Mathieu	PSI 2016-77175-P WHAT KIND OF LISTENER ARE YOU? A DEGENERACY APPROACH TO SPEECH PROCESSING	87.725 €	30/12/2016 - 29/12/2019
10	Mancini, Simona and Alemán, José	FFI2016-76432-P LANGUAGE ATOMS: AN INVESTIGATION OF MOOD, PERSON AND TENSE FEATURES	54.450 €	30/12/2016 - 29/12/2019
11	Carreiras, Manuel	BFU2016-81721 ALIANZA SEVERO OCHOA Y MARIA DE MAEZTU: CENTROS Y UNIDADES DE EXCELENCIA ESPAÑOLES	120.000 €	01/01/2017 - 31/12/2019
12	Carreiras, Manuel	PSI2016-81881 APLICACIONES CLINICAS DE LA NEUROIMAGEN FUNCIONAL	20.000 €	01/01/2017 - 31/12/2019
Expected applications	**PI**	**Grant**	**Amount**	**Period**
20	BCBL Researchers	20 Plan Nacional Excelencia/Retos Projects	n/a	2018-2021

GOBIERNO VASCO – EUSKO JAURLARITZA

Running grants	PI	Grant	Amount	Period
1	Paz-Alonso, Kepa	PI 2016-1-12 ATLAS MULTIMODAL DE NÚCLEOS TALÁMICOS Y SU APLICACIÓN AL ESTUDIO DE LA DISLEXIA	55.791 €	16/01/2017-15/01/2019
2	Molinaro, Nicola	PI 2016-1-14 MARCADORES NEUROBIOLÓGICOS PARA EL DIAGNÓSTICO DE LOS TRANSTORNOS DEL DESARROLLO DEL LENGUAJE	57.260 €	16/01/2017 - 15/01/2019
3	Soto, David	PI 2017-1-25 LA INTERACCIÓN ENTRE LA MEMORIA OPERATIVA Y LA ATENCIÓN VISUAL A LO LARGO DEL CICLO VITAL	69.600 €	21/07/2017 -20/07/2019
4	Carreiras, Manuel	ELKARTEK KK-201700103 NEUROMOD: SISTEMA DE NEUROMODULACIÓN EN LAZO CERRADO PARA LA MEJORA DEL SUEÑO Y LA MEMORIA BASADO EN LA REGENERACIÓN Y MANIPULACIÓN NEURONAL	56.569 €	01/03/2017 - 31/12/2018
Expected applications	**PI**	**Grant**	**Amount**	**Period**
8	BCBL Researchers	8 Proyectos de Investigación Básica	n/a	2018-2021

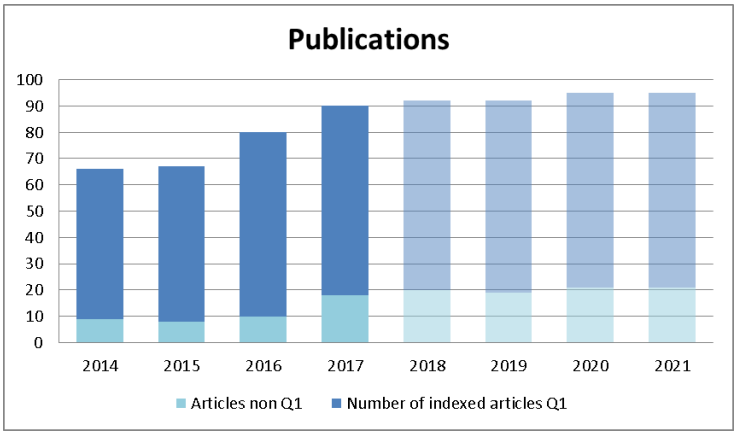
DIPUTACIÓN FORAL DE GIPUZKOA – GIPUZKOAKO FORU ALDUNDIA

Running grants	PI	Grant	Amount	Period
1	Lallier, Marie	99/17 MARCADORES NEUROBIOLÓGICOS PARA EL DIAGNÓSTICO DEL TRANSTORNO ESPECÍFICO DEL LENGUAJE (TEL) EN NIÑOS BILINGÜES	25.620 €	01/09/2017 -31/08/2018
Expected applications	**PI**	**Grant**	**Amount**	**Period**
8	BCBL Researchers	8 Proyectos de Investigación Básica	n/a	2018-2021

BBVA FOUNDATION

Running grants	PI	Grant	Amount	Period
1	Duñabeitia, Jon Andoni	IN[16]_CJS_PSI_0037 CAMBIOS CEREBRALES ASOCIADOS A LA ALFABETIZACIÓN DE ADULTOS	34.000 €	01/10/2016 - 31/03/2018
Expected applications	**PI**	**Grant**	**Amount**	**Period**
4	BCBL Researchers	4 Proyectos de Investigación Básica	n/a	2018-2021

Publications 2018-2021



Patents, Licences, knowledge and tech-transfer

During the period 2018-2021 the BCBL will continue focusing on **technological transfer to society**. It is important to note that translational research takes some time, especially for a centre created from scratch with the main mission of carrying out excellent basic research. Thus, we expect that our production in this domain will be accelerating in our next period. Thus, as the centre matures, in addition to carrying out basic research intended to increase knowledge, we will also intend to provide knowledge that can be applied to other bodies that, in the near future, can be transformed into products and services, while making this process as efficient as possible. In order to reach this goal, the BCBL Management will ensure that the research results undergo continuous evaluation with regard to their potential application and rapid transfer to their specific field of development. The BCBL Management will also continue promoting cooperation with the rest of the actors in the science and research system in order to increase the prospect for the transfer of knowledge and results between organisations.

Tech-transfer is one of the long term pillars for the BCBL, thus **strengthening the Basque Science System by transferring knowledge, technology and research results to society**.

This **Strategic Plan i**ncludes the development of three tech-transfer initiatives, which might be future start-ups, based on the technology and knowledge generated in the BCBL. These initiatives will be further explained in section 2.2.7.

2.2.2. Research Groups

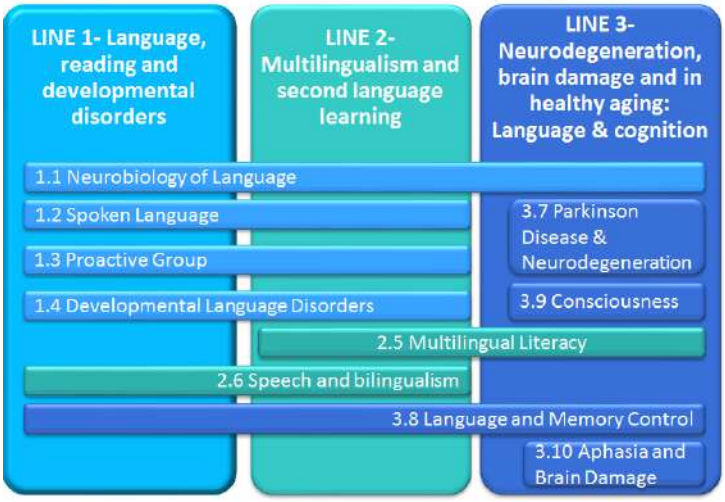
This section should include (Max. 3 pages):
Definition of research structure or organisation of the centre. Strategies and activities to support the attraction and retention of research talent. Expected evolution of the structure of personnel to achieve the strategic objectives of the centre.

Internal Organisation

The internal organisation of the centre follows the same schema displayed in 2.1.2, except that we have created a new research group. As it has done in the past, the BCBL will proactively develop new activities and research teams that complement and extend our three main research lines as the interdisciplinary study of language continues to advance. Currently researchers are grouped then into ten research teams led by senior and staff scientists (see below for the name of each group and of each group leader) that will dynamically change/increase as the research develops and new human resources are recruited. In addition, it is important to note each group carries out research mainly in one of the research lines, but not exclusively, so that, in some cases, the work addresses problems of two research lines, and may also collaborate with other groups to tackle a specific question of common interest.

LINE	RESEARCH GROUP	GROUP LEADER	POSTDOCTORAL	PhD STUDENTS
LINE 1-Language, reading and developmental disorders	1.1 Neurobiology of Language	M. Carreiras	B. Costello, M. Giezen, I. Quiñones, L. Amoruso, J. Cespón, J. Correia, M. Termenon	P. Dias, N. Fariña, J. Pejovic, S. Gisbert, S. Villameriel, A. Mohamed, S. Geng, P. Timofeeva
	1.2 Spoken Language	A. Samuel	S. Guediche, E. Kapnoula, R. A. López Zunini, L. Polyanskaya, L.B. Wilson	
	1.3 Proactive Group	N. Molinaro	C. Richter, M. Bourguignon	J. Martorell, I. F. Monsalve, S. Nara, P. Morucci, A. Zarraga
	1.4 Developmental Language Disorders	M. Lallier	M.Koutsogiannaki	A. Antzaka, M. Ostiz, J. Pérez Navarro, P. Ríos, C. Zugarramurdi
LINE 2-Multilingualism and second language learning	2.5 Multilingual Literacy	J.A. Duñabeitia	A. De Bruin, L. Hoversten	E. Antón, M. Borragán, J. Aguasvivas, L.Ivaz, C. Frances, Y. Liu
	2.6 Sentence Processing in Bilinguals	C. Martin	S. Caffarra, R. Garrido	E. Navarra, S. Schöffel
LINE 3-Neurodegeneration, brain damage and in healthy aging: Language and Cognition	3.7 Parkinson Disease and Neurodegeneration	M. Rodriguez-Oroz	D. Davidson, C. Caballero	S. Moia, B. Blanco, T.Esteba, A. Martínez
	3.8 Language and Memory Control	K. Paz-Alonso	L. Beourguignan, J. Hartzell, E. Abrahamsen	J.Arnaez, K. Gurunandam, M. Ibarbia
	3.9 Conciousness	D. Soto	M. Ordin	U. A. Sheikh, B. Carcedo, N. Mei
	3.10 Aphasia	M. Hernández	S. Mancini, N. Biondo	P. Heinzova, B. Ristic, D. Scarinci

Each group has a primary link to one of the three BCBL research lines and at the same time are aligned to the other lines as described below. There is a clear matrix of alignment, such that the "whole is greater than the sum of the parts", as shown in this figure.



Neurobiology of Language (PI: M. Carreiras): This research group contributes to the three research lines by investigating (Line 1) language comprehension in different modalities (Spoken and Signed Languages), Reading in the deaf, illiterates, and dyslexics; (Line 2) comparing language processing, and in particular morphosyntactic processes in bilinguals and monolinguals, and (Line 3), by investigating brain damage, presurgical mapping for brain surgery of tumours in the left hemisphere, and neuroplasticity by comparing brain functioning before and after brain surgery.

Spoken Language (PI: A. Samuel): This research group aligns with Research Lines 1 and 2, as we study natural language use in both native and non-native speakers. It examines how listeners recognize spoken words, and how certain contextual information (e.g., lip-read information, and lexical information) supports spoken word recognition. Our work on non-native listening investigates both how listeners learn L2 words and sounds, and how processing dynamics differ in non-native listening versus native listening.

Proactive Group (PI: N. Molinaro): The research activity of the group mainly focuses Research lines 1 and 2. In particular, it focuses on the role of prediction in language processing to provide information about how the brain builds up internal priors to constrain language perception. Once it provides robust and replicable evidence on language prediction, it aims at studying the relation between prediction and learning taking advantage of populations that are acquiring a new language (both children and adults). In addition, it investigates how brain oscillations entrain to external rhythms to optimally process the environment. In particular, it examines the multiple frequency bands to which brain activity is tuning to process speech (<2 Hz, delta band; 4-8 Hz, theta; >30 Hz, gamma)

Developmental Language Disorders (PI: M. Lallier): This group aligns with Research lines 1 and 2 by investigating the multifactorial nature of the neurocognitive bases of Dyslexia and SLI and the impact of bilingualism and cross-linguistic variations on the cognitive and neural substrates of reading and language development.

Multilingual Literacy (PI: J.A. Duñabeitia): This group contributes to research lines 2 and 3, since it focuses on language development and written language comprehension in multilingual individuals across lifespan. A series of experiments carried out in the last years have explicitly focused on second language acquisition in older adults as a way to promote healthy ageing.

Speech and Bilingualism (PI: C. Martin): This group is contributing to Research Lines 1 and 2. Most of the work is related to written and spoken language comprehension in adults, and with the incidence of orthographic rules in linguistic and non-linguistic tasks in children and adults. In addition, by investigating on how L2 readers and listeners comprehend language, and how native listeners comprehend L2 speakers (e.g., accented speech).

Parkinson Disease and Neurodegeneration (PI: M.C. Rodriguez-Oroz): This group contributes to research line 3 by investigating the effect on bilingualism on Parkinson disease, and potential neurocognitive biomarkers in early stages of the illness. In addition, this group investigates inhibitory control in Parkinson patients with impulse control disorders and on training higher cognitive functions in mild cognitive impairment patients

Language and Memory Control (PI: K Paz-Alonso): This group contributes to the three research lines by investigating (a) the universal versus specific reading processes in highly contrastive writing codes; the function-structure relations in the reading circuit, and language production in experts such as *bertsolaris* (verse improvisers); (b) the functional dynamics and structural connectivity of dorsal and ventral reading networks in bilinguals, and the differences in functional and structural connectivity as a function of being early versus late bilinguals; and finally, (c) the interactions between memory and language, and the developing new improved procedures to segment the hippocampus, neural networks that are able to examining motion in structural scans retrospectively, and building an atlas of the thalamic nuclei for studies in cognitive neuroscience.

Consciousness (PI: D. Soto): This group aligns Research line 3 on Language and Cognition as it deals with the brain processes that support the relationship between language and other cognitive systems (e.g. learning and memory, attention and visual perception) and the extent to which these processes are contingent on conscious awareness. Some of the work has a neurodevelopmental perspective and will consider the effects of cognitive ageing.

Aphasia and Brain Damage (PI: Mireia Hernández): This group aligns mainly with Research line 3 as it deals with brain damage, and specifically aphasia looking and impairments in comprehension and production in monolingual and bilingual patients.

Therefore, the research programmes of each of the research groups are aligned with the three principle research foci of the BCBL.

Strategies and activities to support the attraction and retention of research talent

Human resources and especially young researchers (predoctoral and postdoctoral) are the main assets of a knowledge-intensive centre such as the BCBL. Since the Centre was created, the Scientific Director and the General Manager have devoted much energy and time to creating a shared culture and the values of the Centre, integrating people, as this is a key factor to success. This task is even more complex in a multicultural centre with people from more than 29 different countries, but where diversity is considered an opportunity and a unique resource.

Having a human resources management strategy is crucial in scientific institution if the aim is to create good working conditions, assess the researchers and their activity and provide the appropriate environment to enable quality research and facilitate the attraction and retention of talent. In consequence, a continuous evolution of the already existing HR strategy is vital for the success of a research centre in order to adapt to the needs of our **PEOPLE**, so the BCBL is committed to the **HR Excellence in Research** process to: stand for a stimulating and favourable working environment for researchers, maintaining attraction/retention capacity; support actively a change in working culture; benefit from international visibility, and join a pan-European network consisting of researchers and research organisations for benchmarking activities in HR.

In order to carry out the **HR Excellence in Research** process we have established a **working group** which involves the General Manager, the Project Manager and the Lab Manager of the BCBL. The three members are currently acting as members of the “The EURAXESS Rights team” and volunteer to assess HRS4R applications received from institutions applying to the HR award and already HR awarded institutions which are in the process of renewing the award.

Possessing this HRS4R seal of excellence is a great honour for us, since it highlights the efforts of the BCBL to meet quality standards and create a favourable environment for research, fomenting mobility, attracting new talent and helping to strengthen the research lines.

Today, the BCBL is working towards the **new horizon** that the HR Excellence in Research establishes. This is why we are currently improving our previous international recruitment and selection processes and have implemented an **Open, Transparent and Merit-based recruitment process of researchers** (OTM-R). By ensuring that the best person for the job is recruited, OTM-R of researchers improves the effectiveness of the BCBL research systems, guarantees equal opportunities and access for all, facilitates developing an international portfolio (cooperation, competition, mobility) and makes research careers more attractive.

This process sets out, in chronological order, the various steps of the recruitment process, from the job advertising/application phase through to the appointment phase. It aims to build on the principles of the European Code of Conduct for the Recruitment of Researchers, providing more detailed information, practical.

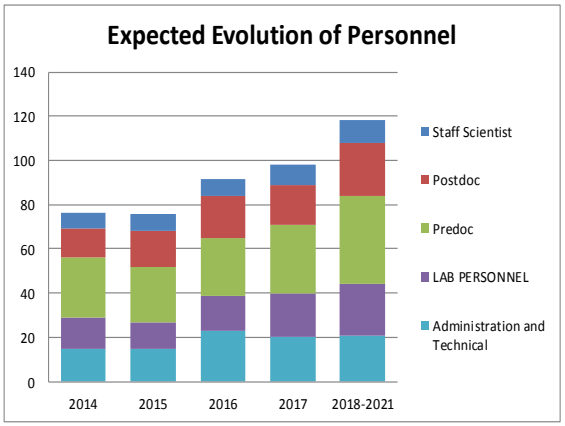
The BCBL OTM-R recruitment process includes the following steps:

1. Pre Advertising
2. Advertising and application
3. Evaluation and selection: Choosing the Selection Committees and screening and evaluation of candidatures
4. Appointment
5. Negotiation
6. Welcome Plan

In sum, to attract and retain talent we will continue launching very competitive calls and offer the candidates and the hired researchers the best possible working conditions with access to outstanding research facilities, continuous training in advanced neuroimaging methods, a unique combination of languages in the world, a rich intellectual atmosphere, access to international researchers that come regularly to the BCBL, access to international conferences that the BCBL organize every year, and allocation of budget to travel to international meetings anywhere in the world, the possibility to carry out innovative research in one of the groups, and collaborate with researchers of the different groups with different expertise, etc.. We always, emphasize combining deep theoretical groundbreaking questions with advanced methodological expertise and acting as a hub for world-leading skills in areas related to language.

Expected evolution of the structure of personnel to achieve the strategic objectives of the centre

We plan (1) to strengthen our capabilities for addressing frontier research on language and (2) transfer new generated knowledge to the areas of education and health. To do so, we expect (a) to grow, hiring new high-skilled researchers, incorporating new capabilities and more expertise, reinforcing multidisciplinarity, spreading the training capacities and raise our international visibility; (b) improve and update our facilities, to keep improving our research and to be an attractor for young researchers; and (c) to work more closely with software developers to create applications for diagnosis of disorders, learning and training, based on knew knowledge generated from our lab and others.



In the next four years we will create at least two more groups (one on language acquisition and another on advanced neuroimaging methods), and, if enough resources and strategically important, to reach a maximum of 15 research groups led by experts in other new areas of language, with special attention to high profile basic but also to translational research. In addition, we will strengthen the current groups. Currently each research group gets allocated 1 postdoc and 1 PhD student, plus some money for traveling and some special running costs, since we have a policy of open lab. It would be desirable, if budget permits, to allocate more internal resources to the groups (2 postdocs and 2 PhD students) regardless of additional external funding they can obtain. In addition, we expect to increase our research personnel (both predoctoral and postdoctoral researchers) through individual grants obtained in competitive calls (Ikerbasque Fellows, Ramón y Cajal Fellows, Marie Curie, Juan de la Cierva, La Caixa grants, etc.)

2.2.3. Internationalisation plan

This section should include (Max. 3 pages):
Agreements and collaboration frameworks with international entities that help in the internationalisation of the centre. Composition and role of the International Scientific Advisory Committee (ISAC). Highlight European and International projects/networks the centre aims to coordinate or take part in. Detail the research outputs expected for these collaborations: publications, patents, licences…
Visiting researchers, hosted or going abroad

Agreements and collaboration frameworks with international entities

For the period 2018-2021 the goal is to develop the international agreements signed during previous period, carrying out actions according to an established work plan defined by a joint follow-up committee. We will also keep on identifying international potential partners.

Besides the agreements and future applications for European Projects (**ERC** Ideas), the active participation and collaboration with other international teams is part of the strategy of every Research Area.

We identify and encourage eligible researchers in our centre to apply to the ERCs in different modalities. So far (2009-today) we have submitted 17 starting grant applications to the ERC, 7 consolidator grant applications and 4 advanced grant applications. Five of our applicants (Clara Martin, Nicolas Dumay, Nicola Molinaro, David Soto and Eugenio Iglesias) were invited to the second-phase interview. Clara Martin will be interviewed this September. So far, we have been awarded 2 advanced grants (Biliteracy, L2STAT). We will continue encouraging, guiding, training and helping our research personnel in the process of applying for ERCs.

In addition, we are currently working on a **COFUND** application; one of our researchers (César Caballero) is leading the application of an **ETN** proposal on neuroimaging methods (the institutions that participate in the proposal are The University of Nottingham, Donders Institute for Brain, Cognition and Behavior, Max Plank Institute for human cognitive and brain sciences, UMC Utrecht and Université de Genève) and we have been awarded 20 **Marie Skłodowska-Curie** grants (2010-today). We will keep encouraging young scientists to apply with us, so we can keep recruiting excellent fellows

We will promote the participation of our researchers in European consortia in the different schemas of the ERA. In fact, we have recently got together with the Max Planck institute for Psycholinguistics and the University of Bordeaux through the **Flag ERA** schema a project under the Human Brain Project call.

We are participating in international consortiums outside the EU. We lead an awarded international grant financed by the **Qatar** National Research Fund (NPRP 6 -378-5-035). Another consortium in which we are participating is the “reading across orthographies” with groups from Haskins Laboratories in the USA, University of San Francisco, Academia Sinica in Taiwan, and the Hebrew University in Israel. We submitted a grant to Human Frontiers, and a major paper about brain correlates of reading in four different orthographies, made possible through our international collaboration network with other leading institutions, has been recently published in the PNAS. We have also applied (July 2017) for an NSF grant together with researchers from the University of Kansas (still pending, but with very good feedback from the first round). Furthermore, we are carrying out a research project looking at brain and cognitive processes linked to literacy by comparing literates and illiterates in India in collaboration with Nandini Singh from the National Brain Research Centre of India in Delhi.

To sum up, the BCBL continues collaborating actively with the following international bodies:

INSTITUTION OF COLLABORATION	COUNTRY
Academia Sinica	Taiwan
Aston University	UK
Bangor University	UK
Bar-Ilan University	Israel
Brain Products GmbH	Germany
BrainCarta BV	Netherlands
British Dyslexia Association	UK
CENIR au sein de l'hôpital de la Salpêtrière	France
Chicago University	USA
CNRS	France
Danish Autism Association	Denmark
Danish Research Centre for Magnetic Resonance	Denmark

INSTITUTION OF COLLABORATION	COUNTRY
SISSA	Italy
SKOPE	Switzerland
Stockholm University (Centre for Research on Bilingualism)	Sweden
Syddansk Universitet	Denmark
The Hebrew University of Jerusalem	Israel
The University of Nottingham (Sir Peter Mansfield Imaging Centre)	UK
Toronto Western Hospital and Research Institute	Canada
Trondheim University	Norway
UC Berkeley	USA
UC Davis	USA
UC San Francisco	USA
Universidad Catolica de Chile	Chile

INSTITUTION OF COLLABORATION	COUNTRY
Deutsche Interessengemeinschaft Phenylketonurie (PKU) und verwandte angeborene Stoffwechsel	Germany
Dislebi	Spain
Ecole Normale Supérieure Paris	France
Erwin L Hahn Institute for MRI	Germany
European Dyslexia Association	Belgium
Federação Nacional de Cooperativas Solidariedade Social	Portugal
Fundación Arturo López, Nuclear Medicine and PET/CT Center	Chile
Ghent University	Belgium
Haskins Laboratories	USA
Haskins, Yale University	USA
Imperial College London	UK
Johns Hopkins University (School of Medicine, Neurology and Neurosurgery)	USA
Konstanz University	Germany
Laboratoire de Psychology et Neurocognition	France
Lancaster University	UK
Max Planck Institute	Netherlands
Max Planck Institute for Human Cognitiva & Brain Sciences	Germany
Münster University	Germany
National Institute of Mental Heath	USA
National Yang-Ming University	Taiwan
New York University	USA
Norges Teknisk-Naturvitenskapelige Universitet	Norway
Philips Medical Sistem	Netherlands
Purdue University	USA
Qatar University	Qatar
Radboud University Medical Centre	Netherlands
SCALAB	France
SEIN - Stichting Epilepsie Instellingen Nederland	Netherlands
Siemens Healthineers	Spain

INSTITUTION OF COLLABORATION	COUNTRY
Universidad Complutense	Spain
Universidad Complutense-Lab. Cognitive/Comp. Neuroscience	Spain
Universidad de Burdeos	France
Universidad Europea del Atlántico	Spain
Universidad Iberoamericana	Dominican Republic
Università di Perugia	Italy
Universitat Jaume I	Spain
Universitat PompeuFabra	Spain
Universitat PompeuFabra	Spain
UniversitätS-klinikum Münster	Germany
University College of London	UK
University Medical Centre Utrecht	Netherlands
University of Cadiz	Spain
University of California (Speech Neuroscience Laboratory)	USA
University of Castilla- LaMancha	Spain
University of de la Republica	Uruguay
University of East Anglia	UK
University of Exeter	UK
University of Granada	Spain
University of Groningen	Netherlands
University of Kaiserslautern	Germany
University of Leiden	Netherlands
University of Manchester (Neuroscience/Aphasia Unit)	UK
University of Oxford	UK
University of Reading	UK
University of San Francisco	USA
University of Stirling	UK
University of Vic	Spain
UPV/EHU	Spain

Composition and role of the International Scientific Advisory Board

Six high profile scientists with extensive experience in the management and evaluation of top-tier research centres were appointed to be members of the BCBL ISAB when the centre started.

In the beginning of 2017, Prof. Posner stepped down from his position on the ISAB, even though he was very enthusiastic about the BCBL, given that he was not willing at his age to engage in long trips, so the current members are:

Anne Cutler, Ph.D. Research Professor, The MARCS Institute, Western Sydney University, Australia and Director Emeritus, Max Planck Institute for Psycholinguistics, The Netherlands

William Marslen-Wilson, Ph.D. Honorary Professor of Language & Cognition, Department of Experimental Psychology and Director Emeritus, MRC Cognition & Brain Sciences Unit, University of Cambridge, U.K.

Timothy Shallice, Ph.D. Professor and Director Emeritus, Institute for Cognitive Neuroscience, University College London, U.K. and Professor Emeritus, Scuola Internationale Superiore di Studi Avanzati, Italy

George R. Mangun, Ph.D. (Chair). Distinguished Professor of Psychology and Neurology. University of California, Davis, U.S.A.

James L. McClelland, Ph.D. Lucie Stern Professor in the Social Sciences, Department of Psychology and Director, Center for Mind, Brain and Computation, Stanford University, U.S.A

Visitors programme

Currently, the BCBL has a strong track record with respect to internationalisation. The range of countries represented by the researchers the BCBL has had, and still has, is remarkable, as 20 different nationalities are represented right now within the BCBL staff. This shows how international the BCBL personnel is and how international networks are established. Through improvement of the centre's equipment, broadening of its research lines, and hiring of new researchers to work on existing research lines, it is clear that one of our objectives will be to strengthen these lines, more fully integrating the BCBL not only into individual projects with other research groups, but as part of their core international collaboration network and as part of long-term international grants (e.g., NIH and NSF grants in the USA, ERC advanced grants in the EU, etc.). Moreover, additional collaborations and strategies are followed towards internationalisation of the BCBL as described below:

The BCBL carries out several scientific activities and mobility programmes to strengthen the links of its researchers with external researchers and research centres, thus fostering long term and high-impact internationalisation.

- We will continue organising **international conferences**, workshops and seminars top help promote the BCBL as a knowledge hub for language research. This external promotion of the centre will continue, since it has been very successful so far, and we already have agreements in place for new conferences to be hosted by the BCBL.
- **External speakers series**: every other week we invite an external speaker to deliver a talk at the BCBL, hold a journal club with PhD students, and meet with researchers of the BCBL. This way, outstanding researchers from different areas in the field get to know the centre and the researchers get to know the external researcher. This will promote international collaborations and will lead to partnerships for grant proposals.
- Our **Visitor programme** is aimed at bringing the top researchers to spend some days at the BCBL so that they can collaborate with our researchers, participate in the daily life of the centre, and explore the prospect of new interactions and cooperation in the future. Thus far, more than 54 researchers from different universities and research institutions around the world (see Annex VIII) have visited the BCBL, 39 of whom stayed for over a month.
- Internship programme at the BCBL is designed to provide research training to students at all levels that may later join the centre as PhD students or postdocs. It also provides researchers with an opportunity to select and hire interns to help with their research, if they have funding available. This help can relate to a paper, a collaborative project, a master thesis, a part of a PhD thesis, or a way of establishing contacts/collaboration with other research groups and institutions. Furthermore, it is a good way to exploit the relationships and agreements with other centres for student exchanges. It is worth highlighting that 30 students have benefited from this programme through the end of 2014.
- **Visits** to **international institutions**: As part of internationalisation activities, the BCBL not only fosters the incoming of students but also facilitates visits to international research institutions. In addition to the planned stays abroad of the senior researchers and staff scientists, many of the staff researchers at the BCBL will apply for grants to visit international universities and/or excellence research centres. These grants are designed to strengthen the internationalisation of scientific training and technical capacity by incorporating the awarded student/staff into an outstanding research group for some months.
- We will also continue with the current programmes that we are using to **receive** students and researchers funded by foreign research agencies such as the Fyssen Foundation, the NOW (Nederlandse Organisatie voor Wetenschappelijk Onderzoek) and the Brazil Minesterio Da Educaçao (Brasil), and the Fundación Carolina.
- **Presentations** in international conferences and workshops. Apart from the budget provided in individual research projects, the BCBL allocates 1500 euros per year to each research member of the BCBL to present their work in international conferences and workshops so the world knows about the research and findings of the BCBL. This way we stimulate and support the presence of members of the BCBL in international forums, given that international collaboration comes about largely from the collaborations established by the researchers.
- **Administration, IT, Labs team improvement**: We encourage and finance our support staff (administrative, IT, lab staff) to attend several courses or meetings to improve their skills (e.g., courses for improving conformity with new grant accounting standards recently introduced by the EU). In addition, some members of our staff have been, and will be invited to several national and international forums. To name a few, our General Manager of the BCBL, Miguel A. Arocena PhD, has been regularly invited as external evaluator for the research centres associated with CERCA (Catalonian Research Centre's Association). This will also help to enhance the collaboration in managing with other national and international institutions from an administration perspective. As mentioned in previous sections, Larraitz López (Lab Manager), Ana Fernández (Project Manager) and Miguel A. Arocena are volunteer reviewers/experts within the European Human Resources Strategy For Researchers (HRS4R).

2.2.4. Training activities

This section should include (Max. 1 page):
Training activities for researchers and support staff in all the different career stages, designed to recruit, strengthen and retain the talent and personnel.

The BCBL considers people are the most important resource and the only guarantee of success for its global project. Our **personnel policy** is and will continue to be based on the following strategies:

- To build research teams that are highly-qualified, motivated, resourceful, willing to work in teams and open to the world.
- To incorporate excellent research personnel at national and international levels.
- To set up mechanisms for recruiting and maintaining researchers from early levels of training.
- To facilitate the incorporation of new professional bodies with a multidisciplinary focus to guarantee the transversality of scientific activities.
- To build a flexible and efficient system of student and researcher exchange.
- To stimulate programmes of collaboration with researchers of excellence from other centres.
- To define and develop an ongoing career development and training plan for each individual.
- To allocate a personal training allowance for every member of the BCBL research and support team.

Research Team oriented training: Young researchers are the soul of the Centre. Thus, one of our primary goals is to attract the best students in the world and provide them with world-class training so that they can develop their future careers in a successful way. Since the very beginning, we combined a highly competitive process of selection for researchers with processes for continued learning and training on all of the available theories and techniques. We will continue offering the researchers in the BCBL access to the best research facilities and the best training of advanced research techniques both via internal training mechanisms and by recruiting (on either a short-term or long-term basis) highly qualified researchers from other institutions with knowledge of new techniques that are of interest to the centre.

Following the HRS4R aligned internal policy a **brand new draft classification** aims to communicate the various characteristics, personal and technical key skills that researchers may have throughout their career. It describes four broad profiles that apply to all researchers and helps to identify the training gap they may have at every stage of their career.

- Group Leader (R4-Leading Researcher): The leading researcher is a principal investigator or professor who, apart from being a lead expert on a certain field, has strong managerial skills. One of his/her main duties will be to lead and supervise a group of researchers at different stages working on the same field. Also, embedding each researcher's work on the group's research line. These researchers will co-work with other group leaders, scientific director and general manager in order to follow the same working path and aligned with the centre's vision, mission and values.
- Staff Scientist (R3-Established Researcher): Researchers at this stage have a large degree of autonomy, typically holding the status of Principal Investigator or Professor. Their considerable expertise in the field enables them to conduct their own experiments but still need to co-work under the supervision of the Group Leader in order to follow the research lines of their group-colleagues.
- Postdoctoral Researchers_(R2-Recognised Researcher): Postdoctoral researchers who recently obtained their PhD and even though they are able to work under a significant level of independence they still need to progress in their expertise level, under the supervision of a Group Leader.
- PhD Students/Predoctoral Researchers (R1-First Stage Researchers): Are doctorate candidates at different stages and will be considered of this group until the completion of their PhD. This profile includes individuals doing research under the supervision of at least one Established Researcher (R3) and being part of a certain research group generally supervised by a Leading Researcher or Group Leader (R4)

Existing BCBL **Postgraduate Courses** (master programme "Cognitive Neuroscience of Language" and the PhD programme in Linguistics) will continue, and additionally a new PhD programme fully managed by the BCBL has been submitted for approval (more information in section 2.2.7).

Support Team oriented training: The BCBL firmly believes that training Improves employee performance, employee satisfaction, addresses weaknesses and increases productivity and adherence to quality standards. This is the reason to keep the training actions that have been performed until today and continue investing on it allocating part of the budget to this particular purpose.

2.2.5. Gender equality plan

This section should include (Max. 2 pages):
Include an analysis of the personnel of the centre, by gender and category. Define any measure intended to promote gender equality in the centre, including activities either organised or participated.

Analysis of the personnel of the centre by gender and category

The BCBL is conscious that research centres can be competitive only if they develop, attract and retain the best talent, both male and female. Consequently, since its beginning, the BCBL has promoted the equality of opportunities between men and women. In this sense, access to BCBL positions and promotion are based on purely academic merits, seeking an Open, Transparent and Merit based recruitment policy (OTM-R). In fact, attracting talent is based on the evaluation of the merits of each submitted candidacy, guaranteeing the same opportunities for all candidates, and trying to keep gender balance. These principles are also applicable to the selection of the staff team.

Apart from that, as a key point of its Gender Action Plan, the BCBL facilitates a flexible environment in which both men and women can combine their family and research lives (e.g., by requiring all researchers to be at the centre for only certain "core hours" of the day, and offering as much flexibility as possible). The objective is to create a workplace where the best talent can flourish, in line with the Strategic Vision of the European Research Area (adopted in 2010), that points out the objective for the year 2030 in which half of all scientific personnel in all disciplines and at all levels of the scientific system should be women. In fact, 62 % of the BCBL research community are female, while 38 % are male scientists (PhD students: 70 % female; 30 % male; Postdoctoral: 75 % female; 25 % male; Staff Scientists & Group Leaders: 40 % female; 60 % male).

The BCBL also encourages researchers (both men and women with equal rights) to present their candidacy for postdoctoral calls such as the Ramon y Cajal or Juan de la Cierva (where on average only about 15 % of the grants are awarded to women; 62 % however, in the case of the BCBL, our internal track record shows that women are awarded double this rate: 76 % of our grants have been to women), Ikerbasque fellows, Marie Skłodowska-Curie, etc. In this respect, communications on promotion and job opportunities are distributed to all the members so as to guarantee the same opportunities. Some studies indicate that individuals who are not given information on their readiness for a certain call, or who are not directly approached and encouraged to apply for promotion, might assume they were either not eligible, or not yet ready. So, at the BCBL, after general communication, personalised recommendations are done so as to encourage researchers to apply for all calls for which they would be competitive, with a special emphasis on encouraging women.

Also, not only from the administration point of view, but also from the academic perspective, the BCBL has been participating in a European project, under the VII Framework programme that focused on how language influences and forms the cognitive representations of women and men. We hope that this project will ultimately help address issues of inequality across Europe.

The BCBL Gender Action plan is managed directly by the General Manager of the centre and, as a result of this plan, the current situation is that 64 % of the BCBL employees are female and 36 % are men. This derives from the strategy which seeks the two main pillars of equity to balance the proper proportion of male/female:

1. Salary: no distinction in gender with regard to salary. Salary comes from the responsibility and/or research level, regardless of gender.
2. Promotion: promotion is always achieved on a performance basis, no matter the gender of the employee.

Measures intended to promote gender equality in the centre

The BCBL has developed a Plan for Equal Opportunities and Conciliation in order to achieve a favourable environment that may facilitate the conciliation of the personal and work lives of the team, in the sense established by law and the BCBL internal policies.

The BCBL promotes the following basic principles of action:

1. To respect diversity, promoting non discrimination due to reasons of race, colour, age, sex, marital status, ideology, political opinions, nationality, religion, sexual orientation, or any other personal, physical or social conditions among its professionals.

2. To develop the principle of equal opportunities. This principle is one of the essential pillars of professional development, entails the commitment to practise and demonstrate a fair treatment that may further the personal and professional progression of the BCBL team in the following areas:

   - Promotion, professional development and compensation: to value the knowledge and skills necessary to perform their work, through the evaluation process and the personal development plan.
   - Hiring: not to establish any salary differences due to any personal, physical or social conditions, such as sex, race, marital status or ideology, political opinions, nationality, religion, or any other personal, physical or social conditions.
   - Recruitment and selection: to choose the best professionals by means of selection criteria based on merit and the capabilities of candidates (OTM-R standards).
   - Training: to ensure the training of each professional, in the knowledge and skills that are required for the correct performance of their work.
   - Support for workers with different capabilities, promoting their effective occupation.
   - Promotion of transparent communication, encouraging innovation and granting professionals the necessary autonomy to exercise their functions.

3. To promote effective equality between women and men within the company in relation to access to employment, training, professional promotion and working conditions, promoting in this way gender diversity as a sign of social and cultural reality, and, in particular:

   - To commit to effective equality of opportunities between women and men both within the organisation.
   - To guarantee the professional development of women, removing any obstacles that may impede or limit their careers.
   - To potentiate mechanisms and procedures for selection and professional development that may facilitate the presence of women with the necessary qualifications in all of the areas of the organisation.
   - To promote the organisation of working conditions with gender perspective, allowing for the conciliation of the personal, working and family lives of the women and men who work in the company, ensuring elimination of any discrimination due to gender.

4. To implement measures of conciliation that may promote respect for the personal and family lives of its professionals and facilitate the best balance between the latter and the work-related responsibilities of women and men. Some of the implemented actions and policies are:

   - 35 working hours per week
   - Productivity is measured according to goal fulfilment
   - Flexible time of entry and exit, reducing lunchtime looking for an earlier leaving time
   - Kitchen and dining room at the working place
   - Meetings, talks and training sessions are always scheduled from 10.00 to 15.00
   - No meetings nor talks are scheduled out of regular working times
   - IT resources available to ease tele-working from home
   - Flexible holiday calendar
   - Overtime is voluntary
   - Part time working upon request
   - Total flexibility to allow meeting children's needs, attending medical appointments, etc.
   - Different timetable in summertime (9.00 – 14.30) to facilitate family reconciliation

Today, the BCBL is working towards the horizon of achieving the "Family Responsible Company (FRC)" award issued by the Másfamilia Foundation and supported by the Spanish Ministry of Labour and Social Welfare. FRC is an international movement that provides answers on liability and respect for reconciling work and family life. The Másfamilia Foundation has been created to provide innovative solutions, such as the FRC certificate, placing particular emphasis on the management of conciliation and support for the family, looking for a balanced work-life.

In conclusion, the BCBL has implemented an effective Gender and Equality Plan promoting an environment that ensures that the best employees are in the best positions, in terms of efficiency and equity. The criteria used by the centre to choose and promote employees are strictly technical and merit based, having achieved a proportion of female engaged in research which exceeds the international statistics.

2.2.6. Strategy for dissemination and transfer of knowledge, outreach activities.

This section should include (Max. 2 pages):
Include all the measures intended to be implemented for research communication and dissemination, at a scientific level and to the general public. Detail the actions to be carried out.

Since it was created, the BCBL has identified the need to develop and implement a comprehensive outreach plan. The main objective of the dissemination plan is to continue with our previous strategy: (1) Publish the results in highly-regarded **scientific journals; organise conferences, workshops and seminars** in order to disseminate to the scientific community our scientific findings, and (2) organise **BCBL events and tech-transfer** oriented to professionals in education and health; with our website and social media acting as channels for accomplishing both of these goals.

(1) Our programme will contribute to excellence and societal change strategy based on our work to advance knowledge and methods of research in the field of Cognitive Neuroscience of Language, and by transforming the outcome of fundamental research into products and services to the society (e.g., software, protocols), through the collaboration with other agents. In order to optimise the impact of publicly-funded research both at European and national levels, since it is essential to enhance economic returns and improve competitiveness through knowledge, the BCBL follows its "**Open Access**" policy so that results of publicly-funded research get disseminated broader and faster in the benefit of researchers, the innovation field and society in general. The added value provided by the BCBL regarding knowledge transfer, can contribute to the achievement of the societal challenges of Horizon 2020, by means of breakthrough solutions in at least two general objectives through social sciences and humanities research:

Health, demographic change and well-being: BCBL research will contribute in the topics understanding health and improved health information and data exploitation providing longer term support to topics in the areas of prevention, diagnosis, treatment and rehabilitation.

Europe in a changing world - inclusive, innovative and reflective societies: The BCBL will contribute to increase employment in the R&D sector (e.g., via language training to build international groups of workers in the technology fields) that must be a key to get out of the crisis, making its contribution to the challenge of inclusive, innovative and reflective societies.

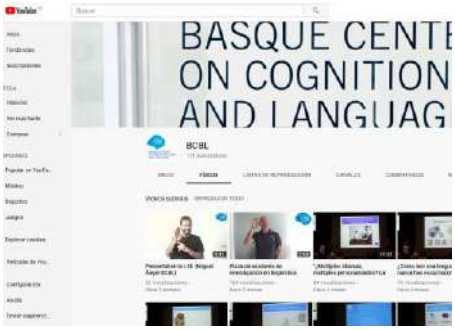
(2) **Organising and presenting results in specialized workshops, seminars and courses** for researchers and/or for the stakeholders and the general public. The BCBL will actively promote the dissemination of BCBL researchers' scientific activities and their contributions and achievements. The BCBL will continue to have a wide programme of workshops, seminars and courses that are led by BCBL researchers. The Centre will reinforce the promotion of these activities motivating researchers to lead them and supporting the organisation. Interestingly, in some workshops we have had notable success by combining two days dedicated to the scientific community and one day for stakeholders and the general public, thus linking basic research to applications in education and health. Another format we have used, and will continue using in the future, are the "brain talks" offered to the general public scheduled before each scientific conference or workshop organised by the BCBL.

(3) **Communication activities for the general public.** The BCBL will actively promote initiatives to create awareness about the research work performed and its implications for citizens. Outreach activities should also introduce students from schools and universities to science, research and innovation. Following the BCBL's philosophy, the researchers will receive specific training in 'transfer and dissemination of research results', and will share the research done with the general public via different outreach activities such as:

- The 'ZIENTZIASTEA' (Science, Technology and Innovation Week, http://www.zientzia-astea.org/) that attracts thousands of visitors across the Basque Country. The researchers will participate in organising and managing one of the exhibition booths presenting research results in an interactive fashion.
- The Brain Awareness Week is an international campaign aimed to raise awareness about the progress and advantages of research related to the brain, and it is coordinated by "Dana Alliance for Brain Initiatives" and "European Dana Alliance for the Brain".

- Events to thank the audience: "Gracias" and "Eskerrik asko" are two dissemination events to thank the volunteer participants who have taken part in our experiments. There, they received feedback about the results of the experiments they had volunteered for, highlighting the importance of disseminating the findings.

- These kinds of scientific meetings are especially relevant since they manage to bring together the PI of the projects with participants and create a collaboration network between both parts, in which participants realise of the usefulness of volunteering.



- Pint of Science It is a platform which allows people to discuss about science with the researchers who carry experiments out. It is a non-profit organisation, managed by volunteers, created by a community of postgraduate and postdoctoral researchers. The annual festival lasts 3 days and it is held simultaneously in different bars and pubs worldwide.
- We will create a new research blog: Hosted on the BCBL web server, this blog will gather news and information about journals, press articles, and events (i.e. conferences, workshops, meetings and seminars) related to the topics of the research project, (e.g. functional brain networks, bilingualism). We will contact authors of the commented publications so that they offer a more informal and general description of the work so that blog visitors can express their opinion, and bring attention to other relevant works or events. This will be an e-forum for dialogue between researchers, scientists and interested webzines, with international impact.
- Building upon our previous successes in promoting the scientific work at the BCBL, published research results will be summarized, explained and put into context in press releases, which will then form the basis for articles in local and national newspapers, and popular science magazines, such as Mente y Cerebro, Scientific American, New Scientist, SINC, etc. In a similar vein, we will create short videos and podcasts which will be uploaded in the BCBL website and distributed to different media via the contact the BCBL has with different communication agencies so that the researcher will have the opportunity to be interviewed on TV and radio programmes. Brain-related research is very popular and in demand by the general press, radio and TV. These activities will be an opportunity to reach a large audience and improve public awareness of the importance of science and research to society.

- In addition to its **off-line media** presence (press, TV and radio), the BCBL will improve its presence in the already created corporate channels in the main **social networks**: Facebook, Twitter, Google+ and Youtube. Using these channels, the BCBL sends a bi-weekly communication related to cognitive neuroscience and language, which is followed and forwarded by the followers of these channels. An exceptionally innovative aspect of the BCBL's on-line communication is the Open Cognitive Neuroscience initiative, which is based on the publication in YouTube of short (< 5 minute) videos related to the BCBL's research areas. Each time a researcher from the centre publishes a scientific article in a prestigious scientific journal, s/he briefly explains the finding using language directed at society at large.

- Finally, the BCBL is playing a very active role collaborating with Frontiers for Young Minds. Frontiers for Young Minds (kids.frontiersin.org) provides a collection of freely available scientific articles by distinguished scientists that are shaped for younger audiences by the input of their own young peers. This website is spreading science edited for kids, by kids, but only in English so far. The goal is to be an international and multilingual platform to bring science to kids in an understandable way. BCBL is collaborating actively in this enterprise by translating the papers on understanding neuroscience into Spanish and has been acknowledged as sponsor (https://kids.frontiersin.org/sponsors). The webpage in Spanish is scheduled to be operative during 2018.

2.2.7. Other activities

This section should include (Max. 3 pages):
Other complementary actions not covered in the previous sections.

In this section, we will describe some relevant activities that have not been included in the previous sections despite being relevant to the BCBL:

University Teaching. PhD programme in Cognitive Neuroscience

The BCBL envisions starting a new PhD programme in "Cognitive Neuroscience", which currently is pending approval from ANECA. We anticipate that this programme will allow us to expand the pool of excellent students who will enrol in our programme starting from different fields (e.g., linguistics, psychology, physics, engineering, etc.). Please, find below the thesis to be defended in the future:

Student	Supervisor	Theis title	Defense date
Alexia Antzaka	Marie Lallier	The impact of cross-linguistic morphological differences on visual processing in reading	2018
Jovana Pejovic	Monika Molnar	Effects of semantic context and sensory-motor information on monolingual and bilingual phonological development	2018
Peter Boddy	Eiling Yee	The Relationship between Context and Semantic Access	2018
Sophie Schloeffel	Clara Martin	Does learning to read in L2 affect native language reading and general cognitive skills	2018
Joyse Medeiros	Blair Armstrong	Semantic ambiguity effects: interaction between perceptual modality and information availability timing	2018
Irene Fdez. Monsalve	Nicola Molinaro	Language predictions across the cognitive hierarchy	2018
Asier Zarraga	Nicola Molinaro	Visual attention and reading skills: is the brain's own rhythm relevant?	2018
Bojana Ristic	Simona Mancini	Are different prediction mechanisms used for different syntactic purposes?	2019
Borja Blanco	Cesar Caballero	Influence of bilingual exposure in the developing human brain	2019
Patricia Dias	Manuel Carreiras	Changing between languages in two different modalities: is there a price?	2018
Paula Ríos	Marie Lallier	Evaluación longitudinal neurofisiológica de los procesos de adquisición de la lectura	2018
Saul Villameriel	Manuel Carreiras	Lexical access in cross-modal bilinguals	2018
Lela Ivaz	J.Duñabeitia	Translation recognition in Bilinguals across the Lifespan	2018
Yuriem Fernández	J. Duñabeitia	Cambios neuroanatómicos asociados al bilingüismo durante el envejecimiento normal	2018
Jaione Arnaez	Kepa Paz-Alonso	Bases neurales de la recuperación repetida en la memoria	2020
Camila Zugarramurdi	Manuel Carreiras	Estudio longitudinal de la adquisición de la lectura y desarrollo de predictores comportamentales	2019
Mikel Ostiz	Manuel Carreiras	Diseño y evaluación de una herramienta terapéutica a través de la música para personas con dislexia	2020
Dana Scarinci	Simona Mancini	Verbal morphosyntactic processing	2020
Maria Borragan	J. Duñabeitia	Word learning in multilingual contexts	2020
Pavlina Heinzova	Simona Mancini	Argument Structure Processing in Bilingual Population	2020
Usman Ayub Sheikh	David Soto	Decoding Semantic Representations Across Different States of Visual Awareness	2020
Candice Frances	J. Duñabeitia	The Effects of Learning in a Foreign Language	2021
Iria de Dios	Carlos Acuña	The role of grammar in language processing	2021
Sanjeev Nara	Nicola Molinaro	Predictive processing across sensory modalities	2021
Maddi Ibarbia	Kepa Paz-Alonso	Functional and structural MRI correlates of higher cognitive functions	2021
J. J. Perez Navarro	Marie Lallier	on going	2021
Eugenia Navarra	Clara Martin	Phonemic retuning during reading acquisition in average reader children	2021
Teresa Esteban	M.C. Rodríguez-Oroz	Deterioro cognitivo en la enfermedad de parkinson	2021
Sandra Gisbert	Manuel Carreiras	Functional changes in the language network in patients undergoing awake neurosurgery	2021
Jose Aguasvivas	J. Duñabeitia	on going	2022
Kshipra Gurunandan	pending	on going	2022
Jordi Martorell	pending	on going	2022
Piermatteo Morucci	pending	on going	2022
Polina Timofeeva	pending	on going	2022
Shuang Geng	pending	on going	2022
Begoña Carcedo	David Soto	on going	2022
Ning Mei	David Soto	on going	2022
Stefano Moia	pending	on going	2022

Knowledge and Tech-transfer initiatives

One goal for the 2018-2021 period is to launch to the market three initiatives to transfer knowledge generated by the basic research of the centre and offer added value services and products to society through innovation. We have the opportunity to combine the existing capacities and new technologies to transfer part of the scientific advances of the BCBL to society in the form of products and services:

(1) The first initiative is a **clinic for the diagnosis, treatment and monitoring of learning disorders, focused primarily on school children**.

The clinic capitalizes on the research knowledge of the BCBL regarding learning disabilities using neuroimaging techniques. The aim is to provide early diagnosis of learning disabilities (specifically, SLI, dyslexia and dyscalculia) in children at risk, as well as a more complete diagnosis of children already having learning disabilities, by providing a detailed assessment of different cognitive processes. This is an opportunity for establishing collaboration with professionals in the field to set up a way of providing a detailed and well-informed diagnosis.

The characteristics of the first initiative are similar to those of a clinic with two important strategies:

1. ASSISTANCE: The clinic will be a valued complement for the diagnosis of learning and development disorders.
2. RESEARCH: The clinic will supply the database of the Basque Centre on Cognition Brain and Language (BCBL), transforming it into a win-win cooperation between both bodies. The clinic will supply the database of the BCBL, making this a win-win collaboration between both bodies. The BCBL's expertise will benefit the clinic, while the collection of clinical histories in the database will benefit the BCBL's research.

The clinic is built and will start giving diagnoses and support to therapists in 2018.

(2) In the second stage, we are **developing and will market educational software** and **software for valid early diagnosis** of learning disorders such as dyslexia, dyscalculia or specific language impairment disorders. The software will consist of tools for early diagnosis of learning disorders with multimedia support, previously tested in a large sample. It will be presented as a user-friendly suite supported by findings obtained from the basic and excellence research by the BCBL. It will be distributed through the marketing channels appropriate for these advanced diagnosis programmes.

These software will be oriented towards the world of education. Given its multimedia support, the software will permit automation of the process, interaction with the child, and the possibility of evaluating results quickly against a growing, aggregated database, allowing for increasing adjustment of the diagnosis discrimination factor, while increasing the research database of the BCBL.

During recent years, we have started designing the materials and the underlying software for stimulus presentation. We are in the phase of standardizing the test. The final software will be a valuable tool for early diagnosis and training with multimedia support. It will be presented as a user-friendly suite supported by findings obtained from the basic and excellence research by the BCBL. It will be distributed through the marketing channels appropriate for these advanced diagnosis programmes.

So far, the BCBL is working on three software packages, the two first scheduled to be finished during 2018 (one for dyslexia, and other for Specific Language Impairment - SLI) a third one for math abilities and dyscalculia. In addition, we are developing a training videogame of phonological and visual abilities and are in contact with professional video games companies how to create educational applications on videogames grounded on findings from neuroscience and education.

These products will distinguish themself from other diagnostic suites in the market by the following:

- Digital support
- Scientific quality and nature
- Support: User-friendly. Interactive. Recreation-oriented
- Discrimination factor: diagnostic accuracy

(3) Third, we are developing the **Presurgical mapping project**. One of the recent research avenues we have been exploring is the presurgical mapping of patients with brain tumours and epileptic focus in areas related to language functions. This initiative pertains to the health and medical domain. In collaboration with the neurosurgery department of the Cruces hospital in Bilbao we are carrying out at the BCBL the pre-surgical and post-surgical mapping of language in patients that go into brain surgery, and provide support for mapping language during the surgical operation as well.

In addition, **other priority lines to be developed** in methods and tech transfer are:

- Construction of an atlas for neuroimaging: initially focusing on thalamic nuclei

- Software development for education and health for:
  - Diagnosis and remediation of language disorders
  - Second language learning.
  - Rehabilitation aphasic patients
  - Cognitive training in the elderly and in patients with neurodegeneration
- Identification of individuals through electrophysiological biometrics

Management of Intellectual Property Rights (IPR)

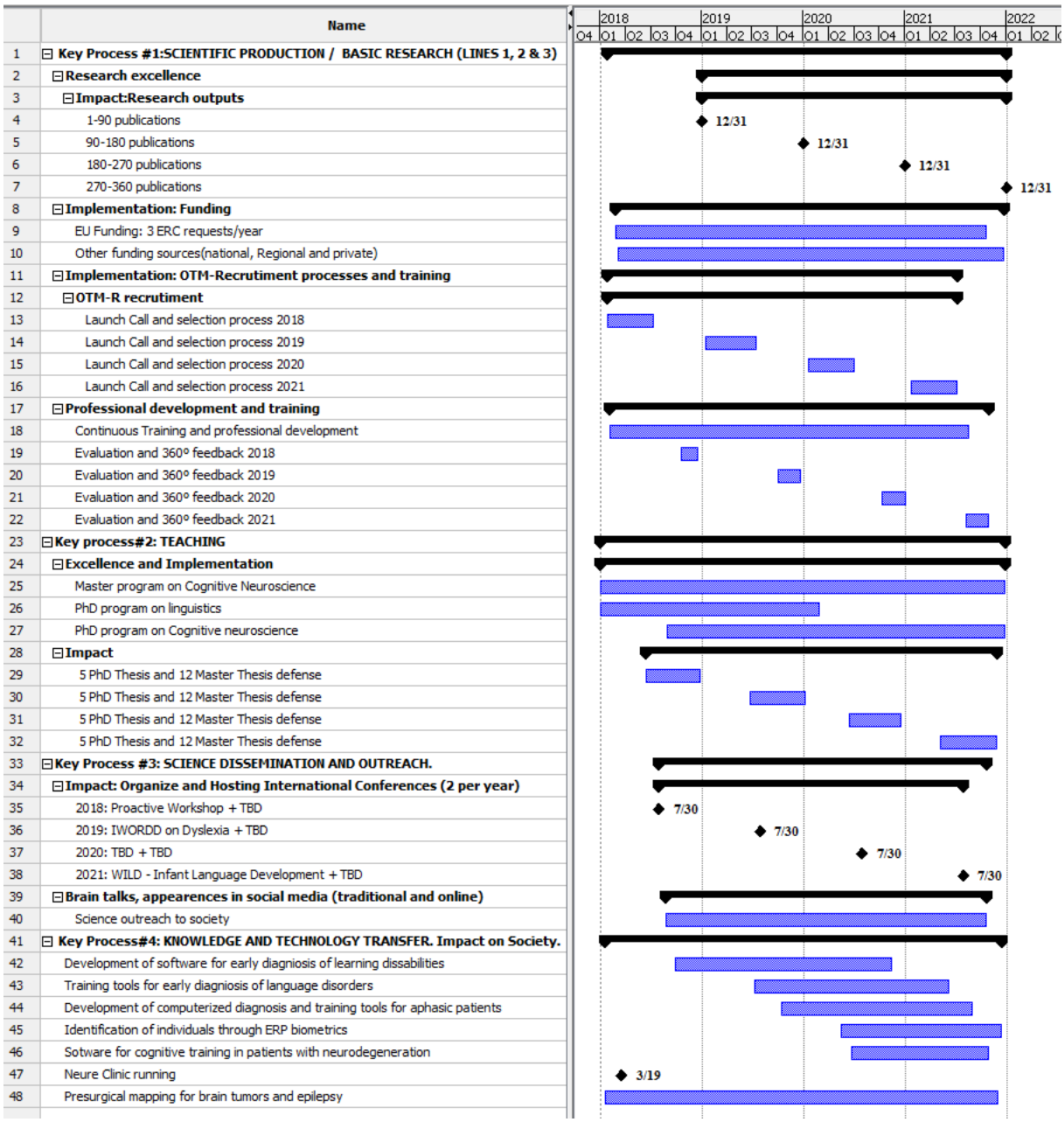
The BCBL ensures that researchers at all career stages reap the benefits of the exploitation (if any) of their R&D results through legal protection and, in particular, through appropriate protection of Intellectual Property Rights, including copyrights. Policies and practices should specify what rights belong to researchers and/or, where applicable, to their employers or other parties, including external commercial or industrial organisations, as possibly provided for under specific collaboration agreements or other types of agreement.

All these transfer actions are managed: (a) to guarantee the rights of our researchers as a “inventors” (b) to ensure the “return” as scientific benefits in the sense of new contracts for researchers (c) to transfer real new knowledge into technology for the education and health sectors (d) to guarantee the open access for the essential results achieved to the medical and research communities.

2.2.8. Planning

This section should include (Max. 2 pages):
Temporal plan for the deployment of the strategies and activities

The work plan for the next four years is summarized in the GANTT chart that contains how the different actions and activities that have been described in the different sections will develop as time unfolds. In particular we will focus on research outputs, fund raising, recruiting and training of personnel, international visibility, transfer of knowledge and technology, and acquisition of new infrastructure.



	Name
1	**Key Process #1:SCIENTIFIC PRODUCTION / BASIC RESEARCH (LINES 1, 2 & 3)**
2	**Research excellence**
3	**Impact:Research outputs**
4	1-90 publications
5	90-180 publications
6	180-270 publications
7	270-360 publications
8	**Implementation: Funding**
9	EU Funding: 3 ERC requests/year
10	Other funding sources(national, Regional and private)
11	**Implementation: OTM-Recrutiment processes and training**
12	**OTM-R recrutiment**
13	Launch Call and selection process 2018
14	Launch Call and selection process 2019
15	Launch Call and selection process 2020
16	Launch Call and selection process 2021
17	**Professional development and training**
18	Continuous Training and professional development
19	Evaluation and 360º feedback 2018
20	Evaluation and 360º feedback 2019
21	Evaluation and 360º feedback 2020
22	Evaluation and 360º feedback 2021
23	**Key process#2: TEACHING**
24	**Excellence and Implementation**
25	Master program on Cognitive Neuroscience
26	PhD program on linguistics
27	PhD program on Cognitive neuroscience
28	**Impact**
29	5 PhD Thesis and 12 Master Thesis defense
30	5 PhD Thesis and 12 Master Thesis defense
31	5 PhD Thesis and 12 Master Thesis defense
32	5 PhD Thesis and 12 Master Thesis defense
33	**Key Process #3: SCIENCE DISSEMINATION AND OUTREACH.**
34	**Impact: Organize and Hosting International Conferences (2 per year)**
35	2018: Proactive Workshop + TBD
36	2019: IWORDD on Dyslexia + TBD
37	2020: TBD + TBD
38	2021: WILD - Infant Language Development + TBD
39	**Brain talks, appearences in social media (traditional and online)**
40	Science outreach to society
41	**Key Process#4: KNOWLEDGE AND TECHNOLOGY TRANSFER. Impact on Society.**
42	Development of software for early diagniosis of learning dissabilities
43	Training tools for early diagniosis of language disorders
44	Development of computerized diagnosis and training tools for aphasic patients
45	Identification of individuals through ERP biometrics
46	Sotware for cognitive training in patients with neurodegeneration
47	Neure Clinic running
48	Presurgical mapping for brain tumors and epilepsy

3. GOVERNANCE, INFRASTRUCTURES AND MANAGEMENT FOR EXCELLENCE

3.1. Governance

This section should include (Max. 2 pages):
Description of the legal entity of the centre and the partner institutions/persons and the agreements among them and the centre.

The BCBL was established as a non-profit association on November 19, 2008. The Association currently comprises the following **founding partners**:

Ikerbasque
Basque Foundation for Science
www.ikerbasque.net

Innobasque
Basque Innovation Agency
www.innobasque.eus

Provincial Government of Gipuzkoa
www.gipuzkoa.eus

University of the Basque Country
www.ehu.eus

PROMOTED BY:

Basque Government
www.euskadi.eus

ACCREDITED AS:

Severo Ochoa Center of Excellence

Governing Bodies

The General Assembly is the Association's supreme governing body; it includes all members.

The Steering Committee is the body responsible for administering the Association; it ensures that the articles of the Association are complied with and that the agreements reached at the General Assembly are fulfilled.

The Chairmen of the BCBL's General Assembly and Steering Committee for the 2013-2016 period have been:

"Ikerbasque" foundation, represented by:

- 2013-2014: Itziar Alcorta Idiaquez, Viceconsejera de Universidades e Investigación del Gobierno Vasco (Basque Government Deputy Councilor for Universities and Research).
- 2015-today: Aldofo Morais Ezquerro, Viceconsejero de Universidades e Investigación del Gobierno Vasco (Basque Government Deputy Councilor for Universities and Research).

3.2. Infrastructure and Equipment

This section should include (Max. 3 pages):
Detail of the current and future infrastructures to achieve the strategic objectives of the regional and the centre. Detailed justification of the need and opportunity of the equipment.

Today the BCBL has **four sites**. The headquarters (main laboratories and offices) are located in the San Sebastian Technology Park with a total surface area of 1,823 m2 (1,170 m2 for offices, meeting rooms, auditorium, library and lounge and 653 m2 for labs). The second location is a 100 m2 space located in the Jose Mª Korta building in the University of the Basque Country Campus. In addition, the BCBL extended its facilities with the Junior Lab in Vitoria (120 m2) to test children and a shared lab in Murcia (100 m2) to test monolinguals.

LABORATORIES

Miramón, Korta & Murcia: The full complement of neuroscience methodologies is available, including EEG/ ERP, MEG, and MRI. All facilities are connected to a high-speed local network that also supports communication between user workstations. As far as possible, the same stimulus presentation and data recording hardware and software are employed throughout the lab facilities, to ensure comparable experimental setups across different experimental methods/platforms (Behavioural, MEG, MRI, EEG, Eye Tracking, babyLAB and NIRS). For special-purpose applications, a skilled technical group supports the installation and use of different hardware and software. Murcia Lab is a lab located in the campus of the University of Murcia, for accessing easily to Spanish monolingual participants. Korta is a lab located in the university campus (UPV/EHU) in San Sebastian to easy access to university students.

Junior Lab: As a consequence of the numerous projects that imply child participation, the idea of creating a permanent lab inside a school was explored. Today, the Junior Lab is located in Carmelitas School in VITORIA (1 hour driving distance from the BCBL). It is an external laboratory of the main BCBL Lab with significant potential and possibilities for exploring language development in children. It is equipped with 2 behavioural cabins, 1 eye tracker and 1 EEG. The behavioural cabins have a touch screen in order to ease participant performance and the EEG facilities comply with the standards of the main laboratories. The eye tracker is a cutting-edge device. It is special as it has a mirror system allowing participants to move during the experiment. This feature is very critical in the case of child participation. In addition, to this permanent lab, we set up agreements with many other schools to collect data. (See Table below with a summary of the techniques available in each lab)

	Behavioural	MEG	MRI	EEG	Eyetracking	Baby EEG & Behavioural	NIRs
Miramón	4	1	1	3	2	1	1
Korta	4	-	-		1	-	-
Junior Lab	2	-	-	1	1	-	-
Murcia	1	-	-	1	-	-	-

AVAILABLE TECHNIQUES

Behavioural: Eleven soundproof chambers are available to conduct behavioural experiments. Each chamber is equipped with a standardized, quality, experimental setup, which can collect reaction-time data such as push-button responses or naming latencies. Chambers can be used for individual testing sessions with one experimenter monitoring individual participants, as well as for testing up to 4 participants simultaneously. The hardware for each chamber includes monitors (ViewSonic G90FB 19" CRT), soundcards (Soundblaster Titanium X-FI, with ASIO support) and headsets (Sennheiser HMD 280 pro push button response boxes). The standard software packages are DMDX, Presentation, or home made programmes in Psychopy or Psytoolbox.In addition, the technical group can build and develop special-purpose hardware and software when the standard configuration does not provide the functionality for a particular study. A special sound booth is available as well in Miramón, in order to prepare and run production and perception experiments.

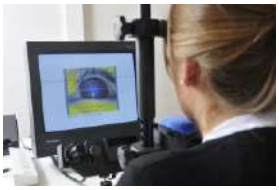
MEG: Magnetoencephalography (MEG) provides a non-invasive method for recording cortical activity with exceptional temporal resolution and fine spatial resolution. The MEG facility at the BCBL is a 306-sensor (204 planar gradiometers and 102 magnetometers; arranged in a helmet configuration) Elekta Neuromag® device with 16 digital trigger lines and 8 auxiliary analog input channels. The setup will allow for the delivery of both auditory and visual stimuli, and recordings can be performed in either supine or sitting position. The MEG device also includes an integrated 64-channel EEG system (60 single channel and 4 differential electrodes) for simultaneous MEG and EEG recordings that can be acquired at a sampling rate of up to 8 kHz (5 kHz standard) in either

AC or DC. Throughout the experimental session, a participant's head position within the scanner is sampled so that the data can be linked to independently-acquired anatomical MRI images. The facility at the BCBL includes passive shielding to reduce external noise, together with a MaxFilter™ software, which filters artifacts as well as internal and external noise sources. For data analysis, the Elekta Neuromag® includes advanced analytical software, including powerful tools for visualization and source modelling of the recorded data. We have acquired some new Phantonics panel speakers and are presently evaluating the effect of the speakers as there is a long discussion thread on the MEG Community list about auditory stimulation. Most of the concerns relate to artifacts with a different system (Etymotic ear plugs) and could be resolved with this system.

MRI: Since June 2016, the BCBL houses a Siemens 3T MAGNETOM PRISMAfit MR scanner that allows researchers to perform functional MRI (BOLD and perfusion ASL), structural MRI, diffusion-weighted MRI and MR Spectroscopy studies. This system uses the Siemens Total Imaging Matrix (TIM) 4G technology, including the TimTX TrueForm and TimTX TrueShape technologies for parallel transmission and selective RF excitation for better B1 homogeneity, reduced Specific Absorption Rate (SAR), and enabling zoomed imaging with the ZOOMit application. The Tim 4G technology, with up to 64 independent channels available for parallel reception, is exploited with two dedicated 20-channel head coil and a 64-channel head/neck coil. The fully digital transmission and reception design with the DirectRF technology integrates all components inside the magnet room, connected with fibre optic cables with the equipment room, for reduced noise and improved stability. The Prismafit system offers a large anatomical coverage with a maximum field of view (F0V) of 50 cm. Decisively, it comprises a unique XR 80/200 gradient coil with a maximum amplitude of 80 mT/m and a slew rate of 200 T/m/s simultaneously on all three axes for increased SNR in the most demanding applications, enabling us to obtain higher spatial and temporal resolutions, reduced scan times and excellent workflow with subject's comfort in mind. The scanner also integrates real-time monitoring of cardiac pulse, ECG and respiration signals. The PRISMAfit system includes a new generation of MRI protocols, for example the CAIPIRINHA and MP2RAGE sequences for structural imaging, and the simultaneous multislice (SMS) sequences for highly accelerated functional and diffusion weighted imaging. The BCBL has a research agreement with Siemens Healthcare Spain for technological support and access to the latest MR sequences and protocols developed for MAGNETOM systems, and it is developing its own tailored MRI sequences with the Siemens IDEA and ICE programming environments. Furthermore, the BCBL has established agreements with international research centres (e.g. the Athinoula A. Martinos Centre in MGH/Harvard, the CMRR at the University of Minnesota, the Donders Institute in Nijmegen) to make the best imaging protocols available to our researchers. In addition, the BCBL MRI lab is equipped with multiple stimulation and response MR-compatible peripherals for all type of fMRI studies, including 4-button optical response pads (Current Designs), response grips (Nordic Neurolab), a rear-projection video display (Panasonic SXGA+ 7000), an audio system comprising noisecancelling headphones (MR Confon) and microphone (Optoacoustics), S14 insert earphones (Sensimetrics), a MR-compatible EyeLink 1000 Plus eye tracking system (SR Research), and a MP-150 BIOPAC system for external monitoring of physiological signals (e.g. cardiac pulse, respiration, electromyography and skin conductance). For simultaneous EEG-fMRI experiments, a MR-compatible BrainAmp Plus system with up to 64 electrodes (Brain Products) is also available.

EEG: The BCBL is equipped with five EEG systems that are installed in Faraday cage soundproof chambers. Each chamber is equipped with a BrainAmp DC® amplifier. Using the recording software (Brain Recorder®) all the amplifier options, including the switch from DC to AC recording mode as well as selecting different filtering bandwidths, can be controlled. The BrainAmp DC® is more stable than older EEG systems in a variety of applications, and it supports simultaneous EEG/TMS and EEG/MEG input to the Brain Computer Interface and Neurofeedback. Chambers are equipped with a 64-channel system as well as with a 32-channel amplifier. The BrainAmp DC® is a portable amplifier which connects to any laptop and can be powered with batteries. As a result, the 32-channel amplifiers can also be used for experiments outside the centre (e.g., in schools or hospitals). Each chamber is also equipped with sets of electrodes that can be arranged on EasyCaps® in whatever pattern needed for a given experiment. Each cap has 64 equidistant electrode positions (10 %-System); several different sizes are available, including those suitable for children. For off-line EEG/ERP analyses, Vision Analyser® 2.1 software is available on each computer via a network key. An EEG fMRI compatible BrainAmp MR Plus (32 channels) was also been acquired and multimodal type experiments can therefore be carried out.

EYE TRACKING: Our centre is equipped with the hardware and software resources to carry out and analyse a wide range of on-line reading experiments and studies using the visual world paradigm. Our Labs have four units of the latest and most complete systems for eye tracking: EyeLink 2K provides an excellent sampling rate (2000 Hz) and is especially suitable for real-time data collection. EyeLink 2K can be used for monocular as well as binocular eye tracking, and the system is perfectly compatible with most contact lenses and eyeglasses. This system has a very high average accuracy, down to 0.15º. Many paradigms can be implemented in the EyeLink 2K, such as the visual world paradigm, the boundary technique (parafoveal previews) or silent sentence reading. The EyeLink2K system uses a remote desktop mounting, which allows participants to be liberated of any head-mounted cameras. The EyeLink 2K is also portable, which enables fieldwork to be conducted in other locations than the centre, depending on the needs of the test population.



BABYLAB: In our state-of-the-art infant lab, a number of methods and techniques are available to discover the first steps of human language development. The behavioural set-up supports the Visual Habituation, Head-turn Preference, and Intermodal Preferential Looking procedures to assess preverbal infants' general language skills (from 3 to 12 months of age), and to investigate older infants' syntactic and lexical knowledge up to 28 months of age. The behavioural set-up is supplemented with an electrocardiogram (ECG) system that collects heart rate recordings of the infant during behavioural tasks. ECG activity reflects how infants' attention is being modulated and regulated in the context of specific language experience. In addition to the methods at the behavioural and physiological levels, we are also equipped with EEG/ERP systems suitable for infants and children. Electrophysiological recordings are advantageous in infancy as they provide a direct and online measurement of processing abilities; moreover, the exact same technique can be applied throughout the whole lifespan, making it possible to track language-related developmental changes. Our EEG/ERP systems can be integrated with the ECG system as well. The BCBL babyLAB offers a cutting-edge research venue within an exceptional environment for investigating monolingual and bilingual language development comprehensively.

NIRS: Near-infrared spectroscopy is a light-based imaging technique that may be of great value in our studies. In particular, our system, NIRScout, is an ultra-compact and scalable solution for applications where flexibility is the dominant concern. This system is ideally suited for longitudinal studies with children, combined EEG-functional/NIRS studies and freely-moving studies. For instance, it provides a flexible methodology for measuring cortical activity during overt speech production while avoiding some of the limitations of traditional imaging technologies. The BCBL Nirscout has eight illumination points and sixteen sensors, can enlarge, is EEG-compatible, and has three caps from baby to infant studies available.

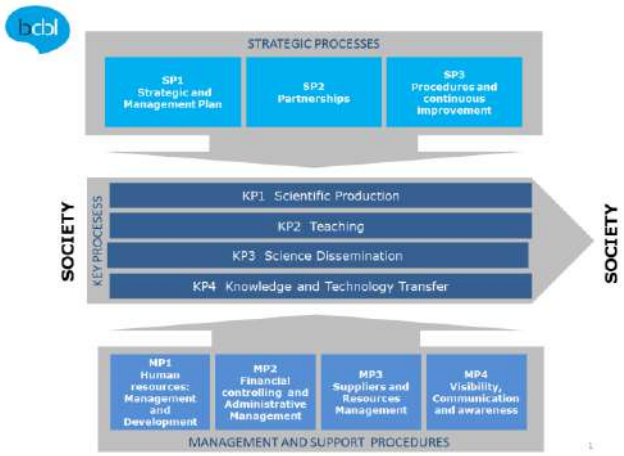
COMPUTING FACILITIES: The BCBL Information System provides high degrees of performance, reliability and availability of both data and computing resources. High-performance computing clusters allow the execution of sophisticated data analyses. Network services facilitate secure data sharing within and between research teams. The extensive software resources include tools for development and execution of experimental tasks, data processing, and production of scientific communications. Fast delivery of network services is guaranteed by a high-speed optical backbone network. Eduroam (Educational Roaming) is an international project with the purpose of providing a single Wi-Fi space in the member institutions. The objective is delivering an internet connection service in the easiest and transparent way. The BCBL is integrated in the eduroam network, so the visitors/people from other institutions integrated in the eduroam network who are in transit at the BCBL are able to use our Wi-Fi service. In the same way, our staff members in transit are able to use the Wi-Fi service in the associated institutions.

Researchers thus have all the information technology that they need to design, execute, analyse, and report on an almost unlimited range of behavioural and neuroscientific investigations of language and cognition.

In sum, taking advantage of our advanced technical platforms and the advanced technical expertise of our human resources, combined with ground breaking research questions, we will generate new knowledge in our three main lines of research, aiming to apply this knowledge in two fields essential to the welfare state and the future of the country, Health Care and Education. Across the three research lines, we will actively promote as well expertise in advanced research methods, which have fuelled and enabled many recent theoretical advances.

3.3. Management

This section should include (Max. 3 pages):
Organisation of the centre. Systems or procedures for internal evaluation and quality assurance.



The BCBL introduced and implemented standardized internal procedures for all relevant aspects of its operation, in order to clarify and simplify its functioning always assuring the quality, ethics and proper finantial controlling of the research, and to streamline the relationships between its existing members and new members. These procedures deal with hiring of new researchers, joint scientific activities in BCBL, manage bought out items and supplies, resources management, etc. The operation procedures for an internet-supported organisation and accounting system are already developed and implemented. In addition, we will continue with the procedures that have been implemented for disseminating the research done in the BCBL (e.g., lab meetings) and for running experiments in the different labs of the centre (e.g., project presentations, request form to the lab managers, etc.). All these processes are described in our internal wiki, so that each member of the BCBL can easily check for any procedure. In sum, to carry out activities of research and training in the three research lines using the facilities described above we have in place (1) several procedures and platforms based in web technology, some directly linked to research and training, and others needed by the support personnel to sustain the operations at the BCBL, (2) Manual of Procedures and Roles (Key Policies***)***, and (3) Procedures for internal evaluation and quality assurance.

(1) Platforms based on web technology for management: The BCBL created several platforms, accessible from outside the BCBL that facilitates employees' mobility and remote work. These are (1.1) Enterprise Resource Planning (ERP) system; (1.2) Resources for data analyses and remote access; (1.3) wiki; (1.4) web Participa; (1.5) ticket system; (6) main web; (7) Conferences webs.

(1.1) An **Enterprise Resource Planning (ERP) system**, named Open Bravo, is currently running at the BCBL. This is a system that integrates internal and external management information across an entire organisation, embracing finance/accounting, purchasing and services, customer relationship management, etc. ERP systems automate this activity with an integrated software application. The ERP contains an extensive list of procedures for purchases, accounting, finance controlling, conference travel, absences from work, holidays, reimbursement of expenses, and reserving facilities and equipment or requests for maintenance.

(1.2) For **resource-demanding statistical analyses**, there are machines with generous capabilities and either Windows and Linux server operating systems. Among the software for such computations are Matlab, SPSS and R, complemented with open source toolboxes and well-known specific tools for fMRI research, such as SPM, AFNI, or FSL. Remote access to data and applications is enabled by a VPN SSL appliance. BCBL is connected to the Internet through RedIRIS, the Spanish science and technology network. An optical link managed by i2Basque, the Basque equivalent of RedIRIS, is able to provide symmetric broadband of up to 1Gbps, thus covering any **potential need. Remote access to data and applications is enabled by a VPN SSL appliance.**

(1.3) Our **wiki** is continuously updated and includes all kind of information that might be necessary for our employees, such as the employee handbook, all meeting minutes, the repository of publications and conference proceedings, grants, resources, training courses, news and media, how to, FAQ, events, experimental procedures and much more. Being a wiki, this is made possible via contributions from all members of the BCBL.

(1.4) The **web Participa**. Another task for which continuous improvement is crucial is laboratory management, which involves recruiting a large number of voluntary participants **and managing** them adequately, is our Participa website. The web Participa is a very valuable asset to book participants. Once the lab managers receive the request form, they open an experiment in the web Participa. All the participants with a profile compatible with the requirements set in the request form receive an email explaining the experiment, the duration, the technique, etc. If the subject wants to participate in the study, he/she can enter in the web Participa and book a specific time in the available slots to do the experiment. This allows for the recruitment of participants and tracks their information so they can be contacted again if needed. It also allows participants an easy location to point to after they have had a positive experience with the BCBL, thus enlarging the database and the recognition of the BCBL in society. This specific website for recruitment and booking of participants has been running since the summer of 2011. More than 10.000 volunteers are already registered.

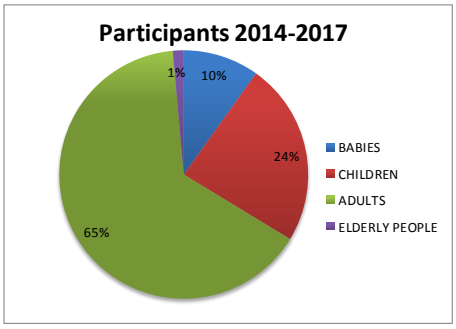
- Researchers can obtain the complete linguistic profile of the registered users and can filter potential candidates from there.

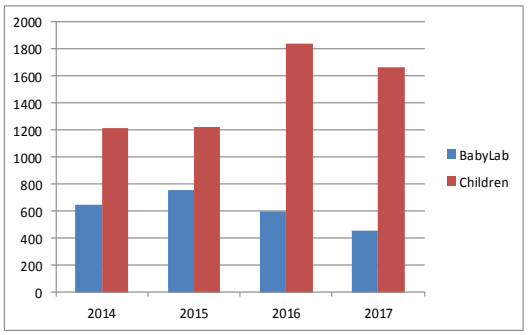
- This website is also useful for labs booking management.

During the 2014-2017 period the BCBL completed almost 25.000 experimental sessions involving more than 10.000 participants, thus providing the local community with an important grass-roots group for learning about and developing an appreciation for our research, and scientific research more generally. Since the BCBL opened, the number of participants has increased, indicating that our efforts to interact with the local community and involve them actively as part of our mission are bearing fruit and predict a very optimistic future trajectory.

In order to carry out all the experiments developed at the BCBL, we need the active participation of babies, children and adults (between 18 and 35 years old), as well as elderly participants.

The following chart shows the 24.952 experimental sessions carried out throughout the 2014-2017 period and how these were distributed according to the following group ages. Participation of babies and children is particularly high in our research projects as shown in these graphs:





(1.5) Our **ticket system** allows employees to request General and Lab Maintenance, Travels, open an experiment, laptop loans and any other IT support.

(1.6) the **main web** www.bcbl.eu that contains information about the mission of the BCBL, the research lines, the human resources, the facilities, our research output, the transparency portal, the purchasing processes, the events that are organised by the BCBL, and the main news related to our activity. This is a portal for disseminating our research to other scientists but also to the society. It is updated constantly in three languages: English, Basque and Spanish.

(1.7) **Conference webs:** The BCBL creates a website for each congress, providing all the information related to presentations (posters, conferences) together with their abstracts, programmes and practical information about the event.

(2) Manual of Procedures and Roles (Key Policies): This manual is a collection of rules regarding practical and logistical aspects and all processes involved at the Centre. It aims to provide a suitable framework to meet the goals of an excellence centre, the compliance of the indicators stated by the agreement signed with the Basque Government, and to fulfil those requirements coming from applicable laws. This manual, which will continue to evolve with the Centre, summarizes the processes and policies within the organisation:

(2.1) **Personnel Policy**: After a thorough analysis of the institution HR policies, we have developed and improved, among others, the recruitment process. Open, transparent and merit-based recruitment (OTM-R) has been included as a key part of this process. OTM-R brings benefits to researchers, institutions and a country's research system. More specifically, OTM-R makes research careers more attractive, ensures equal opportunities for all candidates and facilitates mobility. Overall, it may contribute to an increase in the cost-effectiveness of investments in research. As member of the organisations involved in the development of HRS4R, we have analysed, assessed and integrated the recommendations and principles of OTM-R into our internal recruitment policies.

As member of the 2nd cohort of organisations involved in the development of HRS4R, we have analysed, assessed and integrated the recommendations and principles of OTM-R into our internal recruitment policies.

We have used the Report of the Working Group of the Steering Group of Human Resources Management on Open, Transparent and Merit-based Recruitment (OTM-R) of Researchers and the checklist for ensuring the completeness of our analysis and the corresponding policy definition.

The management team supports all researcher needs, not only from the purely managerial point of view, but also including searching for participants, running experiments in the lab and preparing materials for the researchers.

(2.2) **Open Access policy**: Following our "Open Access" policy, the results of publicly-funded research get disseminated broader and faster in the benefit of researchers, the innovation field and society in general.

To this end, the BCBL has made an agreement with the University of the Basque Country (UPV/EHU) to use ADDI (Archivo Digital para la Docencia y la Investigación) as its official repository to register all the scientific production of the centre since January 2016.

ADDI is the digital archive for learning and research materials of the University of the Basque Country (UPV/EHU) designed to organise, archive, preserve and disseminate via open-access the intellectual output generated as a product of the teaching and research activities and, therefore, includes PhD thesis, Master's thesis, end-of-degree projects, scientific papers, dissertations, book chapters, teaching material, etc.

(2.3) **Personal data protection policy**

According to Spanish Organic Law 15/1999 of 13 December, the Personal Data Protection Act (PDPA) is aimed at guaranteeing and protecting the treatment of personal data, public freedom and the fundamental rights of physical persons, especially as regards their family and personal honour, intimacy, and privacy. These regulations are applicable to all BCBL personnel and all external personnel who collaborate with the centre. All documentation with data of interest is handled in such a manner that its integrity and confidentiality is guaranteed, preventing the access to this documentation by any unauthorized persons.

The BCBL adopts as well **three pillars of Corporate Social Responsibility**, which include:

(2.4) **Economic Responsibility**: The BCBL adheres to a culture of social responsibility, voluntarily assuming commitments that go further than regulatory obligations and accepting Corporate Social Responsibility (CSR) through a global focus from its own corporate strategy.

- To collaborate in the economic development of the community.
- To meet legal obligations.
- To be a non-profit entity and reinvest surplus into its own activities.
- To establish transparent corporate managerial criteria and transmission of values.

(2.5) **Social Responsibility**

- To ensure equal opportunities.
- To provide personal, family, and work-life conciliation.
- To establish active ergonomic policies and occupational health and implement a balanced salary system.
- To promote communication channels between management and workers.
- To pay attention to training needs.
- To support and respect the protection of human rights.
- To respect occupational rights.
- To establish an environmental policy.

(2.6) **Environmental policy**

At the BCBL we actively support the conservation of the environment and have policies to reduce energy consumption.

(3) Procedures for internal evaluation and quality assurance

(3.1) **Evaluation and quality assurance**: Existing processes for assessment are used as a basis for developing each employee's professional career. We have implemented and we will continue an annual review process both for Admin and technical staff and researchers, giving them a detailed description of those skills and capabilities required to develop their careers, the needed guidance and training. An scheduled training plan and a professional development plan is developed for each member.

For researchers, this will involve setting guidelines to suggest possible professional career paths within the BCBL goals, not only in terms of scientific expertise but also managerial skills To evaluate researchers' performance and development, we will follow the usual criteria used by the largest funding agencies in the world, for instance, NSF in the USA and the ERC in Europe. While it is not clear if current metrics are providing the expected knowledge regarding to the real improvement of the scientist or research centre, we defined the following indicators considering (1) the scientific quality through the number of publications appearing in the Web of Science (WoS) or Scopus; (2) competitive fund raising, such as ERC, Marie Skłodowska-Curie, and Plan Nacional grants; and (3) other indicators based in recruiting, training and technology transfer: thesis, researchers recruited, agreements with sectorial entities and tech-transfer initiatives.

3.4. Future development of the centre

This section should include (Max. 2 pages):
A view on the next steps of the centre after 2021.

The BCBL, on the horizon of 2021, is determined to become:

1. A world reference point and hub for multidisciplinary research in Cognitive Neuroscience of Language, where research excellence goes hand in hand with the versatile capacity to develop innovative projects with a high impact in Education and Health. We expect to consolidate the current 10 research groups and to create 2 to 5 additional groups to strengthen the research lines described in this report. We expect that each research team will focus primarily on a research line, but we also expect researchers from different groups to collaborate with members of other groups, since one of the strengths of the BCBL is its interdisciplinary character. One of the keys for consolidating these three lines of research will be the capacity to attract and retain talent. In addition, in order to reach our goals, we foresee stronger collaborations with other high profile international entities and also with entities of the Basque network for science and technology. Finally, to reach and maintain this goal, we will continue attracting resources by participating in different calls at various levels including the Basque Government, the Spanish Government, the EU and other international agencies. In addition, in line with our commitment to communicate science at different levels, we will continue organising scientific events and events for the general public.

2. A field leader in terms of how to adapt, advance and transform the outcome of fundamental research into products and services to society, through the collaboration with diverse educational and health institutions. For instance, in order to find an outlet for the knowledge generated by the basic research of the centre, and offer more **added value services and products to society through innovation**, we are discussing with two professional video games companies to create educational applications on videogames grounded on findings from neuroscience and education. The BCBL will be present in two fields essential to the welfare state and the future of the country, Biosciences, Health Care and Education. In Health Care specifically, apart from the projects that are already in place with leading bodies in the research and treatment of the elderly, such as the Instituto Gerontológico Matia through the Ingema Foundation or the Donostia Hospital and Biodonostia with Parkinson Disease patients, we will continue collaborating with the neurosurgeons of Cruces Hospital to provide pre-surgical, surgical and post-surgical mapping helping to increase the quality of life of patients that need brain surgery. This is a very innovative project that combines basic research and assistance to patients. In addition, we will continue developing cognitive tools for remediation neurodegeneration and brain damage (e.g., aphasia).

Another pillar of society is Education. The BCBL, given its mission and its lines of research, will be actively present in studies related to learning (e.g., learning a second language) and learning disabilities (e.g., SLI, dyslexia, dyscalculia), especially in a bilingual environment. We are already collaborating with various schools both in Donostia and Vitoria. Moreover, in the Sagrado Corazón School of the Carmelite order in Vitoria, we will continue running experiments in our permanent **Junior Lab** in order to more conveniently perform longitudinal experiments on the children attending the school. In addition, we keep a close relationship with Dislebi (Basque association for dyslexia) among other associations. It is quite likely that the BCBL will produce knowledge that can be transferred to the educational arena, including information regarding typical processes and how these can be improved (e.g., when a foreign language will best be assimilated), as well as knowledge regarding individual differences and learning disabilities and how these can be helped. In addition, the BCBL is providing assessment tools for diagnosis of several learning disabilities (dyslexia, dyscalculia and SLI) both in Spanish and Basque, a current demand from society and professionals. Additionally, the BCBL will provide software for diagnosis and intervention in developmental disorders, and also through “Neure Clinic”, specialized diagnosis for developmental disorders, based on behavioural and neuroimaging data. This initiative is based on the experience acquired throughout years of research and in view of the opportunity provided by the availability of a first rate human team and scientific equipment, we have the opportunity to **combine the existing capacities and new technologies to transfer part of the scientific advances of the BCBL to society** (2nd axis of Basque Government’s Euskadi 2020 programme) in the form of a product and a service.

3. A driving force and catalyst for important projects in the Research Development and Innovation (R+D+i) system within the H2020 framework. These types of projects should also help to create synergies that in turn lead to a more comprehensive restructuring of the country. This, in turn, will contribute to building bridges and common projects among the general public and private bodies belonging to the R+D+i system, within the Spanish Strategy of Science and innovation, the PCTI (**RIS3 Basque Strategy- Biosciences**) and H2020. The added value provided by the BCBL regarding knowledge transfer, can contribute to the achievement of the societal challenges of Horizon 2020, by means of breakthrough solutions from multi-disciplinary collaborations.

4. An environment that provides young people in the post-doctoral stages of their careers, highly qualified and specialized international researchers and administrative and technical staff with the opportunity to develop unusual and ambitious projects in excellent conditions. It is vital for the BCBL to be attractive in this regard. Nevertheless, we should also take into account that competition in Europe is very intense, so agile adaptations to changing interests in the field, the development of new techniques, and to available funding schemes are paramount.

5. A centre that provides an optimal work atmosphere with an international and multicultural environment for research; this will help promote the creation of hard-working international and interdisciplinary teams, summarized in the next points:

    a. Team (Human Resources): People are the key success factor of our strategy. The BCBL is a whole, where researchers, managers and support personnel work together on a team-based and collaborative way. We look for polyvalent (e.g., combination of different methods or one method to different theoretical questions) and complementary (e.g., diverse theoretical backgrounds and expertise in advanced methods) profiles, so that each individual can develop a successful career.

    b. Innovation (Processes): Innovation and creativity are the soul of our activity. We yearn for excellence in everything we do, fostering people participation. To that end we recruit personnel from a wide range of areas who are experts in their particular domain.

    c. Coherence (Excellence): The human resources are aware of the aims established by our governing bodies, so our infrastructures, equipment and working habits are consistent with the objectives of excellence.

    d. Knowledge (Transfer): The way to connect our human resources, innovation and excellence to the society by the educational, health and social entities.

The support from the BERC action will be an opportunity to situate the BCBL at the forefront of Cognitive Neuroscience with outstanding research facilities competing for the best human resources with the best centres worldwide. The BCBL has a remarkable trajectory since it was funded, leading to its current status as a top research institute in the world. That can then lead into how getting the highest support from the BERC framework will provide a major new push upward, accelerating what is already a really impressive trajectory. We are very competitive in attracting young researchers. In overall terms we are optimistic about the chances of succeeding in the planned prospective activities. The updates of the facilities (e.g., the MRI) will help us to continue to produce frontier research and keep being attractive to recruit new research personnel. Additionally, the support from the BERC initiative will help to increase our human resources to strength some of our strategic research lines.

The BCBL has rapidly evolved in the first term of its academic life and, at present, its management schemes and international reputation allow us to be much more effective on the attraction and recruitment processes. Undoubtedly, the highest support from the BERC schema will strengthen our position in the world. In the same vein, the Severo Ochoa label awarded to the BCBL is has been also an attractor-guarantee for new researchers and PhD students from any country; and definitely the Severo Ochoa label is added value for our educational and health partners, and for companies of our productive sector as well. In this sense, this funding scheme is expected to create a chain reaction. This initial funding would greatly enhance our ability to secure additional major funding sources, excellent researchers, and new and updated equipment to continue our work far into the future.

Finally, the actions described in the document to be taken to achieve the goals of the centre developed through the research lines with the increased human resources and research facilities will have a tremendous impact on the quality and quantity of our research and in the generation of new knowledge for not only the scientific community, but for society at large. This is because language is so inherently central to our everyday lives, education, health, and overall well-being. Consequently, deepening our understanding of language and using that knowledge for the benefit of society is expected to be an equally central line of scientific inquiry. We have a trajectory in mind to accomplish precisely this with the critical help from the BERC framework.

3.5. Financial planning: quantification and economic justification

3.5.1. Budget

This section should include (Max. 3 pages):
Include information on the budget for the period 2014-2017 and the budget foreseen for 2018-2021. All the expenses must be justified by means of a detailed description of its specific destination and a study of the financial sources expected to cover those expenses.
Include the table supplied in the Excel file.

2014-2017 PERIOD

In the last four years, the BCBL has grown significantly with regards to activity, results, amount of personnel and, hence, also budget levels. The increase in the different expenditure items can be noted in the following detailed chart:

BUDGET	2014	%	2015	%	2016	%	2017	%	TOTAL 2014-2017	%
Personnel	2.463.913	66,50%	2.546.477	69,30%	2.768.183	56,11%	3.125.000	61,76%	**10.903.573,00**	**62,76%**
Other costs	966.601	26,09%	1.030.234	28,04%	1.199.287	24,31%	1.385.000	27,37%	**4.581.122,00**	**26,37%**
Investments (total)	274.789	7,42%	97.809	2,66%	966.065	19,58%	550.000	10,87%	**1.888.663,00**	**10,87%**
TOTAL BUDGET	**3.705.303,00**	**100,00%**	**3.674.520,00**	**100,00%**	**4.933.535,00**	**100,00%**	**5.060.000,00**	**100,00%**	**17.373.358,00**	**100,00%**

It is noteworthy that, in 2016 and coinciding with the outset of the Severo Ochoa funding programme (1.000.000 € per year), the annual budget increased considerably. See below a deeper analysis of these three main items:

Personnel

The expenditure on the BCBL personnel has entailed, on average, a 63 % or the total annual budget of the centre. Thus, it has been the major expenditure item. Between 2014 and 2017, this item has been increase slightly over 660.000 euros.

The BCBL personnel are distributed in 3 main departments: Research Personnel, Lab Personnel, and Admin and Technical Personnel. The total expenditure gets divided in these three items as follows:

	BERC 2014-2017 Euros	PROJECTS 2014-2017 Euros	GRANTS 2014-2017 Euros	TOTAL 2014-2017 Euros
RESEARCH PERSONNEL				
Staff Scientist	534.951	751.268	350.330	1.636.549
Postdoc	278.018	1.197.587	1.580.463	3.056.068
Predoc	447.537	952.590	963.646	2.363.774
LAB PERSONNEL	492.732	723.969	223.259	1.439.961
ADMINISTRATION				
Admin and Technical	2.255.430	151.792	0	2.407.222
TOTAL	**4.008.669**	**3.777.207**	**3.117.698**	**10.903.573**
Funding percentage	37%	35%	29%	100%

Moreover, given its importance, the chart below shows the Research Personnel department divided into categories. .

It is also relevant to outline the origin of the funds supporting the cost of the BCBL personnel. Funding derives from three different resources: Grants, Research Projects and General Budget of the BCBL (BERC programme). The average distribution of these three origins can also be seen in the previous chart. It should be noted that variability along these four years has been significant in this respect, during which funding derived from the BERC programme has decreased from 46 % in 2014 to 32 % in 2017, following the historical tendency to increase the self-finance capacity.

Other management costs

This item includes all the BCBL costs which are not related to personnel or investments. Thus, it is broad and varied in terms of the nature of the expenses. See below the items detailed for every year:

	2014	2015	2016	2017	Average
OTHER COSTS					
Other management costs				*(estimated figures)*	
Renting costs	234.647	230.944	233.536	295.090	248.554
Works, repair and maintenance	108.655	100.649	131.148	129.764	117.554
Suplies: Electricity and Helium	131.895	135.987	127.420	150.674	136.494
Conference Proceedings Abroad	172.917	200.522	256.187	304.749	233.594
Participants and lab specific tools	64.432	76.161	80.568	158.586	94.937
Other general costs (insurances, indirect costs, etc.)	220.570	253.396	307.490	282.828	266.071
Other Social Expenses	33.485	32.575	62.938	63.309	48.077
TOTAL	**966.601**	**1.030.234**	**1.199.287**	**1.385.000**	**1.145.281**
FUNDING SOURCE: BERC	**75%**	**62%**	**52%**	**49%**	**59%**
FUNDING SOURCE: GRANTS AND RESEARCH PROJECTS	**25%**	**38%**	**48%**	**51%**	**41%**

In this cost breakdown, it can be observed that the amounts of the "Renting" and "Conference Proceedings Abroad" expenditure items are the most significant over the years. Besides, almost all items have increased progressively due to the growth of the centre over the years.

Importantly, the Operational Costs of the BCBL are supported with general funds (BERC grant), as well as other grants and research projects, both in direct and indirect expenditure items, depending on its nature. The evolution over the years, just like in the case of the expenditure item on personnel, has been towards increasing self-finance capability, considering this derives from sources unrelated to the BERC programme.

Investments

Investments in fixed assets are a major item in the BCBL, since the labs and technical equipment need to be kept abreast with the necessary updates and upgrades and get adapted to the growth of the centre, both in terms of amount of personnel, as well as participants in the lab and data derived from the studies. Therefore, the investments made vary in nature, being the lab and IT facilities the most remarkable. See below the yearly breakdown by categories:

	2014	2015	2016	2017	TOTAL
INVESTMENTS					
				estimated figures	
SOFTWARE AND HARDWARE	177.754	62.529	48.672	125.257	**414.212**
LAB EQUIPMENT	90.918	31.206	912.166	65.000	**1.099.290**
GENERAL INVESTMENTS	6.117	4.074	5.227	359.743	**375.161**
TOTAL	**274.789**	**97.809**	**966.065**	**550.000**	**1.888.663**
FUNDING SOURCE: BERC	96%	54%	28%	22%	37%
FUNDING SOURCE: GRANTS AND RESEARCH PROJECTS	4%	46%	72%	78%	63%

The significant increase in General Investments in 2017 is due to the adaptation works done in the offices, aiming at extending the space for the newly hired staff members.

As can be seen at the bottom of the table, funding of investments has gone from almost depending entirely on the BERC grant in the early years to tend clearly towards self-financing, as in the previous sections.

2018-2021 PERIOD

See below a general view of the budget showing a slight increase in subsequent years, according to the trend of previous years.

BUDGET	2018	%	2019	%	2020	%	2021	%	TOTAL 2018-2021	%
Personnel	3.500.000,00	61,35%	3.700.000,00	61,96%	3.900.000,00	61,37%	4.100.000,00	62,38%	**15.200.000,00**	**61,78%**
Other costs	1.650.000,00	28,92%	1.672.000,00	28,00%	1.753.000,00	27,59%	1.773.000,00	26,97%	**6.848.000,00**	**27,83%**
Investments (total)	555.000,00	9,73%	600.000,00	10,05%	701.500,00	11,04%	700.000,00	10,65%	**2.556.500,00**	**10,39%**
TOTAL BUDGET	**5.705.000,00**	**100,00%**	**5.972.000,00**	**100,00%**	**6.354.500,00**	**100,00%**	**6.573.000,00**	**100,00%**	**24.604.500,00**	**100,00%**

The growth objective of the centre seems to be stable and under control for the following years. Neither a steep overgrowth nor stagnation is considered as positive in the current level. The centre has considered maintaining approximately the weight percentages of each budget line over the total: 62 % personnel expense, 26,6 % other management costs, and 11 % investments. The funding entities of the BCBL are demanding in terms of setting mandatory benchmarks and objectives for the grants to be awarded. It should also be taken into consideration the Severo Ochoa programme as a clear development aim.

See outlined in the two charts below a breakdown of the personnel expenditure, as well as of travel and investment expenses. It corresponds to the 2018-2021 four-year period, in which the ascending line of the self-financing percentage can be seen, as in previous years.

ESTIMATED FIGURES	BERC 2018-2021 Euros	PROJECTS 2018-2021 Euros	GRANTS 2018-2021 Euros	TOTAL 2018-2021 Euros
RESEARCH PERSONNEL				
Staff Scientist	850.000	500.000	750.000	2.100.000
Postdoc	500.000	1.500.000	2.000.000	4.000.000
Predoc	500.000	1.850.000	1.650.000	4.000.000
LAB PERSONNEL	480.000	1.500.000	170.000	2.150.000
ADMINISTRATION				
Admin and Technical	2.500.000	450.000	0	2.950.000
TOTAL	**4.830.000**	**5.800.000**	**4.570.000**	**15.200.000**
Funding percentage	32%	38%	30%	100%

The proposed budget is in line with the slight growth of personnel:

1 Staff Scientist.
6 Postdocs (Severo Ochoa)
9 Predocs (Severo Ochoa)
3 Lab Personnel
1 Administration and Technical

20 staff members in total

Estimated Figures	2018-2021
INVESTMENTS AND OTHER COSTS	
Investments	
Software and Hardware	696.500
Lab Equipment	1.250.000
General Investments	610.000
	2.556.500
Running costs BCBL	
Renting	1.500.000
Maintenance	648.000
Consumables: Electricity and Helium	700.000
Conference Proceedings Abroad	1.500.000
Participants and lab specific tools	700.000
Other general costs (insurances, indirect costs, etc.)	1.300.000
Other social costs (training)	500.000
	6.848.000
TOTAL	**9.404.500**
FUNDING SOURCE: BERC	**42%**
FUNDING SOURCE: GRANTS AND RESEARCH PROJECTS	**58%**

Moderate growth in all expenditure items. Considering the expected personnel and activity growth, an increase in investments and general costs can be predicted accordingly.

The “renting” section includes the buildings where activities are carried out, as well as IT material and other fixed assets that have been more conveniently rented rather than purchased.

3.5.2. Incomes

This section should include (Max. 3 pages):
Detail of all the financial sources expected to cover the budget foreseen for the period 2018-2021. Include also a detail of the financial sources corresponding to the period 2014-2017.
Justify the information provided and include the table supplied in the Excel file.

PERIODO 2014-2017

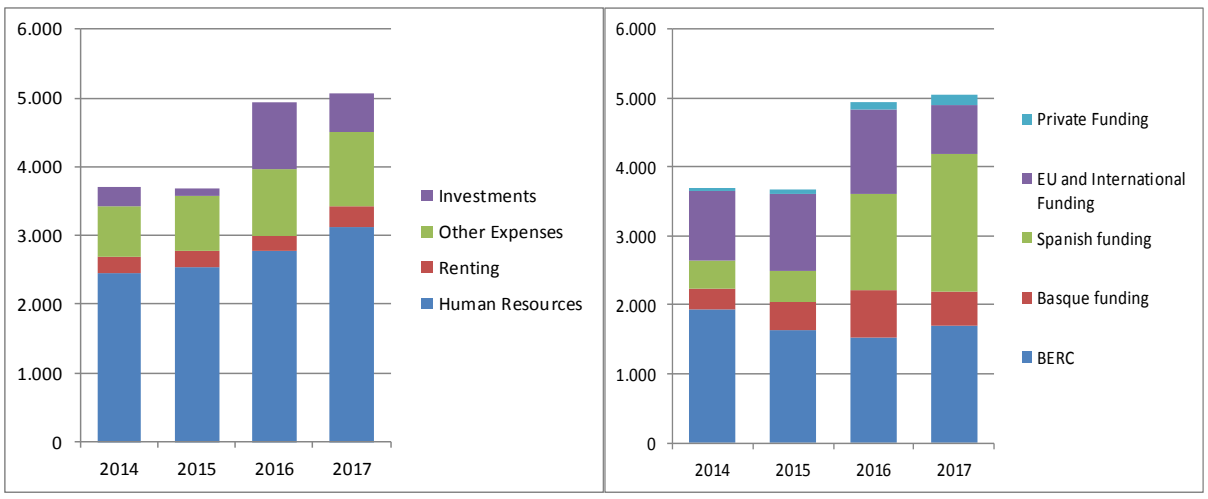
INCOMES (BERC only)	2014	%	2015	%	2016	%	2017	%	TOTAL	%
PUBLIC FUNDING	**3.661.758,48**	**98,82%**	**3.609.615,00**	**98,23%**	**4.843.832,00**	**98,18%**	**4.892.148,76**	**96,68%**	**17.007.354,24**	**97,89%**
BERC program	1.934.724,00	52,22%	1.640.975,00	44,66%	1.536.877,00	31,15%	1.689.025,00	33,38%	**6.801.601,00**	**39,15%**
UPV/EHU funding	6.138,00	0,17%	1.000,00	0,03%	1.000,00	0,02%	1.000,00	0,02%	**9.138,00**	**0,05%**
Other Basque funding	298.203,48	8,05%	405.734,00	11,04%	678.410,00	13,75%	497.733,32	9,84%	**1.880.080,80**	**10,82%**
CSIC funding	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%	**0,00**	**0,00%**
Other Spanish funding	416.164,00	11,23%	442.717,00	12,05%	1.398.441,00	28,35%	1.993.392,93	39,40%	**4.250.714,93**	**24,47%**
EU & International funding	1.006.529,00	27,16%	1.119.189,00	30,46%	1.229.104,00	24,91%	710.997,51	14,05%	**4.065.819,51**	**23,40%**
Other funding		0,00%		0,00%		0,00%		0,00%	**0,00**	**0,00%**
PRIVATE FUNDING	**43.544,52**	**1,18%**	**64.905,00**	**1,77%**	**89.703,00**	**1,82%**	**167.851,24**	**3,32%**	**366.003,76**	**2,11%**
R+D contracts	19.705,52	0,53%	39.684,00	1,08%		0,00%		0,00%	**59.389,52**	**0,34%**
patronage		0,00%		0,00%		0,00%		0,00%	**0,00**	**0,00%**
donations		0,00%		0,00%		0,00%	12.000,00	0,24%	**12.000,00**	**0,07%**
returns via patents, licencing...		0,00%		0,00%		0,00%		0,00%	**0,00**	**0,00%**
other private funding	23.839,00	0,64%	25.221,00	0,69%	89.703,00	1,82%	155.851,24	3,08%	**294.614,24**	**1,70%**
TOTAL INCOME (must match total budget)	**3.705.303,00**	**100,00%**	**3.674.520,00**	**100,00%**	**4.933.535,00**	**100,00%**	**5.060.000,00**	**100,00%**	**17.373.358,00**	**100,00%**

The activity of the BCBL is financed by funds deriving from various entities and programmes. The major part of the funding obtained comes from competitive extramural grants and public entities. However, direct BERC funding is also granted to the activity of the BCBL (or a specific investment/project), as well as funds deriving from private entities, although the latter are not very significant.

During the 2014-2017 period, there has been great variability regarding the relative importance of the origin of funds. This variation has been offset mainly with European and international funds in 2015 and funds derived from Mineco in 2016 and 2017. The prospect for the future is that BERC supports between 30 and 40 % of the total annual budget.

Special mention needs to be made of European and international funding. During the 2014-2017 period, the BCBL has led 2 ERC Advanced Grants. Moreover, the centre takes part in an international project with Qatar University.

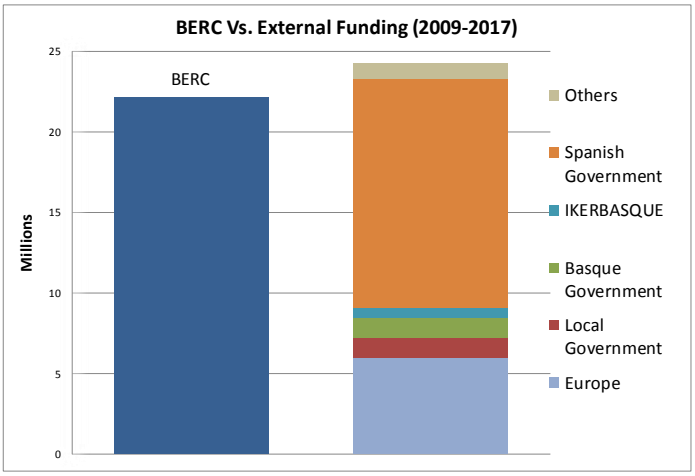
The graph below shoes the relationship between expenses and revenues of the BCBL.



The substantial growth of the "Spanish funding" item between 2015 and 2016 was remarkable. It belongs to the funding derived from the Severo Ochoa programme. This budget should necessarily be bound up to activity and infrastructure growth, and should not bear the costs of the centre, but merely those derived from such upward progression.

For further information about funding percentages of different expenditure/investment families, see section "3.5.1.Budget".

This chart shows the investment made by the Basque Government's BERC programme (direct support) for the years 2009-2016, as well as the competitive grants obtained during the same period. This indicates that the "investment" made by the BERC programme has a €1.1 per euro payback coming from external competitive support (profitability of 110 %).



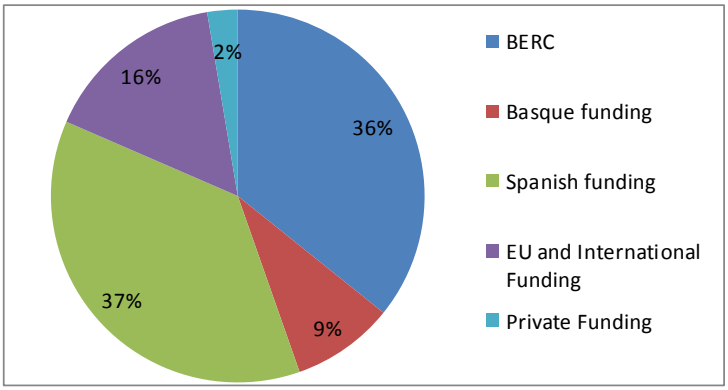
2018-2021 PERIOD

INCOMES (BERC only)	2018	%	2019	%	2020	%	2021	%	TOTAL	%
PUBLIC FUNDING	5.583.000,00	97,86%	5.820.000,00	97,45%	6.182.000,00	97,29%	6.373.000,00	96,96%	23.958.000,00	97,37%
BERC program	2.200.000,00	38,56%	2.200.000,00	36,84%	2.200.000,00	34,62%	2.200.000,00	33,47%	8.800.000,00	35,77%
UPV/EHU funding	1.000,00	0,02%	1.000,00	0,02%	1.000,00	0,02%	1.000,00	0,02%	4.000,00	0,02%
Other Basque funding	518.000,00	9,08%	553.000,00	9,26%	553.000,00	8,70%	553.000,00	8,41%	2.177.000,00	8,85%
CSIC funding	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%
Other Spanish funding	2.064.000,00	36,18%	2.216.000,00	37,11%	2.328.000,00	36,64%	2.469.000,00	37,56%	9.077.000,00	36,89%
EU & International funding	800.000,00	14,02%	850.000,00	14,23%	1.100.000,00	17,31%	1.150.000,00	17,50%	3.900.000,00	15,85%
Other funding	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%
PRIVATE FUNDING	122.000,00	2,14%	152.000,00	2,55%	172.500,00	2,71%	200.000,00	3,04%	646.500,00	2,63%
R+D contracts	10.000,00	0,18%	10.000,00	0,17%	10.000,00	0,16%	10.000,00	0,15%	40.000,00	0,16%
patronage	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%
donations	12.000,00	0,21%	12.000,00	0,20%	5.000,00	0,08%	5.000,00	0,08%	34.000,00	0,14%
returns via patents, licencing	0,00	0,00%	5.000,00	0,08%	7.500,00	0,12%	10.000,00	0,15%	22.500,00	0,09%
other private funding	100.000,00	1,75%	125.000,00	2,09%	150.000,00	2,36%	175.000,00	2,66%	550.000,00	2,24%
TOTAL INCOME (must match total budget)	5.705.000,00	100,00%	5.972.000,00	100,00%	6.354.500,00	100,00%	6.573.000,00	100,00%	24.604.500,00	100,00%

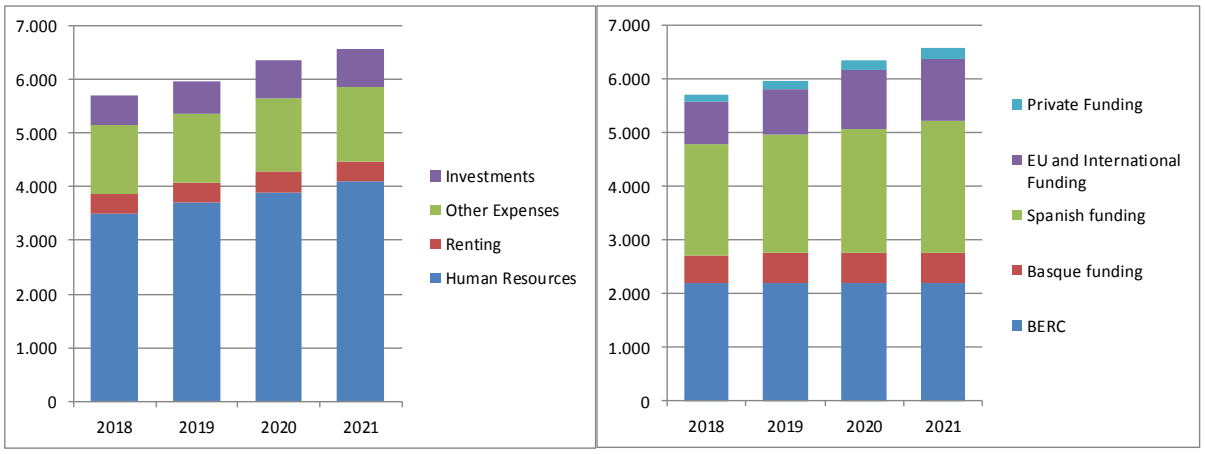
In order to estimate the revenues, the centre has considered the following factors:

1. Upkeep the funding level from Basque public entities in line with previous years. Similar success ratio in grants and funded projects.
2. Renew Severo Ochoa programme for the 2020-2023 period. The BCBL is constantly endeavouring to comply with the objectives of the programme and provides performs continuous monitoring of the indicators. The Severo Ochoa programme includes additional funding of Predoctoral Training grants, also taken into account within this budget.
3. With reference to the funding derived from European and international resources, the centre expects to succeed in the ERC and Marie Curie grants. This year, the centre also opts for the Cofund call for the first time.
4. Funding of the BERC grant over the total annual budget: average of 35 % over the four-year period.

As previously mentioned in the expenses section, the growth objective of the BCBL is smooth and constant, hence the estimated revenues for the subsequent years go in line with such expectations.



See below the revenues-expenses relationship, as in the previous four-year period.



3.5.3. Cost of renting of premises

This section should include (Max. 2 pages):
Please indicate, for the last economic year (as a whole), the expenses in renting the premises or building. Include documents (invoices) of the expenses in order to justify the cost and any comment or additional information that could be taken into consideration in this regard.
Justify the information provided and include the table supplied in the Excel file.

BUDGET (BERC only)	**2014**	**2015**	**2016**	**2017**	**TOTAL 2014-2017**	**2018**	**2019**	**2020**	**2021**	**TOTAL 2018-2021**
Cost of renting of facilities	220.899	220.899	220.899	226.965	**889.661,52**	252.030	260.000	265.000	270.000	**1.047.029,76**

The renting cost of the buildings during the 2016 fiscal year has amounted to **220.899 euros,** approximately 18 % of the total budget of the centre for this year. Such cost is distributed among premises of the Technology Park of Miramón, where the office (2nd floor) and lab (ground floor) are located, and an auxiliary lab in the Korta building, belonging to the UPV/EHU. The rental costs are divided as follows amongst the aforementioned premises:

Miramón building:

In 2016, the rental fee of the premises the BCBL uses in the building number 69 of the Technology Park of Miramón amounted to 259.034,76 euros (VAT incl.). Find outlined below the monthly invoices justifying such payment. Moreover, a copy of these is attached to this document (Annex IX). The offices and head lab of the BCBL are located in these premises, representing the main location of the centre.

Renting Expenses: Miramón	Euros VAT Excl.	Euros VAT Incl.	Vendor	Invoice Number	Invoice Date	Payment Date
January	17.839,86	21.586,23	Parke Gipuzkoa	FV16/0019	04/01/2016	20/02/2016
February	17.839,86	21.586,23	Parke Gipuzkoa	FV16/0164	02/02/2016	20/03/2016
March	17.839,86	21.586,23	Parke Gipuzkoa	FV16/0313	01/03/2016	20/04/2016
April	17.839,86	21.586,23	Parke Gipuzkoa	FV16/0476	01/04/2016	20/05/2016
May	17.839,86	21.586,23	Parke Gipuzkoa	FV16/0623	02/05/2016	07/07/2016
June	17.839,86	21.586,23	Parke Gipuzkoa	FV16/0818	08/06/2016	20/07/2016
July	17.839,86	21.586,23	Parke Gipuzkoa	FV16/0974	04/07/2016	20/08/2016
August	17.839,86	21.586,23	Parke Gipuzkoa	FV16/1138	01/08/2016	20/09/2016
September	17.839,86	21.586,23	Parke Gipuzkoa	FV16/1283	02/09/2016	20/10/2016
October	17.839,86	21.586,23	Parke Gipuzkoa	FV16/1504	03/10/2016	20/11/2016
November	17.839,86	21.586,23	Parke Gipuzkoa	FV16/1746	03/11/2016	20/12/2016
December	17.839,86	21.586,23	Parke Gipuzkoa	FV16/1988	05/12/2016	20/12/2016
TOTAL	**214.078,32**	**259.034,76**				

All the invoices were paid through bank transfer within 2016.

From 2017 onwards, the rental fee of the Miramón building will rise (see chart in header) due to the expansion of the office carried out to accommodate progressively new comers, in order to meet the growth requirements of the Severo Ochoa programme.

Korta building:

The premises rented by the BCBL in the Korta building, belonging to the UPV/EHU, houses a small but highly valued and necessary auxiliary lab to be close to the university community, which is of great importance in the research area at issue. See below the invoices of the rental fees in detail:

Renting Expenses: Korta	Euros VAT Excl.	Vendor	Invoice Number	Invoice Date	Payment Date
January - March	1.705,05	UPV/EHU	Liquidación nº 1/2016	13/01/2016	27/01/2016
April - June	1.705,05	UPV/EHU	Liquidación nº 2/2016	07/04/2016	07/04/2016
July - September	1.705,05	UPV/EHU	Liquidación nº 3/2016	15/07/2016	21/07/2016
October - December	1.705,05	UPV/EHU	Liquidación nº 4/2016	07/11/2016	01/12/2016
TOTAL	**6.820,20**				

In this case, invoices are VAT free and amount to 1.705,05 euros per quarter, a total annual amount of 6.820,20 euros. A copy of the quarterly settlements annexed to this document (Annex IX).

3.5.4. Degree of lab-based practical work of the centre

This section should include (Max. 3 pages):
Please indicate, for the last economic year (as a whole), the expenses undertaken for research-related tasks such as facilities, laboratories, equipment, reagents, specific tools or similar, needed to carry out experiments. Include documents (invoices) of the expenses in order to justify the cost and any comment or additional information that could be taken into consideration in this regard.
Justify the information provided and include the table supplied in the Excel file

The activity carried out in the BCBL lab is the base of the research work performed at the centre. The chart below shows the main expenses related to the work in the BCBL lab by item and year:

BUDGET (BERC only)	**2014**	**2015**	**2016**	**2017**	**TOTAL 2014-2017**	**2018**	**2019**	**2020**	**2021**	**TOTAL 2018-2021**
Cost of renting of facilities	220.899	220.899	220.899	226.965	**889.661,52**	252.030	260.000	265.000	270.000	**1.047.029,76**
Cost of the lab-based practical	525.306	487.370	1.456.251	781.905	**3.250.831,66**	820.000	987.000	1.300.000	1.115.000	**4.222.000,00**
maintenance of facilities	15.750	18.000	34.914	21.275	**89.938,66**	30.000	32.000	35.000	40.000	**137.000,00**
equipment	90.918	31.206	912.166	65.000	**1.099.290,00**	100.000	200.000	500.000	300.000	**1.100.000,00**
reagents	0	0	0	0	**0,00**	0	0	0	0	**0,00**
specific tools	26.156	25.174	22.284	90.000	**163.614,00**	45.000	50.000	50.000	50.000	**195.000,00**
Participants	38.277	50.987	58.284	60.000	**207.548,00**	70.000	75.000	80.000	85.000	**310.000,00**
Personnel	304.443	302.846	381.050	477.630	**1.465.969,00**	500.000	550.000	550.000	550.000	**2.150.000,00**
Helium	49.762	59.157	47.553	68.000	**224.472,00**	75.000	80.000	85.000	90.000	**330.000,00**
Travel expenses related to experiments (participants /	6.516	9.664	11.917	4.316	**32.412,99**	8.000	8.000	8.000	8.000	**32.000,00**

Focusing in the 2016 fical year, as requested in the statement, see the following evaluation of expenses per item in order to provide information in greater detail:

Maintenance of facilities

The cost included in this section corresponds to the montly maintenance expense for the Magnetoencephalography (MEG). This service is essential for the correct running of the machine all year round. The related cost is of 1.772,92 euros per month.

Additionally, an upgrade of the machine was carried out in May 2016 for proper adjusting to the helium recycler. The cost amounted to 14.048 euros. A copy of these invoices is annexed to this document (Annex X)

Equipment

The highest investment in 2016 on the BCBL lab was the upgrade of the Magnetic Resonance, one of the key components. The new model is a 3T Magneton Prismafit and the cost of the upgrade amounted to 900.000 euros.

Actualización del equipo MAGNETOM Trio a MAGNETOM Prisma [nis 167004]

Importe Neto	EUR	900.000,00	900.000,00
IVA repercutido	21,00 %		189.000,00
Total Factura	EUR		1.089.000,00

De acuerdo al Rd 679/2006, está incluido en el precio la aportación realizada por Siemens a Sigaus (6,05 E/Kg), por los aceites industriales, si los hubiera, incluidos en los productos de esta factura.

This upgrade was funded by the Severo Ochoa programme (74,44 %), the Provincial Government of Guipúzcoa (11,11 %) and the Basque Government (14,44 %). Copy of invoices are annexed to this document (Annex X).

Specific Tools

Within this section, many costs associated to the daily running of the lab are included: lab material (syringes, gel, adaptors, towels, etc.), small replacements for the different techniques (e.g. bulbs), specific materials to carry out particular tests, etc.

The centre has selected the items of higher value and outlines its concepts in the chart below:

Description of the Expense	Euros VAT Excl.	Vendor	Invoice Number	Invoice Date	Payment Date
40 * 150 Pelet	500,00	Manuel Espinosa Moreno, S.L. (ab gas)	Inv A160040	05/02/2016	20/03/2016
Lab consumables: Glycerin, Xylene, Etilene glycol…	2.338,12	Levantina de Laboratorios , SL	Inv 9000165	08/02/2016	20/03/2016
45 washer kit	675,00	Bionic Iberica	Inv 16/190	09/02/2016	20/03/2016
20 m. optical fiber cable	345,00	Bionic Iberica	Inv 16/237	11/02/2016	20/03/2016
Bidistilled water	304,00	QuimiBacter S.L."	Inv 160.445	29/02/2016	20/03/2016
Gel for EEG / ERP Technique	1.400,00	Bionic Iberica	Inv 16/346	04/03/2016	20/04/2016
Ethopropazine Hydrocloride	370,00	EPICA S.L.	Inv 160314	29/04/2016	20/05/2016
Cap and 32 electrode kit	2.470,00	Bionic Iberica	Inv 16/700	02/05/2016	20/06/2016
Washer / cable	430,00	Bionic Iberica	Inv 16/829	20/05/2016	20/06/2016
3 NirsCaps and Grommets	944,00	Bionic Iberica	Inv 16/867	30/05/2016	20/07/2016
Gel, syringes, gel applicators	306,00	Bionic Iberica	Inv 16/1040	27/06/2016	20/08/2016
Audiometer	2.040,00	Salesa - Instituto Auditivo Español, S.A.	Inv ORB 1/160932	29/07/2016	05/07/2016
Kit 2 Panasonic Lights	1.288,00	A-2 Alquiler Audiovisual	Inv 16-058	04/08/2016	16/08/2016
3 Caps for EEG / ERP and washer kit	1.095,00	Bionic Iberica	Inv 16/1460	28/09/2016	20/10/2016
3 Caps for EEG / ERP	975,00	Bionic Iberica	Inv 16/1708	08/11/2016	20/12/2016
Cap for EEG / ERP	365,00	Bionic Iberica	Inv 16/1709	08/11/2016	20/12/2016
	15.845,12				

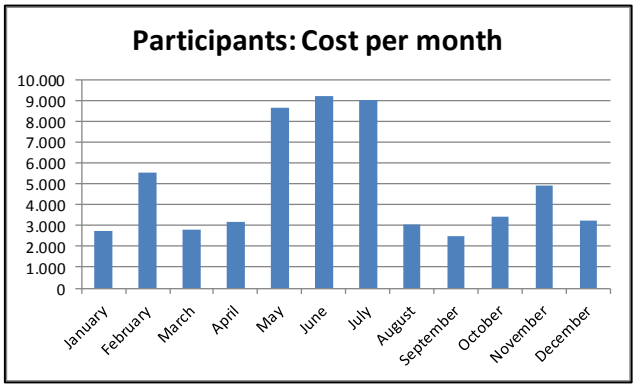
A copy of these invoices is annexed to this document (Annex X).

Participants

The BCBL needs to obtain data of participants coming to the lab in order to carry out the research developed in the centre. Participants of all ages and social groups turn to our premises, and the amount has risen exponentially year after year since the BCBL opened in 2009.

The cost participants is a small compensation for the BCBL, which is offered in turn for the time and effort they devote to science.

In 2016, the total sum of this concept amounted to 58.284 euros and was monthly distributed as follows.



During the months of May, June and July, there was a great increase of the expense amount due to an experiment carried out with deaf population, requiring the participant and their family to travel to San Sebastián (most of them came from other provinces). Therefore, the BCBL had to cover such travel and accommodation costs.

In order to manage adequately payments to participants, all transactions are duly registered in a book at the lab, including relevant information such as the name of the study, the date, the principal investigator, name and ID of participant, the payable amount, and signature in accordance to the payment made.

Sometimes, besides the monetary compensation, the BCBL offers a small present (voucher for spa, little toy for children, T-shirts, etc.) to participants. This cost is also included in the previous figures.

Personnel

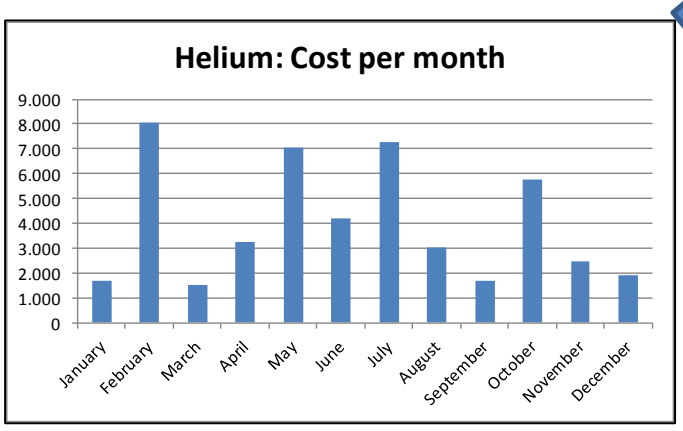
The personnel related to the activity performed in the lab is basically comprised of the 2 staff members in charge (Lab Managers, the coordinators of each technique (Lab Coordinators) and the team of Research Assistant, whose duties are to help the research team to prepare and carry out the experiments in the centre.

The cadre of personnel below shows the total expenditure on BCBL personnel for 2016. Out of that total amount, 13,29 % was designated to Lab Personnel, that is, **368.406 euros.** Detailed cost in euros by category is also included.

	BERC 2016		PROYECTOS 2016		BECAS 2016		TOTAL 2016	
	Euros	Nº	Euros	Nº	Euros	Nº	Euros	Nº
INVESTIGACIÓN								
Staff Scientist	60.337	1	240.098	4	101.707	2	402.142	7
Postdoc	106.508	3	387.658	10	337.119	6	831.284	19
Predoc	66.071	4	233.088	12	258.319	10	557.478	26
LAB PERSONNEL	122.330	2	222.720	12	36.000	2	381.050	16
ADMINISTRATION								
Admin and Technical	549.819	20	46.409	3			596.228	23
TOTAL	**905.065**	**30**	**1.129.973**	**41**	**733.145**	**20**	**2.768.183**	**91**
Funding percentage	33%		41%		26%		100%	

LAB STAFF	Euros
Lab Manager	80.000
Lab Section Coordinator	133.321
Research Assistant	167.729
TOTAL	**381.050**

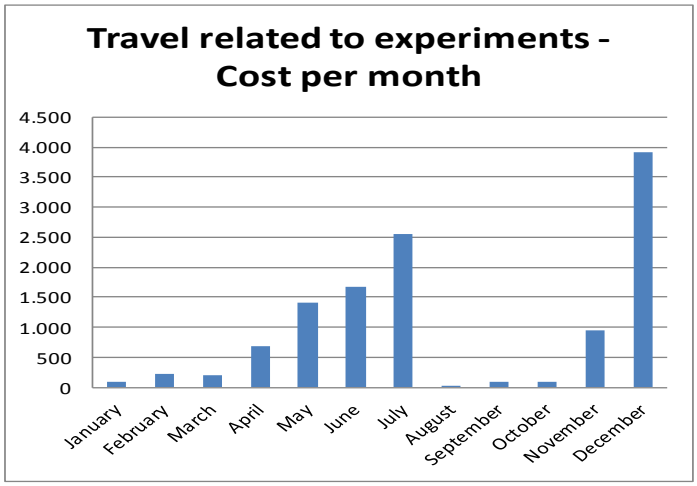
Helium



Helium supply is of vital importance for the BCBL lab, since both MEG and MRI use it for operating.

The Magnetic Resonance machine gets filled with helium approximately every three months, whereas the MEG gets filled almost weekly. In the following graph the expense peaks can be seen for the months in which the resonance machine gets the fill: February, May, July and October. A copy of these invoices is annexed to this document (Annex X)

Travel Expenses Related to Experiments



This section includes travel expenses and substance allowance related to experiments. These comprise the expenses of Research Assistants who travel to carry out studies outside the centre (e.g. schools), as well as expenses of participants who travel from other locations to collaborate with the BCBL and need to cover their travel costs, substance allowance and accommodation. This is the case of specific groups hard to find nearby (e.g., Dravet Syndrome).

4. INTEGRATION OF THE BASQUE SCIENCE SYSTEM IN THE EUROPEAN RESEARCH AREA

4.1. Collaboration with Basque entities

This section should include (Max. 2 pages):
Description of the collaboration frameworks or agreements with other public and private Basque entities.

Our collaboration framework is fundamentally focused on the fields of basic research, health and education.

Basic Research

The Basque Government has made an important effort over the last 10 years to support R&D through different programmes and initiatives. Ikerbasque and the **CIC/BERC** programmes, both of which the BCBL is involved with, are just a few examples of such initiatives. In order to reach our aforementioned goals, we foresee stronger collaborations with other entities of the Basque network for science and technology, such as the **Achucarro** Basque Centre for Neuroscience and the **BCAM** (Basque Centre for Applied Mathematics). These collaborations will facilitate the development of improved computational tools to investigate, for instance, brain connectivity. For instance, the BCBL and BCAM already share a researcher who holds a joint position on data analysis for magnetic resonance imaging, enhancing the collaboration among both institutions.

Health Care

In **Health Care** specifically, apart from the projects that are already in place with leading bodies in the research and treatment of the elderly, such as the Instituto Gerontológico Matia through the **Ingema** Foundation or the **Donostia Hospital** and **Biodonostia**, we want to promote new bonds and joint projects with these and other centres dedicated to aging. In particular we will build on our initial collaboration with the Hospital Donostia in San Sebastián to research neurodegeneration, Parkinson and aphasia. In addition, the BCBL has just become a full member of Biodonostia (a biomedical international research centre), which will strength our ties with the other partners including the hospital. Furthermore, for the aphasia project we have started collaborating with Aita Menni, a health centre focused on brain damage.

In addition, we will continue collaborating with the neurosurgeons of **Hospital de Cruces** to provide pre-surgical, surgical (via brain stimulation) and post-surgical mapping, helping to increase the quality of life of patients that have a certain brain tumour on the language area. We will also extend in the near future our collaborations to ECoG (electrocorticography) for patients with epilepsy that need resection of brain tissue, as we have gained expertise with this method.

NEUROMOD Public-private consortium, led by **Tecnalia** and with the collaboration of **UPV/EHU, Bioef, Cita Alzheimer**, **BCBL** (contributing with a behavioural and neuroscientific perspective) and **Virtualware-Labs** strive to launch to the market a “made in the Basque-Country” brain regenerator and memory enhancer that works in your sleep. The system presented in a proposal that just got funded in the recent Elkartek call is based on the closed-loop neuromodulation technique and consists of an intelligent night cap which registers and stimulates the nervous system, and an app by Serious Games focused on memory learning and enhancing, synchronised with the neurophysiological activity.

Education

Another fundamental pillar of society is **Education**. The BCBL, given its mission and its lines of research, is and will be actively present in studies related to learning (e.g., learning a second language) and learning disabilities (e.g., specific language impairment, dyslexia, dyscalculia), especially in a bilingual environment. Furthermore, during these years the BCBL has set up additional collaborations with several institutions of the Basque Science and Education System.

We are already collaborating with **various schools** both in Donostia and Vitoria. Moreover, in the **Sagrado Corazón School of the Carmelite order in Vitoria**, we arrived at an agreement to install a permanent BCBL Junior Lab laboratory that is running since 2011 in order to more conveniently perform longitudinal experiments on the children attending the school. In addition, we keep a close relationship with **Dislebi** (Basque association for dyslexia) and **TEL Euskadi** (Basque association for Specific Language Impairment) among other associations.

The BCBL is producing knowledge that can be transferred to the educational arena, including information

regarding typical processes and how these can be improved (e.g., when a foreign language will best be assimilated), as well as knowledge regarding individual differences and learning disabilities and how these can be helped. In addition, the BCBL is in the final process to provide assessment tools for diagnosis of several learning disabilities (dyslexia, dyscalculia and SLI) both in Spanish and Basque, a current demand from society and professionals. In fact, several schools (e.g., Lauro in Bilbao and St Patricks, Axular, Santo Tomas in Donostia) asked for advice about what would be the best strategy to introduce the learning of a foreign language, and the associated literacy.

The **Euskampus Campus of International Excellence** (CEI Euskampus) is a project that aims to place the Basque Country in a position of global leadership as regards education, research activities and its capacity for innovation and knowledge transfer. The CEI Euskampus has been conceived with a long-term commitment and with the aim of becoming a key element for the achievement and development of relevant social and economic values for the Basque Country, showing it to be an internationally competitive alliance that brings dynamism to the research, the innovation and the economy of its surroundings. In March 2012, the BCBL signed a collaboration agreement with Euskampus that includes the general collaboration framework between EUSKAMPUS FUNDAZIOA and the BCBL. It defines the relations within the structure of the EUSKAMPUS Project and through the EUSKAMPUS FUNDAZIOA that will be maintained between UPV/EHU and the BCBL for the promotion of training, research and knowledge transfer, innovation and dissemination.

This partnership also provides support for the development of a high-quality postgraduate studies programme in the **UPV/EHU** and the deployment of the Master's and Doctorate School of the UPV/EHU within the context of the International Excellence Campus.

The BCBL together with the UPV/EHU department of Basque Language and Communication and department of Classical Studies of the Facultad de Letras (UPV/EHU) launched a new PhD programme on linguistics that has been recently approved by the ANECA.

We hold since 2011 an agreement for the teaching of practical courses for students in the Faculty of Philosophy and Educational Sciences of the UPV/EHU. This collaboration promotes the optimal use of the human and material resources of both institutions to improve the practical training of the students studying this discipline, and promotes direct contact of these students with the reality of the labour market, which will result in a higher professional qualification of future graduates.

The BCBL has also signed several agreements with different Basque faculties for the development of internship programmes and practicum: **Faculty of Psychology, Faculty of Philosophy and Educational Sciences, Faculty of Arts (Letras), Faculty of Business EHU/UPV. University of Deusto, ESTE, Polytechnical Institute of** Easo, ISSA Universidad de Navarra.

Other collaboration agreements with Basque Science system entities

The BCBL has a very active and close collaboration with **Ikerbasque**, the Basque foundation for science.

ikerbasque
Basque Foundation for Science

Adhered to i2Basque. **i2BASQUE** is a "Plan Euskadi en la Sociedad de la Información" programme, developed by the Basque Government Education, Universities and Research Department. It focuses on supporting the RDI community in the Basque Country, providing telecom and ICT service infrastructures to Basque Science and Technology Network players.

4.2. Collaboration with European entities

This section should include (Max. 2 pages):
Description of the collaboration frameworks or agreements with other public and private European entities.

Basic Research

Finally, our researchers will continue collaborating with other researchers from Spanish and international universities, and other research bodies all over the world (indeed, international collaborations help our researchers gain access to interesting language contrasts and novel theoretical perspectives that have enabled a number of impressive findings published in high-impact papers). We will also continue to participate in international research consortia (e.g., Max Planck, Donders, Haskins labs, etc.).

Currently we are developing a project under the umbrella of the **Human Brain Project** with a group from the Max Planck institute of Psycholinguistics (with Clyde Francks, Simon Fisher and Peter Hagoort) and a group from Bordeaux University (Fabrice Crivello, Bernard Mazoyer, Nathalie Tzourio-Mazoyer and Marc Joliot).

81 INSTITUTIONS

INSTITUTION OF COLLABORATION	COUNTRY
Academia Sinica	Taiwan
Aston University	UK
Bangor University	UK
Bar-Ilan University	Israel
Brain Products GmbH	Germany
BrainCarta BV	Netherlands
British Dyslexia Association	UK
CENIR au sein de l'hôpital de la Salpêtrière	France
Chicago University	USA
CNRS	France
Danish Autism Association	Denmark
Danish Research Centre for Magnetic Resonance	Denmark
Deutsche Interessengemeinschaft Phenylketonurie (PKU) und verwandte angeborene Stoffwechsel	Germany
Dislebi	Spain
Ecole Normale Supérieure Paris	France
Erwin L Hahn Institute for MRI	Germany
European Dyslexia Association	Belgium
Federação Nacional de Cooperativas Solidariedade Social	Portugal
Fundación Arturo López, Nuclear Medicine and PET/CT Center	Chile
Ghent University	Belgium
Haskins Laboratories	USA
Haskins, Yale University	USA
Imperial College London	UK
Johns Hopkins University (School of Medicine, Neurology and Neurosurgery)	USA
Konstanz University	Germany
Laboratoire de Psychology et Neurocognition	France
Lancaster University	UK
Max Planck Institute	Netherlands
Max Planck Institute for Human Cognitiva & Brain Sciences	Germany
Münster University	Germany
National Institute of Mental Heath	USA
National Yang-Ming University	Taiwan
New York University	USA
Norges Teknisk-Naturvitenskapelige Universitet	Norway
Philips Medical Sistem	Netherlands
Purdue University	USA
Qatar University	Qatar
Radboud University Medical Centre	Netherlands
SCALAB	France
SEIN - Stichting Epilepsie Instellingen Nederland	Netherlands
Siemens Healthineers	Spain

20 COUNTRIES
12 EUROPEAN COUNTRIES

INSTITUTION OF COLLABORATION	COUNTRY
SISSA	Italy
SKOPE	Switzerland
Stockholm University (Centre for Research on Bilingualism)	Sweden
Syddansk Universitet	Denmark
The Hebrew University of Jerusalem	Israel
The University of Nottingham (Sir Peter Mansfield Imaging Centre)	UK
Toronto Western Hospital and Research Institute	Canada
Trondheim University	Norway
UC Berkeley	USA
UC Davis	USA
UC San Francisco	USA
Universidad Catolica de Chile	Chile
Universidad Complutense	Spain
Universidad Complutense-Lab. Cognitive/Comp. Neuroscience	Spain
Universidad de Burdeos	France
Universidad Europea del Atlántico	Spain
Universidad Iberoamericana	Dominican Republic
Università di Perugia	Italy
Universitat Jaume I	Spain
Universitat PompeuFabra	Spain
Universitat PompeuFabra	Spain
UniversitätS-klinikum Münster	Germany
University College of London	UK
University Medical Centre Utrecht	Netherlands
University of Cadiz	Spain
University of California (Speech Neuroscience Laboratory)	USA
University of Castilla- LaMancha	Spain
University of de la Republica	Uruguay
University of East Anglia	UK
University of Exeter	UK
University of Granada	Spain
University of Groningen	Netherlands
University of Kaiserslautern	Germany
University of Leiden	Netherlands
University of Manchester (Neuroscience/Aphasia Unit)	UK
University of Oxford	UK
University of Reading	UK
University of San Francisco	USA
University of Stirling	UK
University of Vic	Spain
UPV/EHU	Spain

Another important consolidated collaboration is with Ricardo Insausti (a neuroanatomist) and his team in the **University of Castilla La Mancha**. Together, we are building an atlas of the thalamic nuclei using ex vivo images that will be incorporated into FreeSurfer. The goal is to extend the atlas to the whole brain at much higher resolution (over 600 structures) and develop methods to apply it to the analysis of in vivo scans. The software will be made available (as part of FreeSurfer), and this is expected to have a huge impact in neuroimaging.

The BCBL and the **CNSE Foundation** for the Suppression of Communication Barriers signed a framework agreement for the promotion of studies and research that contribute to the knowledge and protection of Spanish sign language. Research on sign language and reading in the deaf will continue to be two preferential research endeavours.

We are also involved in an excellence networks financed by the Ministry of Economy and Competiveness. One together with the research centres and departmental units that got the awards Severo Ochoa (research centres) and María de Maeztu (departmental units) BFU2016**-81721 ALIANZA SEVERO OCHOA Y MARIA DE MAEZTU: Spanish Centres and Units of Excellence**

The Spanish Excellence Programme of “Severo Ochoa Centres" and “María de Maeztu Units” promotes excellence in scientific research. It seeks to boost Spanish science by recognizing existing cutting-edge research centres and units, and further supporting them to enhance their impact, and international scientific leadership and competiveness. So far 25 centres and 16 units have received the “Severo Ochoa” and “María de Maeztu” accreditation, respectively. They cover a wide breath of scientific disciplines, from life sciences and medicine, mathematics, chemistry, physics, engineering, economics to humanities and social sciences.

Such initiatives to strengthen excellence at institutional- and unit-level are fundamental to ensure stimulating, creative, and cutting-edge environments. The ultimate goal of this scientific ecosystem is to attract and nurture scientific talent and promote ground-breaking research, following similar principles of excellence, integrity, external peer-review, competitiveness, and international cooperation.

After the launch and consolidation of this Excellence Programme, the Severo Ochoa Centres and María de Maeztu Units aim to reach now a new layer of collaboration. Their ambition is to create an alliance that will 1) increase their national and international visibility as an interdisciplinary and interconnected Spanish research ecosystem of excellence, 2) promote exchange of knowledge, technology and good practice among its members, the international scientific community and key stakeholders, and 3) have a critical voice in Spanish and European science policy.

An approach that can link together centres of excellence in Spain, such as those recognized by the Severo Ochoa Centres and María de Maeztu Units of Excellence Programme, will result in a synergistic and long term effect, where the “whole is more than the sum of its parts” and will have an exponential impact on the scientific talent and research progress in Spain and abroad.

Centro	Web
Coordinador: Centre de Regulacio Genomica (CRG) Barcelona	www.crg.es
Instituto de Ciencias Fotónicas (ICFO) Barcelona	www.icfo.es
Institute for Research in Biomedicine (IRB Barcelona) Barcelona	www.irbbarcelona.org
Barcelona Supercomputing Centre (BSC-CNS) Barcelona	www.bsc.es
Graduate School of Economics (Barcelona GSE) Barcelona	www.barcelonagse.eu
Instituto de Ciencias Matemáticas (ICMAT) Madrid	www.icmat.es
Centro Nacional de Investigaciones Cardiovasculares (CNIC) Madrid	www.cnic.es
Centro Nacional de Investigaciones Oncológicas (CNIO) Madrid	www.cnio.es
Instituto de Astrofísica de Canarias (IAC) Canarias	www.iac.es
Estación Biológica de Doñana (EBD) Huelva	www.ebd.csic.es
Institut d' Fisica d Altes Energies (IFAE) Barcelona	www.ifae.es
Instituto de Fisica Teorica (IFT) Madrid	www.ift.uam.es
Instituto de Tecnología Química (ITQ) Valencia	www.itq.upv-csic.es
Instituto de Neurociencias de Alicante (IN) Alicante	www.in.umh.es/
Centro Nacional de Biotecnología (CNB) Madrid	www.cnb.csic.es/
Instituto Catalán de Investigación Química (ICIQ) Tarragona	www.iciq.es

Centro	Web
Instituto Catalán de Nanociencia y Nanotecnología (ICN2) Barcelona	www.icn.cat
Basque Centre for Applied Mathematics (BCAM) Pais Vasco	www.bcamath.org/es/
Instituto de Física Corpuscular (IFIC) Valencia	http://w ebific.ific.uv.es
Institut de Bioenginyeria de Catalunya (IBEC) Barcelona	www.ibecbarcelona.eu/es/
Departamento de Ciencias Experimentales y de la Salud (DCEXS) Barcelona	www.upf.edu/cexs/
Unidad de Biología Estructural (SBU) Salamanca	www.ibmb.csic.es
Institut de Ciències del Cosmos (ICCUB) Barcelona	http://icc.ub.edu/
Centro de Investigación de Física de la Materia Condensada (IFIMAC) Madrid	www.uam.es/ifimac/
Barcelona Graduate School of Mathematics (BGSMath) Barcelona	www.bgsmath.cat/
Departamento de Economía Madrid	www.eco.uc3m.es/
Centre de Recerca en Agrigenomica (CRAG) Barcelona	www.cragenomica.es
Instituto de Ciencia de Materiales de Barcelona (ICMAB) Barcelona	www.icmab.es
Física de Partículas – Centro de Investigación Energética Medioambiental y Tecnológica	www.ciemat.es
Departamento Tecnologías de la Información y las Comunicaciones (DTIC-UPF) Barcelona	www.portal.upf.edu
Institut de Ciencia i Tecnologia Ambientals (ICTA) Barcelona	www.ictaw eb.uab.cat
Instituto de Ciencia Molecular (ICMOL) Barcelona	www.icmol.es

In addition, as stated in previous sections we are collaborating with researchers from other European research centres and universities.

4.3. Collaboration with other entities

This section should include (Max. 2 pages):
Description of the collaboration frameworks or agreements with other public and private international entities.

Basic Research

In February 2016 a collaboration agreement for the 2016-2017 period was signed with **TARA** (Society for Technology and Action for Rural Advancement), located in **India,** aiming at investigating the neural impact of late learning of literacy in illiterate adults.

Research into Dravet's Syndrome and Untreatable Channelopathies: A project developed together with the Dravet Syndrome Foundation.

Qatar Learning to read in two alphabets: A project that started in 2014 and has been developed with the funding of the Qatar Foundation.

Education

Besides, in February 2016, another collaboration agreement for the 2016-2020 period was signed with **Universidad europea del Atlántico – UNEATLANTICO university,** aiming at joining forces and establishing far-reaching performance standards to channel and increase connections and collaborations in order to reach a better and broader continuous training, inside and outside the classroom.

The Marcs Institute: In 2012 a PhD student of the BCBL spent four months in this centre developing research activities within the framework of the project "Automaticity of Second Language Processing in Spanish-Basque Bilinguals".

Practicum and Internship programmes

Macquarie Centre for Cognitive Science, Australia. The BCBL received students from this centre for an internship.

Brazil Minesterio Da Educaçao (Brasil). The BCBL has an agreement with this Brazilian entity for the interchange of students.

Other collaboration agreements with other entities

It is also important to mention that another important goal of the BCBL has been to promote the cooperation with **developing countries** in the spheres of higher education and research in Social Science and Humanities and its applications, as well as in related subjects. The BCBL cooperates regularly with the "Organización de Estados Iberoamericanos para la Educación, la Ciencia y la Cultura (OEI)". The OEI (www.oei.es) is an international governmental body for the cooperation with Latin America in the field of education, science, technology and culture in the context of overall development, democracy and regional integration countries. The BCBL's collaboration with OEI includes collaboration in the following areas (a) development of training, education and outreach in the scope of both institutions, (b) research in areas of shared interest, (c) organisation and management of education, science, research and development. In addition, the BCBL has an active policy to support students coming from Latin America. Currently the BCBL is hosting and advising 6 PhD students coming from Latin American countries funded by organisations like Fundación Carolina, Ministério Educaçao Brasil y CNPq Brasil.

UNIBE, Universidad Iberoamericana (Dominican Republic) - Prof. Laura Virginia Sánchez Vincitore Together with the team of Prof. Sánchez Vincitore we are developing a project aimed at exploring the cognitive profile of a large group of illiterate participants all across Dominican Republic, with a special focus on the way illiteracy impacts speech perception.

Lastly, we would like to mention two important collaboration agreements between **Siemens Healthcare S.L.U. and BCBL.**

(1) Master Agreement on Collaboration: The research of Neurological Diseases requires close cooperation and in this case, SIEMENS and BCBL. were interested in entering into a cooperation on the basis of a C2P (Core Competence Partnership) agreement, named "Master Agreement on a Collaboration" to foster the exchange of software developments, sequences and any other innovative improvement focused on the development of the Siemens 3T MAGNETOM PRISMAfit MR scanner owned by the BCBL.

(2) Agreement with BCBL as Siemens Reference Customer: BCBL committed to accept visits and provide training to medicine professionals, technicians and Siemens employees. Visits or trainings are arranged by mutual agreement of the Parties, taking into account centre workload and BCBL personnel's involvement. In return, Siemens covers the costs of these visits to BCBL and the activities and/or training or clinical forum workshops organised by BCBL. Additionally, it is of great importance to point out that BCBL professionals have a travel scholarship from SIEMENS for training necessities (i.e., national or international conferences attendance, Siemens reference site visits, new medical technology workshops, etc.).

5. INDICATORS

This section should include the main indicators of the Excel file provided as template.

Scientific output

INDICATORS	OBTAINED RESULTS 2014-2017					PROPOSED INDICATORS 2018-2021					COMMENTS
	2014	2015	2016	2017	TOTAL / AVRG	2018	2019	2020	2021	TOTAL / AVRG	(*Only if necessary*)
Number of articles published in the given year	65	67	80	90	302	92	92	94	94	372	
Number of indexed articles	59	62	74	77	272	78	78	80	80	316	*SCOPUS*
Number of indexed articles Q1	56	59	70	72	257	72	72	74	74	292	
% of indexed articles Q1	94,9%	95,2%	94,6%	93,5%	94,5%	92,3%	92,3%	92,5%	92,5%	92,4%	
Number of indexed articles D1	33	37	51	48	42	50	50	52	52	51	
% of indexed articles D1	55,9%	59,7%	68,9%	62,3%	61,7%	64,1%	64,1%	65,0%	65,0%	64,6%	
% of indexed articles by the Scientific Director	33,9%	35,5%	21,6%	26,0%	29,2%	25,6%	25,6%	25,0%	25,0%	25,3%	
Number of international scientific co-publications	44	48	57	67	216	68	68	70	70	276	
Number of public private co-publications	0,0%	0,0%	0,0%	0,0%	0	0,0%	0,0%	0,0%	0,0%	0	
Number of citations during the given year of all indexed articles published by the center, total	700	866	1095	1400		1500	1550	1600	1650		*a 26/8/2017*
Number of citations during the given year of all indexed articles published by the center, self-citations excluded					3351					5000	
H index of the center for the indexed articles published until the given year	17	21	26	32		33	33	35	35		*SCOPUS*
M index of the center for the indexed articles published until the given year	2,83	3,00	3,25	3,56		3,3	3,0	2,9	2,7		*SCOPUS*
Number of books, book chapters and monographies published in the given year	3	2	2	2	9	3	3	3	3	12	
Invited lectures at international scientific congresses	27	37	29	30	123	32	32	35	35	134	
Technical reports developed under request for public/private decision makers	0	0	0	0	0	0	0	0	0	0	
Policy Briefings	0	0	0	0	0	0	0	0	0	0	
Other relevant indicators for the center	0	0	0	0	0	0	0	0	0	0	

Research talent recruitment (by organization)

INDICATORS	OBTAINED RESULTS 2014-2017					PROPOSED INDICATORS 2018-2021					COMMENTS
	2014	2015	2016	2017	TOTAL / AVRG	2018	2019	2020	2021	TOTAL / AVRG	(*Only if necessary*)
PI	9	10	13	14	11,5	13	15	17	17	15,5	
Permanent researchers (PI excluded)	0	0	0	1	0,25	1	2	2	2	1,75	
Postdoctoral researchers	15	17	19	18	17,25	18	19	19	19	18,75	
PhD students	27	27	26	31	27,75	33	35	37	40	36,25	
Technical personnel	7	7	12	14	10	14	14	14	14	14	
Management personnel	10	9	13	12	11	12	13	13	13	12,75	
Others	12	12	14	12	12,5	14	14	14	14	14	
Total Personnel	80	82	97	102	90,25	105	112	116	119	113	
PI	2	2	4	5	3,25	4	4	4	4	4	
Permanent researchers (PI excluded)	0	0	0	0	0	0	0	0	0	0	
Postdoctoral researchers	1	1	0	1	0,75	1	1	1	1	1	
PhD students	8	7	4	4	5,75	4	4	4	4	4	
Technical personnel	5	5	5	7	5,5	7	7	7	7	7	
Management personnel	10	9	10	8	9,25	8	9	9	9	8,75	
Others	7	7	7	3	6	5	5	5	5	5	
Total BERC Personnel	33	31	30	28	30,5	29	30	30	30	29,75	
PI	0	0	0	0	0	0	0	0	0	0	
Permanent researchers (PI excluded)	0	0	0	0	0	0	0	0	0	0	
Postdoctoral researchers	0	0	0	0	0	0	0	0	0	0	
PhD students	0	0	0	0	0	0	0	0	0	0	
Technical personnel	0	0	0	0	0	0	0	0	0	0	
Management personnel	0	0	0	0	0	0	0	0	0	0	
Others	0	0	0	0	0	0	0	0	0	0	
Total UPV/EHU Personnel	0	0	0	0	0	0	0	0	0	0	
PI	0	0	0	0	0	0	0	0	0	0	
Permanent researchers (PI excluded)	0	0	0	0	0	0	0	0	0	0	
Postdoctoral researchers	0	0	0	0	0	0	0	0	0	0	
PhD students	0	0	0	0	0	0	0	0	0	0	
Technical personnel	0	0	0	0	0	0	0	0	0	0	
Management personnel	0	0	0	0	0	0	0	0	0	0	
Others	0	0	0	0	0	0	0	0	0	0	
Total CSIC Personnel	0	0	0	0	0	0	0	0	0	0	
Ikerbasque Research Professors	2	2	3	3	2,5	3	3	4	4	3,5	
Ikerbasque Research Associates	0	0	0	1	0,25	1	2	2	2	1,75	
Ikerbasque Research Fellows	2	2	3	2	2,25	2	2	2	2	2	
Total Ikerbasque Personnel	4	4	6	6	5	6	7	8	8	7,25	
PI	5	6	6	6	5,75	6	8	9	9	8	
Permanent researchers (PI excluded)	0	0	0	0	0	0	0	0	0	0	
Postdoctoral researchers	12	14	16	15	14,25	15	16	16	16	15,75	
PhD students	19	20	22	27	22	29	31	33	36	32,25	
Technicians	2	2	7	7	4,5	7	7	7	7	7	
Management personnel	0	0	3	4	1,75	4	4	4	4	4	
Others	5	5	7	9	6,5	9	9	9	9	9	
Total other Personnel	43	47	61	68	54,75	70	75	78	81	76	

Research talent recruitment (by type)

INDICATORS	OBTAINED RESULTS 2014-2017					PROPOSED INDICATORS 2018-2021					COMMENTS
	2014	2015	2016	2017	TOTAL / AVRG	2018	2019	2020	2021	TOTAL / AVRG	(*Only if necessary*)
Basque programs	13	16	14	14	14,25	14	16	16	16	15,5	
BERC	8	9	4	4	6,25	4	4	4	4	4	
UPV/EHU	0	0	0	0	0	0	0	0	0	0	
Others	5	7	10	10	8	10	12	12	12	11,5	
Spanish programs	10	8	6	15	9,75	16	15	17	19	16,75	
CSIC	0	0	0	0	0	0	0	0	0	0	
Others	10	8	6	15	9,75	16	15	17	19	16,75	
International programs	4	3	6	2	3,75	3	4	4	5	4	
Total PhD students	27	27	26	31	27,75	33	35	37	40	36,25	
Basque programs	5	6	5	8	6	7	8	8	9	8	
BERC	1	2	3	6	3	5	5	5	5	5	
UPV/EHU	0	0	0	0	0	0	0	0	0	0	
Others	4	4	2	2	3	2	3	3	4	3	
Spanish programs	5	8	5	11	7,25	11	13	14	13	12,75	
CSIC	0	0	0	0	0	0	0	0	0	0	
Others	5	8	5	11	7,25	11	13	14	13	12,75	
International programs	14	10	9	8	10,25	8	8	8	8	8	
Total PhDs	24	24	19	27	23,5	26	29	30	30	28,75	
Basque programs	18	20	29	18	21,25	20	21	21	21	20,75	
BERC	18	20	29	18	21,25	20	21	21	21	20,75	
UPV/EHU	0	0	0	0	0	0	0	0	0	0	
Others	0	0	0	0	0	0	0	0	0	0	
Spanish programs	4	4	14	18	10	18	17	17	17	17,25	
CSIC	0	0	0	0	0	0	0	0	0	0	
Others	4	4	14	18	10	18	17	17	17	17,25	
International programs	3	3	3	2	2,75	2	3	3	3	2,75	
Total lab technicians, admin and IT	25	27	46	38	34	40	41	41	41	40,75	
Total BERC Personnel	27	31	36	28	30,5	29	30	30	30	29,75	
Ikerbasque Research Professors	2	2	3	3	2,5	3	3	4	4	3,5	
Ikerbasque Research Associates	0	0	0	1	0,25	1	2	2	2	1,75	
Ikerbasque Research Fellows	2	2	3	2	2,25	2	2	2	2	2	
Total Ikerbasque Personnel	4	4	6	6	5	6	7	8	8	7,25	

External funding (BERC centre only)

INDICATORS	OBTAINED RESULTS 2014-2017					PROPOSED INDICATORS 2018-2021					COMMENTS
	2014	2015	2016	2017	TOTAL / AVRG	2018	2019	2020	2021	TOTAL / AVRG	(*Only if necessary*)
% of other Basque funding (different from BERC funding)	8%	11%	14%	10%	11%	9%	9%	9%	8%	9%	
% of Spanish funding	13%	14%	30%	43%	25%	38%	40%	39%	41%	40%	
% of international funding	27%	30%	25%	14%	24%	14%	14%	17%	18%	16%	
% of external funding (total)	48%	55%	69%	67%	60%	61%	63%	65%	67%	64%	
Other indicators											

Patents and transfer of knowledge

INDICATORS	OBTAINED RESULTS 2014-2017					PROPOSED INDICATORS 2018-2021					COMMENTS
	2014	2015	2016	2017	TOTAL / AVRG	2018	2019	2020	2021	TOTAL / AVRG	(*Only if necessary*)
Requested patents, utility models	0	0	0	0	0	0	0	0	0	0	
Licenced patents, utility models	0	0	0	0	0	0	0	0	0	0	
Patents, utility models under explotation	0	0	0	0	0	0	0	0	0	0	
Creation of *spin-offs*	0	0	0	0	0	0	0	0	0	0	
Agreements/contracts with private firms	15	15	16	16	62	16	16	16	16	64	
Organized congresses at national level	0	0	0	0	0	0	0	0	0	0	
Organized congresses at international level	3	2	2	3	10	2	2	2	2	8	
Other events organized (seminars, *workshops, scientific meetings, etc.*)	26	19	22	13	80	15	15	15	15	60	
High Level Policy oriented meetings (City Halls, Basque Government, Spanish Government, European Union…)	4	4	4	4	16	4	4	4	4	16	
Other indicators	23	24	25	25	97	25	26	26	26	103	

Training

INDICATORS	OBTAINED RESULTS 2014-2017					PROPOSED INDICATORS 2018-2021					COMMENTS
	2014	2015	2016	2017	TOTAL / AVRG	2018	2019	2020	2021	TOTAL / AVRG	(*Only if necessary*)
Started	7	2	4	11	24	5	5	5	5	20	
Finalized (national)	1	0	2	6	9	3	3	3	3	12	
Finalized (international)	0	0	3	4	7	2	2	2	2	8	
Industrial	0	0	0	0	0	0	0	0	0	0	
PhD Thesis	8	2	9	21	40	10	10	10	10	40	
Started	13	13	14	12	52	11	13	12	13	49	
Finalized (national)	7	4	3	2	16	1	2	4	3	10	
Finalized (international)	7	7	7	12	33	12	10	9	9	40	
Master Thesis	27	24	24	26	101	24	25	25	25	139	
PhD courses	13	13	13	13	52	13	13	14	14	54	
Master courses	30	30	28	31	119	30	30	30	30	120	
Advanced courses	3	5	2	2	12	2	3	3	3	11	
Number of researchers participating in courses	46	48	43	46	183	45	46	47	47	185	
Other indicators					0					0	

Internationalization

INDICATORS	OBTAINED RESULTS 2014-2017					PROPOSED INDICATORS 2018-2021					COMMENTS
	2014	2015	2016	2017	TOTAL / AVRG	2018	2019	2020	2021	TOTAL / AVRG	(*Only if necessary*)
Participation in international networks	5	5	5	5	20	5	5	5	5	20	
International agreements	37	37	40	42	156	42	42	43	43	170	
International projects (requested)	11	19	21	19	70	14	14	15	15	58	
International projects (obtained)	0	3	0	2	5	2	2	2	2	8	
% of non Spanish PhD personnel in relation to total number of PhD personnel	73%	77%	60%	73%	71%	75%	75%	75%	75%	75%	
% of non Spanish PhD students in relation to total number of PhD students	45%	44%	60%	58%	52%	60%	60%	60%	60%	60%	
Number of researchers who are member of editorial boards of indexed research publications	4	5	10	10	7,25	10	10	10	10	10	
Number of researchers who are member of editorial boards of indexed Q1 research publications	2	3	8	9	5,5	9	9	9	9	9	
Requested ERC grants (describe type):	6	3	7	5	21	3	4	3	3	13	
ERC AdV	0	1	1	0	2	0	1	0	1	2	
ERC CoG	2	0	3	3	8	1	1	1	1	4	
ERC StG	4	2	3	1	10	2	1	2	1	6	
ERC PoC	0	0	0	1	1	0	1	0	0	1	
Obtained ERC grants (describe type)	0	0	1	0	1	1	1	2	0	4	
ERC AdV	0	0	1	0	1	0	0	1	0	1	
ERC CoG	0	0	0	0	0	0	0	1	0	1	
ERC StG	0	0	0	0	0	0	1	0	0	1	
ERC PoC	0	0	0	0	0	1	0	0	0	1	
Visiting researchers (number of researchers)	13	15	11	15	54	13	13	13	13	52	
Visiting researchers (number of months of average stay)	2	4	4	3	3	3	3	3	3	3	
International recognitions, awards	2	2	2	2	8	2	2	2	2	8	
Other indicators					0					0	

Public and private partnerships

INDICATORS	OBTAINED RESULTS 2014-2017					PROPOSED INDICATORS 2018-2021					COMMENTS
	2014	2015	2016	2017	TOTAL / AVRG	2018	2019	2020	2021	TOTAL / AVRG	(*Only if necessary*)
Number of Basque universites research groups of excelence (acknowledge by the Basque Government) that collaborate in research projects of the BERC (University groups)	4	4	4	5	4,25	5	5	5	5	5	
Number of Basque research groups(of agents registered in the RVCTI) that collaborate in research projects of the BERC (other groups)	4	4	4	4	4	5	5	5	5	5	
Other indicators					0					0	

Outreach activities

INDICATORS	OBTAINED RESULTS 2014-2017					PROPOSED INDICATORS 2018-2021					COMMENTS
	2014	2015	2016	2017	TOTAL / AVRG	2018	2019	2020	2021	TOTAL / AVRG	(*Only if necessary*)
Seminars, conferences, courses, workshops, as organizer	28	24	21	27	25	27	27	27	27	27	
Seminars, conferences, courses, workshops, as participant	30	39	32	32	33,25	32	32	32	32	32	
Activity in mass media (nº)	165	369	342	850	431,5	850	850	850	850	850	
Activity in social networks (nº)	355	531	495	441	455,5	450	450	450	450	450	
Visits hosted (general public, schools, associations…)	14	17	16	20	16,75	20	20	20	20	20	
Other activities					0					0	

Gender equality

INDICATORS	OBTAINED RESULTS 2014-2017					PROPOSED INDICATORS 2018-2021					COMMENTS
	2014	2015	2016	2017	TOTAL / AVRG	2018	2019	2020	2021	TOTAL / AVRG	(*Only if necessary*)
Scientific director	0	0	0	0	0	0	0	0	0	0	
PI	4	4	6	6	5	7	8	9	10	8,5	
Permanent researchers (PI excluded)	1	1	1	1	1	1	1	2	2	1,5	
Postdoctoral researchers	8	8	10	12	9,5	11	12	12	12	11,75	
PhD students	19	19	18	21	19,25	21	22	24	24	22,75	
Technical personnel	2	2	7	8	4,75	8	8	8	8	8	
Management personnel	6	5	9	8	7	8	8	8	8	8	
Others	7	7	7	6	6,75	6	7	7	7	6,75	
Total number of women	47	46	58	62	53,25	62	66	70	71	67,25	
Scientific director	1	1	1	1	1	1	1	1	1	1	
PI	4	5	6	7	5,5	7	9	9	9	8,5	
Permanent researchers (PI excluded)	1	2	2	2	1,75	2	2	2	2	2	
Postdoctoral researchers	5	6	6	4	5,25	4	4	4	4	4	
PhD students	8	8	8	10	8,5	12	13	13	15	13,25	
Technical personnel	5	5	5	6	5,25	6	6	6	6	6	
Management personnel	4	4	4	4	4	4	4	4	4	4	
Others	5	5	7	6	5,75	7	7	7	7	7	
Total number of men	33	36	39	40	37	43	46	46	48	45,75	
Activities related to promotion of gender equality (n.)					0					0	

BUDGET	2014	%	2015	%	2016	%	2017	%	TOTAL 2014-2017	%	2018	%	2019	%	2020	%	2021	%	TOTAL 2018-2021	%
Personnel	2.463.913	66,50%	2.546.477	69,30%	2.768.183	56,11%	3.125.000	61,76%	**10.903.573,00**	**62,76%**	3.500.000,00	61,35%	3.700.000,00	61,96%	3.900.000,00	61,37%	4.100.000,00	62,38%	**15.200.000,00**	**61,78%**
Other costs	966.601	26,09%	1.030.234	28,04%	1.199.287	24,31%	1.385.000	27,37%	**4.581.122,00**	**26,37%**	1.650.000,00	28,92%	1.672.000,00	28,00%	1.753.000,00	27,59%	1.773.000,00	26,97%	**6.848.000,00**	**27,83%**
Investments (total)	274.789	7,42%	97.809	2,66%	966.065	19,58%	550.000	10,87%	**1.888.663,00**	**10,87%**	555.000,00	9,73%	600.000,00	10,05%	701.500,00	11,04%	700.000,00	10,65%	**2.556.500,00**	**10,39%**
TOTAL BUDGET	**3.705.303,00**	**100,00%**	**3.674.520,00**	**100,00%**	**4.933.535,00**	**100,00%**	**5.060.000,00**	**100,00%**	**17.373.358,00**	**100,00%**	**5.705.000,00**	**100,00%**	**5.972.000,00**	**100,00%**	**6.354.500,00**	**100,00%**	**6.573.000,00**	**100,00%**	**24.604.500,00**	**100,00%**

Additional information

BUDGET (BERC only)	2014	2015	2016	2017	TOTAL 2014-2017	2018	2019	2020	2021	TOTAL 2018-2021
Cost of renting of facilities	220.899	220.899	220.899	226.965	**889.661,52**	252.030	260.000	265.000	270.000	**1.047.029,76**
Cost of the lab-based practical	525.306	487.370	1.456.251	781.905	**3.250.831,66**	820.000	987.000	1.300.000	1.115.000	**4.222.000,00**
maintenance of facilities	15.750	18.000	34.914	21.275	**89.938,66**	30.000	32.000	35.000	40.000	**137.000,00**
equipment	90.918	31.206	912.166	65.000	**1.099.290,00**	100.000	200.000	500.000	300.000	**1.100.000,00**
reagents	0	0	0	0	**0,00**	0	0	0	0	**0,00**
specific tools	26.156	25.174	22.284	90.000	**163.614,00**	45.000	50.000	50.000	50.000	**195.000,00**
Participants	38.277	50.987	58.284	60.000	**207.548,00**	70.000	75.000	80.000	85.000	**310.000,00**
Personnel	304.443	302.846	381.050	477.630	**1.465.969,00**	500.000	550.000	550.000	550.000	**2.150.000,00**
Helium	49.762	59.157	47.553	68.000	**224.472,00**	75.000	80.000	85.000	90.000	**330.000,00**
Travel expenses related to experiments (participants /	6.516	9.664	11.917	4.316	**32.412,99**	8.000	8.000	8.000	8.000	**32.000,00**

BUDGET (associated to projects managed by BERC researchers, managed from the UPV/EHU or CSIC)	2014	2015	2016	2017	TOTAL 2014-2017	2018	2019	2020	2021	TOTAL 2018-2021
Cost of the lab-based practical	0,00	0,00	0,00	0,00	**0,00**	0,00	0,00	0,00	0,00	**0,00**
maintenance of facilities					**0,00**					**0,00**
equipment					**0,00**					**0,00**
reagents					**0,00**					**0,00**
specific tools					**0,00**					**0,00**
others (please specify)					**0,00**					**0,00**

INCOMES (BERC only)	2014	%	2015	%	2016	%	2017	%	TOTAL	%	2018	%	2019	%	2020	%	2021	%	TOTAL	%
PUBLIC FUNDING	**3.661.758,48**	**98,82%**	**3.609.615,00**	**98,23%**	**4.843.832,00**	**98,18%**	**4.892.148,76**	**96,68%**	**17.007.354,24**	**97,89%**	**5.583.000,00**	**97,86%**	**5.820.000,00**	**97,45%**	**6.182.000,00**	**97,29%**	**6.373.000,00**	**96,96%**	**23.958.000,00**	**97,37%**
BERC program	1.934.724,00	52,22%	1.640.975,00	44,66%	1.536.877,00	31,15%	1.689.025,00	33,38%	**6.801.601,00**	**39,15%**	2.200.000,00	38,56%	2.200.000,00	36,84%	2.200.000,00	34,62%	2.200.000,00	33,47%	**8.800.000,00**	**35,77%**
UPV/EHU funding	6.138,00	0,17%	1.000,00	0,03%	1.000,00	0,02%	1.000,00	0,02%	**9.138,00**	**0,05%**	1.000,00	0,02%	1.000,00	0,02%	1.000,00	0,02%	1.000,00	0,02%	**4.000,00**	**0,02%**
Other Basque funding	298.203,48	8,05%	405.734,00	11,04%	678.410,00	13,75%	497.733,32	9,84%	**1.880.080,80**	**10,82%**	518.000,00	9,08%	553.000,00	9,26%	553.000,00	8,70%	553.000,00	8,41%	**2.177.000,00**	**8,85%**
CSIC funding	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%	**0,00**	**0,00%**	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%	**0,00**	**0,00%**
Other Spanish funding	416.164,00	11,23%	442.717,00	12,05%	1.398.441,00	28,35%	1.993.392,93	39,40%	**4.250.714,93**	**24,47%**	2.064.000,00	36,18%	2.216.000,00	37,11%	2.328.000,00	36,64%	2.469.000,00	37,56%	**9.077.000,00**	**36,89%**
EU & International funding	1.006.529,00	27,16%	1.119.189,00	30,46%	1.229.104,00	24,91%	710.997,51	14,05%	**4.065.819,51**	**23,40%**	800.000,00	14,02%	850.000,00	14,23%	1.100.000,00	17,31%	1.150.000,00	17,50%	**3.900.000,00**	**15,85%**
Other funding		0,00%		0,00%		0,00%		0,00%	**0,00**	**0,00%**	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%	**0,00**	**0,00%**
PRIVATE FUNDING	**43.544,52**	**1,18%**	**64.905,00**	**1,77%**	**89.703,00**	**1,82%**	**167.851,24**	**3,32%**	**366.003,76**	**2,11%**	**122.000,00**	**2,14%**	**152.000,00**	**2,55%**	**172.500,00**	**2,71%**	**200.000,00**	**3,04%**	**646.500,00**	**2,63%**
R+D contracts	19.705,52	0,53%	39.684,00	1,08%		0,00%		0,00%	**59.389,52**	**0,34%**	10.000,00	0,18%	10.000,00	0,17%	10.000,00	0,16%	10.000,00	0,15%	**40.000,00**	**0,16%**
patronage		0,00%		0,00%		0,00%		0,00%	**0,00**	**0,00%**	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%	**0,00**	**0,00%**
donations		0,00%		0,00%		0,00%	12.000,00	0,24%	**12.000,00**	**0,07%**	12.000,00	0,21%	12.000,00	0,20%	5.000,00	0,08%	5.000,00	0,08%	**34.000,00**	**0,14%**
returns via patents, licencing…		0,00%		0,00%		0,00%		0,00%	**0,00**	**0,00%**	0,00	0,00%	5.000,00	0,08%	7.500,00	0,12%	10.000,00	0,15%	**22.500,00**	**0,09%**
other private funding	23.839,00	0,64%	25.221,00	0,69%	89.703,00	1,82%	155.851,24	3,08%	**294.614,24**	**1,70%**	100.000,00	1,75%	125.000,00	2,09%	150.000,00	2,36%	175.000,00	2,66%	**550.000,00**	**2,24%**
TOTAL INCOME (must match total budget)	**3.705.303,00**	**100,00%**	**3.674.520,00**	**100,00%**	**4.933.535,00**	**100,00%**	**5.060.000,00**	**100,00%**	**17373358,00**	**100,00%**	**5.705.000,00**	**100,00%**	**5.972.000,00**	**100,00%**	**6.354.500,00**	**100,00%**	**6.573.000,00**	**100,00%**	**24.604.500,00**	**100,00%**

0,00

External funding (associated to projects managed by BERC researchers, managed from the UPV/EHU or CSIC)

INCOMES	2014	%	2015	%	2016	%	2017	%	TOTAL	%	2018	%	2019	%	2020	%	2021	%	TOTAL	%
PUBLIC FUNDING	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**
BERC program		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**
UPV/EHU funding		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**
Other Basque funding		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**
CSIC funding		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**
Other Spanish funding		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**
EU & International funding		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**
Other funding		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**
PRIVATE FUNDING	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**
R+D contracts		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**
patronage		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**
donations		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**
returns via patents, licencing…		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**
other private funding		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!	**0,00**	**#DIV/0!**
TOTAL INCOME	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**	**0,00**	**#DIV/0!**

6. ANNEXES

Include any annex that could contribute to the evaluation process of the centre.

6.1 Annex I. Conclusions and recommendations from ISAB last report, dated September 2017

2017

International Scientific Advisory Board Report

Basque Center on Cognition, Brain and Language

Board Members

Anne Cutler, Ph.D.
Research Professor, The MARCS Institute, Western Sydney University, Australia
Director Emeritus, Max Planck Institute for Psycholinguistics, The Netherlands
George R. Mangun, Ph.D. (Chair)
Distinguished Professor of Psychology and Neurology
University of California, Davis, U.S.A.
William Marslen-Wilson, Ph.D.
Honorary Professor of Language & Cognition, Department of Experimental Psychology
Director Emeritus, MRC Cognition & Brain Sciences Unit, University of Cambridge, U.K.
James L. McClelland, Ph.D.
Lucie Stern Professor in the Social Sciences, Department of Psychology
Director, Center for Mind, Brain and Computation, Stanford University, U.S.A.
Timothy Shallice, Ph.D.
Professor and Director Emeritus, Institute for Cognitive Neuroscience, University College London, U.K.
Professor Emeritus, Scuola Internationale Superiore di Studi Avanzati, Italy

Executive Summary

The International Scientific Advisory Board (ISAB) conducted a comprehensive site visit of the Basque Center on Cognition, Brain and Language (BCBL) on July 21-24, 2017. Prior to the visit, the ISAB received and reviewed the *BCBL Activity Report 2013-2016*. During the visit, the ISAB attended scientific presentations by the Director, the Group Leaders and Staff Scientists, toured the BCBL, attended scientific poster presentations given by doctoral students and postdoctoral scholars, and met with faculty, trainees and members of the administrative staff. These activities were followed by a closed ISAB evaluation session, and then an executive session with the BCBL Director, Professor Carreiras, where the ISAB presented recommendations to the Director, and discussed a variety of topics, especially regarding the future plans of the BCBL. The ISAB was strongly impressed with the accomplishments of the BCBL over the past several years. In 2010 the board visited a promising center with great potential; in 2017 we could observe the detailed realization of that promise in the BCBL as it is today. The BCBL is now a vibrant international center integrating a broad range of programs and activities. The ISAB made particular note of the quality of the scientific discoveries made by the BCBL scientists, their exceptional success in building world-class training programs for doctoral and postdoctoral scholars, their remarkable recent progress in creating a biomedical research program with local medical practitioners, the extensive outreach and collaboration they have built with the local education community, which is already benefiting both science and educational practice, and their success in securing extramural grant support and international cooperation (including the notable achievement of the *Severo Ochoa* award). The BCBL has progressed from being a promising regional center to becoming an important international center with unique

specialization in studies of crucial relevance to a multi-lingual and multi-cultural world. Its emphasis on neural mechanisms, strongly interwoven with applications to education and health, place it on an excellent trajectory to become one of most influential centers worldwide investigating language and reading and their bases in the brain and human experience.

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I. Introduction to the ISAB Report

Director Manuel Carreiras and his colleagues and staff have delivered a remarkable achievement in raising the Basque Center on Cognition, Brain and Language (BCBL) to an international leadership position. Since its founding, the center has advanced every year to the current impressive state. The BCBL has developed an exciting research environment and has made an outstanding start in recruiting an excellent international group of researchers, technical staff and managers. The International Scientific Advisory Board (ISAB) members were delighted by the rapid progress towards the creation of a leading international center.

The ISAB, consisting of Professors Cutler, Mangun, Marslen-Wilson, McClelland and Shallice, met with Director Carreiras and the members of the BCBL on July 21-24, 2017. The last visit of the ISAB to the BCBL, resulting in the first report, was in 2010; an interim remote review took place in 2012. The present 2017 site visit took place at a key time in the development of the BCBL, following a period of rapid growth and expansion on several fronts. During the site visit the ISAB received scientific reports from the Director, Group Leaders, Staff Scientists and trainees, toured the facilities, and discussed the mission, current organization, infrastructure, and future of the BCBL.

Numerous issues were reviewed and discussed during the site visit, including:

- The scientific mission of the BCBL, research excellence, and international standing
- The recruitment, achievements, advancement and review of the scientific Group Leaders
- The synergies between the individual goals of the groups and the BCBL mission
- Training and support of doctoral students and postdocs
- The BCBL scientific and administrative organization, policies and governance
- The success of extramural support of the center and research programs, and current and future budgetary impact
- The contributions of the BCBL to regional scientific and societal advancement

The ISAB came away from this site visit deeply impressed with the accomplishments of the center since its founding, and the impressive acceleration of its many programs since our remote review in 2012. In the following we focus our report on our major observations and recommendations.

II. BCBL Mission, Research Excellence and International Profile

The BCBL has established its international profile and is well on its way toward achieving its aim to become a leading international institute for the study of brain, language and cognition. The BCBL is accomplishing this by pursuing three main research foci: (1) language, reading and developmental disorders, (2) multilingualism and second language learning, and (3) neurodegeneration, brain damage and healthy aging in language and cognition. It is the strong opinion of the SAB that these three foci are well integrated, highly socially relevant, and ripe for major discovery.

The ISAB closely evaluated the research excellence and significance of work at the BCBL. While excellent research was evident at all levels and across programs, the ISAB focused on the major scientific discoveries that advance the international reputation of the center, have significant theoretical importance, and that have immediate, or strong potential for translation to address societal challenges in health and education. The ISAB noted several important discoveries that have propelled the BCBL to its current position of leadership. In the following we wish to highlight some of the most noteworthy discoveries that have drawn significant international attention to the work at the BCBL.

Problems in Learning to Read: Dyslexia. Among the most mysterious disorders of child development is the phenomenon of *dyslexia*, which is characterized as persistent difficulty in learning to read in otherwise normally developing individuals. While there are many theories about the causes of this disorder, which may affect as many as 10% of all children, only limited progress has been made in understanding dyslexia, and there is currently no cure nor generally agreed method of remediation. Researchers at the BCBL have made important new discoveries about dyslexia. Using methods to record ongoing brain activity in the form of oscillations of neural signals, in particular using EEG and MEG technology, they have shown that in the typically developing child, brain oscillatory activity prior to seeing a word facilitates perception of an expected printed word. Brain activity in the so-called delta band (0-4 cyles per sec) reflects higher-order language computations. In developmental dyslexia, BCBL scientists have shown that these delta band EEG processes are deficient. This is a significant finding, which may open up new methods for training dyslexic brains in order to optimize the deficient rhythms, and can also provide critical information to categorize those with reading disorders who would and would not benefit from a specific remedial intervention. In related research, the BCBL scientists have shown that regional hypoactivation (reduced activation) in nodes of the brain's reading network in dyslexia is related to differences in functional brain connectivity. The ISAB was impressed with these findings and their potential for clinical and educational benefits to society.

Bilingual Language Learning. Recently scientists at the BCBL have challenged an important scientific claim that has been widely reported in the media: This is the claim that bilingual children and adults have improved cognitive function, and may also be protected from age-related cognitive decline. While some of the earlier evidence seemed compelling, and while many would like to believe it is true, BCBL scientists have shown that the claim for a "bilingual advantage" cannot be supported in children exposed from early childhood to two languages that are both used extensively in a settled community. Using carefully controlled experimental studies, in the ideal situation provided by the BCBL's bilingual Basque-Spanish cultural context, BCBL researchers could not find evidence to support the popular idea of a bilingual advantage. This is not to say, however, that bilingual brains may not differ from monolingual brains. For example, in other BCBL research, it was shown that the orthography of a language (the conventions for how to write a language) influences which brain circuits the reader utilizes during reading comprehension. In related research, the BCBL has shown that standard practices for learning a second language in schools may actually hinder learning. Contrary to common belief in education, having a second language learner hear and then repeat a word actually delays the development of word representations in the brain, and therefore BCBL research is providing clues as to how to teach second languages in the classroom. Lastly, and importantly, work from the BCBL shows that mixing languages in the classroom does not harm learning. The ISAB was struck by the theoretical and practical importance of these discoveries,

which not only have significant implications for our understanding of bilingualism, but also for how how second languages are taught and learned in school.

Deafness, Language Proficiency and Reading. It is estimated that 360 million people worldwide suffer from significant hearing loss/deafness, which may be developmental in nature, or arise during life. Working in populations that are deaf from birth or who lose their hearing early in life and use signed languages, researchers at the BCBL have shown that similar brain regions are recruited when learning signed languages and spoken languages. However, when it comes to developing reading ability, which not all deaf signers attain, the brain achieves proficiency in different ways in the deaf and hearing; phonological (sound based) codes in the brain are not involved in learning to read in the deaf as they are in hearing children. This basic scientific information is critically important for understanding how to teach reading to the deaf. In addition, though, this line of work may also provide clues about how to mitigate age-related deficits in reading, which is a growing problem in the Basque Country and around the world. The ISAB was pleased to see these new discoveries related to deafness and reading, and believe that the potential societal impact of this work may be considerable.

Neurological Disorders, Brain Damage and Brain Plasticity. Neurological disorders such as stroke, brain tumors, Alzheimer's Disease, Parkinson's Disease, and epilepsy affect hundreds of millions of individuals worldwide. Brain tumors alone affect nearly 90 million people. In the U.S.A., a 2017 report estimated the cost of neurological diseases to be nearly 800 billion dollars, with equivalent costs estimated for the EU. Understanding these disorders and how they affect language and cognition is therefore an important public health priority. The BCBL is now in partnership with local medical professionals in order to obtain new knowledge about brain damage and its effect on brain organization. This joint research has shown that, in the areas of the brain surrounding a tumor that has been surgically removed, there are increases in connectivity; i.e., new circuits and connections are appearing. This remarkable plasticity can help to explain why function does or does not recover after surgery, and provides an innovative pathway to understanding how to help brain tumor patients to recover language and cognitive functions. The ISAB believes these new directions, involving close collaboration with local hospitals and medical professionals, not only provides the BCBL with opportunities to conduct cutting edge brain research, but also channels the scientific knowledge and tools of the BCBL into actual clinical practice, benefiting patients directly. The board is enthusiastic about this development and its future potential.

Technological Advances. Although technology advances at a remarkable rate, and we can now view and measure the activity of the human brain in real time and in living persons, the complexity of the human brain is so immense that even the most advanced tools provide only a small glimpse of the workings of the mind and brain. For this reason, it is important to continue to innovate technology at a high rate. The tools for brain research at the BCBL enable its scientists to contribute significantly to these processes of innovation, and to share their advances with colleagues around the world. Recently, for example, BCBL researchers and their partners have developed a novel method for correcting for head motion in magnetic resonance imaging scans. One large source of noise in brain imaging is the minute movements of the head and brain while the images of the brain are being acquired. Using neural network methods (machine learning), BCBL scientists have developed a new method to correct for even very small head movements, thereby greatly improving the accuracy and precision of brain scanning

methods. Similarly, another BCBL research group has developed new algorithms for identifying the parts of small brain structures, like the hippocampus, which is critical for memory, so that changes in brain structure and function with disease, developmental disorders, and training methods can be assessed more precisely. The ISAB strongly encourages these technological innovations, and applauds the open sharing of these methods with the greater scientific and medical communities.

In sum, the scientific discoveries of the BCBL over the past several years have been impressive, such that the BCBL is routinely viewed as a major international center for research and training in brain, cognition and language, with special strengths given its location in the multilingual and multicultural Basque-Spanish cultural context. Given that the majority of the Group Leaders are still early in their careers, this reputation can only be expected to grow over the next five to ten years. Director Carreiras continues his exceptional career as a leading international figure, and it is noteworthy that he is increasingly sought after for his advice and expertise by international institutions and agencies (e.g., Max Planck Society; European Research Council). Please note that while it was incumbent upon the board to comment directly on the contributions of the Director, for reasons of brevity and style we have in large part refrained from referring directly to other members of the BCBL in this report.

III. Faculty Development and Training Program

Recruitment of Group Leaders. The ISAB was pleased with the success of the recruitment of Group Leaders. At present, the BCBL has nine research groups (with one more to be added this coming year) as follows:

Neurobiology of Language (PI: Manuel Carreiras)
Spoken Language (PI: Arthur Samuel)
Multilingual Literacy (PI: Jon Andoni Duñabeitia)
Consciousness (PI: David Soto)
Developmental Language Disorders (PI: Marie Lallier)
Speech and Bilingualism (PI: Clara Martin)
Proactive (PI: Nicola Molinaro)
Parkinson Disease and Neurodegeneration (PI: Maria Cruz Rodriguez-Oroz)
Language and Memory Control (PI: Kepa Paz-Alonso)
Aphasia (PI: Mireia Hernandez) -- to be added this coming year

Only two of these groups were fully in place at the time of our last written review in 2012 (those of Carreiras and Samuel). The addition of the seven current and one imminent new research groups is a very positive achievement. In part, this is due to the success of the recruitment strategy, which has been to identify and recruit early career rising stars, bring them to the BCBL, and support their career development. The ISAB also notes positively that the Group Leaders are quite diverse in terms of national origin, gender and expertise. The ISAB applauds the success of Director Carreiras in building this team of accomplished scholars at the BCBL.

The ISAB also considered how the Group Leaders are evaluated. Currently, the system appears to be quite well formulated, as it makes use of the Ikerbasque Professor mechanism. This mechanism has clearly defined career landmarks and review steps for Group Leaders to

advance from being an Ikerbasque Fellow/Ramon Y Cajal Fellow to an Associate Ikerbasque Professor (review at 4 years), and then later to a Full Ikerbasque Professor (two reviews, one at 3 years and the second at 6 years). The ISAB believes that the Director would benefit from some additional specific feedback form the ISAB on the success of the Groups and Group Leaders that could contribute to the evaluation processes (without, of course, interfering with the Ikerbasque process); we make this recommendation at the end of the report.

Graduate and Postdoctoral Training. The growth of the faculty, the prestige of their work, their success with extramural grants, and thence the reputation of the BCBL, are also matched by an impressive growth in graduate and postdoctoral training. The initial masters program, and the new doctoral program are attracting and training outstanding international scholars. Similarly, the postdoctoral training program has grown significantly, and new Ph.D.'s from around the globe are now coming to the BCBL to take the next step in their careers. The ISAB observed that the quality, prior training, achievements, and success in securing prestigious national and international fellowships by the trainees are outstanding.

During the site visit, the ISAB had opportunities to receive presentations from the doctoral and postdoctoral trainees at a poster session. The board members were uniformly impressed with the quality of the scientific work being conducted by the trainees. This opportunity also afforded the ISAB members the chance to learn about the backgrounds and immediate future plans of the trainees, and it was clear that they were all interested in pursuing research careers at high levels. One-on-one meetings with trainees took place at lunches and during breaks, where again the opinions formed by the board interactions with the trainees was very positive. Finally, the ISAB met in closed sessions with representative doctoral students, and separately with representative postdoctoral researchers. During these meetings the board probed levels of satisfaction with the program, the extent to which the trainees felt supported in their research and career goals, and whether their voices were heard and attended to by the faculty and administration. Trainees have many opportunities for interactions outside their own laboratory and these are built into the program in the BCBL. This maximizes the trainees' breadth of experience, and improves their scientific work. The postdocs we spoke to were sophisticated young scientists with clear plans for their career development. Some had secured prestigious positions in major international institutions, for example, or were stepping into faculty positions. The ISAB praises the BCBL faculty and administration – as well as the trainees themselves - for developing such an advanced and cohesive training environment. The BCBL has now become a destination, as well as a source, for international scientific training.

IV. Community and Regional Outreach and Programming, and Tech Transfer

Community Engagement and Collaboration. A salient and impressive aspect of BCBL activity over the current period has been the development of a powerful social infrastructure for carrying out its research. All aspects of its research require the active involvement of human participants, and therefore procedures are required to recruit them. On the one hand, this effort is as critical as the availability of state-of-the-art technical infrastructure, while on the other hand, it serves to forge close relationships with members of the local community, who become partners in the research by way of their participation.

Participants come in at least four categories - young and middle-aged healthy adults, children (including babies), patients, in particular those suffering from some form of neurological disease, and the elderly. Excellent recruitment procedures have been developed for all four. This has led to the BCBL having 6000 potential adult participants willing to take part in research studies, a number more than comparable to many larger, major international institutes. The ISAB views this as a strategic success.

It has also led to the BCBL being able to carry out research studies on children in 15 schools. This is a very large and successful operation by international standards, given the complexity of the work involved. Both these achievements have been greatly facilitated by the extensive outreach activities that the BCBL has carried out. The ISAB was perhaps most captivated, in this respect, by the Junior Lab, which the BCBL has established in Carmelitas School in Vitoria. Remarkably, the BCBL has created a remote neurophysiology and behavioral lab in the school itself, which includes EEG recording, eye tracking and behavioral testing facilities. This is a highly innovative success story that truly creates a partnership with local educators to advance knowledge of development and developmental disorders that affect the population. The board was impressed.

Neure Clinic. The ISAB was also greatly impressed by the BCBL's successful collaboration with the local medical community to develop the Neure Clinic – which benefits from specifically targeted funding provided by the BCBL's Severo Ochoa award. There are three main aims to this Clinic. The first aim involves work with patients who will be operated on by neurosurgeons in Bilbao for the removal of brain tumors, using so-called "awake brain surgery". If the patients agree, they would visit the Neure Clinic at the BCBL for two days to have a battery of tests just prior to surgery, and then again three and potentially six months afterwards. This protocol enables their brains to be carefully mapped using research tools at the BCBL that include a wider variety of procedures than would be routinely available in the clinical setting. A very detailed characterization of cognitive difficulties will be possible using new assessment tools developed at the BCBL. This is important because it enables assessments to be made over time from the pre-operative baseline to immediate post-surgical period, and then over the longer-term recovery period. The way in which the human brain changes as the result of disease, surgical intervention and recovery are currently not at all well understood, and it is unusual for patients to be investigated from a combined clinical and research perspective in this way. Cognitive neuroscientists and neurosurgeons tend to move in very different worlds, and have little contact with each other. It is rare for a center to have detailed behavioral and imaging investigations of post-operative recovery as a routine procedure, and this new program is impressive considered against similar programs around the world.

The second aim of the Neure Clinic is the diagnosis and monitoring of learning disorders, focused primarily on school children, but also in early development. The aim is to offer diagnosis of learning disabilities, and early diagnosis in children at risk, by providing a detailed assessment of different cognitive processes and brain dysfunction that capitalizes on the research expertise of the BCBL with respect to learning disabilities (e.g., dyslexia). Advanced neuroimaging techniques will be applied together with behavioral assessment. Currently the clinic focuses on *dyslexia* and *specific language impairment (SLI)*, which are major challenges for healthy child development, educational achievement, and career success.

The third aim of the Neure Clinic is to develop computer software for diagnosis and intervention in learning disorders. The BCBL is currently developing and standardizing two clinical assessment batteries; one for dyslexia and the other for SLI. In another related project the BCBL is creating software for testing the effects of training rhythm and visual spatial abilities in both typically developing children and those with dyslexia.

These three aims hold great promise for translation of basic research to clinical and educational relevance, and are also excellent candidates for technology transfer activities by the BCBL. The ISAB will be keen to follow the activities of the Neure Clinic as it develops, and strongly support both the concept of the clinic and the directions it is taking.

Basque Language and Education. The research topics of the BCBL are clearly designed to capitalize on the cultural opportunities (and challenges) available in the Basque Country, where the population generally speaks two languages, which are structurally very different from each other. A major part of the research being carried out therefore concerns bilingualism. The BCBL has done a wonderful job of integrating interest in bilingualism in citizens of the Basque Country with broader issues in bilingualism and multilingualism, including questions of how proficiency in multiple languages should best be pursued in education settings. Valuable practical knowledge has been gained from the BCBL research programs – showing, for example, that learning to read in the Basque language does not handicap children whose home language is Spanish. At the same time, important theoretical knowledge has been acquired concerning, for instance, how the processing of two languages is implemented in the same brain (as mentioned earlier in our report). Such information about the bilingual brain is of direct important in the Basque Country and around the world for education and health.

V. Facilities, Administration and Budget

Space and Facilities. The research facilities continue to provide the Research Groups and trainees with state of the art cognitive neuroscience methods including fMRI, EEG and MEG, as well as eye tracking and behavioral testing labs appropriate for testing a wide range of participants from infants through to elderly patients. The addition of near infrared spectroscopy (NIRS) is a powerful tool for studying infants and young children. Finally, the upgrade of the MRI system to the latest Siemens 3T PRISMAfit MR scanner is an important facilities development.

Since the last ISAB review, the BCBL has moved forward on its plans for improving and reorganizing the physical space. Now, the BCBL enjoys a well-organized floor plan that serves the researchers, staff and trainees well, and encourages inter-group communication.

Organizational Structure: Scientific and Administrative. Since the initial and remote reviews by the ISAB, the scientific structure of the BCBL has taken shape and is now well organized and clearly developed. In particular, whereas in past reviews the relationships of the research groups to the primary mission area of the BCBL was still being developed, it is now clear that the nine research groups have clear connections to the three principal research foci: (1) language, reading and developmental disorders, (2) multilingualism and second language learning, and (3) neurodegeneration, brain damage and healthy aging in language and cognition. The ISAB will not detail here these many interactions. During the site visit, the Director provided the board with a written document describing how the research programs of

each of the nine research groups aligned with the research foci of the BCBL. There is a clear matrix of alignment, such that the "whole is greater than the sum of the parts". Moreover, the ISAB judged that while the BCBL scientists are well integrated and forging a powerful faculty for advancing the BCBL mission, there is also room and support for new directions to arise either within a research group, or across research groups. This bodes well for the continued development of new ideas and discovery.

The ISAB reviewed the administrative structure with respect to how it supported and enabled the BCBL mission. The staff is well organized, and the leadership provided by BCBL Manager Miguel Arocena was evident to the board. The various staff members the ISAB interacted with were efficient and pleasant to work with, and it was the impression of the board that both the trainees and scientists of the BCBL are appreciative of the efficient support they receive.

The ISAB also discussed governance and policies in detail with the Director. For example, the BCBL now has appropriate procedures in place that require investigators to obtain approval for all new studies. The studies and their protocols undergo scientific and administrative review, and are tracked in an efficient database system. These procedures ensure that scientific and methodological rigor, and ethical principles, meet the highest accepted international standards. When shortcomings are revealed, or violations of policy come to light, the Director has shown strong leadership in both enforcing existing policies, and importantly, in acting to refine the governance and policies of the BCBL to correct the problem. Such steps are critical for maintaining national and international standards, and for maintaining trust and cooperation with the local community on whom the scientific work of the BCBL depends, and who the BCBL serves. The ISAB discussed with the Director specific cases and responses, and the ISAB is assured that BCBL oversight is robust and effective.

Budget and Extramural Research Grants. The success of the BCBL in attracting extramural support for research is impressive. The ISAB notes that the portfolio of grants is quite diverse, indicating that the faculty members of the center are competing internationally very well. Most importantly, as proposed in the original strategic plan, while the funding from the Basque government (BERC) has decreased, the support from competitive extramural grants has increased, keeping the budget of the BCBL relatively stable. This was true even prior to the receipt of the Severo Ochoa award, which provided significant new funding to the BCBL. Remarkably, by the end of fiscal year 2016, almost 60% of the support of the BCBL came from competitive extramural grants. The ISAB congratulates the Director, Group Leaders, Scientific and Administrative Staff of the BCBL for their success.

VI. Recommendations of the International Scientific Advisory Board

The ISAB congratulates the BCBL and its founding Director on the success of their first decade. With each passing year the center has met its target goals, and especially in the past 5 years has surpassed them. The BCBL today is a fully functioning institute for the study of the brain, cognition and language, and enjoys a well-deserved international reputation. The translation of BCBL science back to the medical and educational communities in the Basque Country is also highly productive. In the following we provide recommendations intended to increase the likelihood that the current rapid development of the BCBL will continue or accelerate.

(1) The Director has done very well in making connections with national and international partners, and we encourage the continuation of these efforts, and suggest that more might be done via trainee exchanges, given the BCBL now has a robust training program in place.

(2) The ISAB was impressed with the Junior Lab established at the Carmelitas School in Vitoria. We encourage the potential extension of these efforts to other locations, while appreciating that it would be unwise for the program to become too expansive.

(3) The ISAB is very pleased with the response of the Director over the past few years in recruiting the seven new, early career Group Leaders. Here we call attention the issues of retention raised by this situation. As these talented Group Leaders develop their reputations (as they undoubtedly will), they will increasingly become the targets of other institutions seeking to recruit them. The ISAB sees this as a potentially serious problem (especially given likely salary differentials), and encourages the Director to consider possible strategies to counter this.

(4) With respect to #3 above, the ISAB also recommends that during the next ISAB review, two individual members of the ISAB make assessments of the program of each group leader in order to inform the Director's strategies for recruitment and allocation of resources.

(5) The ISAB also recommends that the Director makes efforts to bolster the computational and theoretical expertise among the faculty. In past this expertise has been present among trainees and visitors, including those who maintain affiliation with the center, but permanent faculty members with such skills could provide important synergistic opportunities across the center.

(6) The ISAB observed that the organizational responsibility for the effective operation of the BCBL, from all of research policy, administrative and infrastructure perspectives, is completely focused on the Director who also needs to maintain his current stellar research productivity. We believe it would be advantageous for the Director to consider recruiting (from among the current or future Group Leaders) an Associate Director who could support the Director in pursuing the BCBL mission as it continues to increase in complexity and productivity.

(7) Lastly, the SAB applauds the Director's success in establishing an international presence by organizing and hosting international colloquia, symposia, conferences and summer schools/workshops. These activities have helped with every facet of the BCBL mission, from recruiting faculty to attracting the best and brightest trainees. The ISAB urges that these activities continue. While this may appear secondary to the output of high-quality research, it is a powerful tool for publicizing BCBL discoveries and translating that knowledge for the public good.

Submitted September 11, 2017
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6.2 Annex II. Benchmarking of the Centre

The Oxford dictionary definition of "benchmarking" states: verb evaluate (something) by comparison with a standard.

In this sense, in this annex we analyse the BCBL's ranking in comparison to reference centres or metrics, providing a general overview of the following topics: status of Spanish Social Sciences in the world and positioning of the BCBL (and BCBL researchers) in this field, making a special emphasis on the BCBL knowledge transfer.

The analysis of research centres positioning is a complex task, since the ranking depends on several variables (publications, citations, knowledge, agreements, activities, etc.) and these variables also depend on other variables (budget, salaries, countries, grants, permanent positions, institutional agreements, support, etc.).

In this annex we present the results of our benchmarking from two different perspectives:

First, we introduce the concept of Social Sciences as a cross curricular subject and the Spanish Social Sciences positioning in the world. Social Sciences are the 7th Field sorted by amount of publications in Spain and Spain was the 7th country in amount of publications and produced the 2,7 % of the papers of the Word over the last 10 years (2006-2016), and the 3,78 % of the production from the top ten countries.

ISI Web of Knowledge℠

COUNTRY/TERRITORY RANKINGS IN SOCIAL SCIENCES, GENERAL

Display items with at least: 0 Citation(s)
Sorted by: Papers SORT AGAIN

1 - 20 (of 111) [1] 2 | 3 | 4 | 5 | 6 Page 1 of 6

	View	Country/Territory	Papers	Citations	Citations Per Paper
1		USA	289,100	2,255,828	7.80
2		ENGLAND	84,140	637,838	7.58
3		AUSTRALIA	42,306	258,125	6.10
4		CANADA	41,946	315,910	7.53
5		GERMANY (FED REP GER)	29,400	180,935	6.15
6		NETHERLANDS	26,145	228,281	8.73
7		SPAIN	22,144	98,424	4.44
8		CHINA MAINLAND	19,227	107,037	5.57
9		FRANCE	16,723	110,012	6.58
10		SWEDEN	15,468	120,247	7.77
11		BRAZIL	14,916	56,529	3.79
12		ITALY	13,297	89,134	6.70

ISI Web of Knowledge℠

Essential Science Indicators℠

FIELD RANKINGS FOR SPAIN

Display items with at least: 0 Papers
Sorted by: Papers SORT AGAIN

1 - 20 (of 22) [1] 2 Page 1 of 2

	View	Field	Papers	Citations	Citations Per Paper
1		CLINICAL MEDICINE	67,248	1,003,099	14.92
2		CHEMISTRY	55,076	824,467	14.97
3		PHYSICS	40,321	553,708	13.73
4		ENGINEERING	34,390	226,967	6.60
5		PLANT & ANIMAL SCIENCE	29,428	296,628	10.08
6		AGRICULTURAL SCIENCES	22,564	225,223	9.98
7		SOCIAL SCIENCES, GENERAL	22,144	98,424	4.44
8		BIOLOGY & BIOCHEMISTRY	20,311	313,273	15.42
9		ENVIRONMENT/ECOLOGY	18,135	247,082	13.62
10		NEUROSCIENCE & BEHAVIOR	16,089	243,844	15.16
11		MATERIALS SCIENCE	15,932	163,490	10.26
12		MATHEMATICS	15,607	66,229	4.24

These data suggest that even though the amount of papers published by Spanish Institutions is high, their impact is not as good as it should be. Spanish Institutions therefore, should improve research in the frontier of knowledge. To that end, probably more modern infrastructures and laboratories, but also more flexible governance procedures are required in research institutions and in universities. More importantly, processes for recruiting and retaining talent should be improved and sustained in the long term.

Second, we compare the BCBL with international centres in Social Sciences by means of quantitative results with the most recent available data, from 2014 until 2016 (2017 is not closed yet):

The BCBL at National and International level

In this section we present the results of the national and international benchmarking, which gives an indication of the BCBL positioning in those contexts.

First, at an international level, an analysis of the scientific production of several research centres can serve as a reference in our topic within Social Sciences. Figure below shows the top 20 Institutions sorted by the results of this analysis. The methodology followed to make this comparison is the following: A search on the web of each institution, and based on the data shown in their web sites and/or activity reports, the ratio "paper/senior or postdoc research" was calculated. For this ratio, faculty and postdocs were used as a significant factor for this comparison, since it is very difficult to compare centres of different sizes, moreover, senior researchers, and staff scientist (faculty) are more stable.

NAME	No. of Faculty or Senior Researchers (Source website)	No. of Postdocs (Source website)	Papers in 2014	Papers in 2015	Papers in 2016	Ratio 2014 Paper/ Faculty	Ratio 2015 Paper/ Faculty	Ratio 2016 Paper/ Faculty	Media 2014/2015/ 2016
Institute of Cognitive Neuroscience, UCL. UK	20	59	190	164	157	8,26	8,20	7,85	8,10
Max Planck Institute for Psycholinguistics Nijmegen, Netherlands	41	96	297	359	217	9,58	8,76	5,29	7,88
MRC Cognition and Brain sciences unit, UK	14	54	106	95	76	8,15	6,79	5,43	6,79
BCBL - Basque Center on Cognition, Brain and Language, Spain	**12**	**25**	**65**	**67**	**80**	**5,25**	**5,58**	**6,67**	**5,83**
Sussex university (Sackler Center for Consiousness Studies), UK	7	11	63	31	34	7,88	4,43	4,86	5,72
Laboratoire de Psychologie Cognitive, France	15	18	75	77	92	5,00	5,13	6,13	5,42
Cognitive science research uni, Belgium	15	14	79	64	43	6,58	4,27	2,87	4,57
Laboratoire Langage, Cerveau Cognition (L2C2), France	5	6	2	26	26	0,06	5,20	5,20	3,49
University of Trento, Center for Mind/Brain Sciences, Italy	43	49	89	170	129	2,54	3,95	3,00	3,17
Center for Brain and Cognition, UPF, Barcelona, Spain	7	27	15	20	19	2,14	2,86	2,71	2,57
Gazzaley Lab, UCSF, USA	5	2	13	8	16	2,60	1,60	3,20	2,47
Centre for Research on Brain, Language, and Music, Canada	62	49	115	56	152	2,30	0,90	2,45	1,88
ICN, National Central University, Taiwan	19	3	43	28	18	2,26	1,47	0,95	1,56
Neurocog, University of La Laguna, Spain	11	?	12	8	6	1,00	0,73	0,55	0,76

Figure 7: Benchmarking of Research centres/units Source: BCBL, based on each institution's website.

This table shows that even though the BCBL is a young institution, the achieved productivity over recent years is significant and comparable with other world leading consolidated institutions.

6.3 Annex III. Full list of publications 2014-2017

2014

Journal Articles

1. Acha, J., & Carreiras, M. (2014). Exploring the mental lexicon: a methodological approach to understanding how printed words are represented in our minds. *The Mental Lexicon,* 9:2, 196 –231. Doi: 10.1075/ml.9.2.03ach
2. Acuña-Fariña, J.C., Meseguer, E., & Carreiras, M. (2014). Gender and number agreement in comprehension in Spanish. *Lingua,* 143, 108-128. Doi: 10.1016/j.lingua.2014.01.013
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14. Chow, W.Y., Lewis, S., & Phillips, C. (2014). Immediate sensitivity to structural constraints in pronoun resolution. *Frontiers in Psychology,* 5:630. Doi: 10.3389/fpsyg.2014.00630
15. Dillon, B., Chow, W.Y., Wagers, M., Guo, T.M., Liu, F.Q., & Phillips, C. (2014). The structure-sensitivity of memory access: evidence from Mandarin Chinese. *Frontiers in Psychology,* 5:1025. Doi: 10.3389/fpsyg.2014.01025
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Book chapters/books

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2015

Journal Articles

1. Acha, J., Perez, A., Davidson, D., & Carreiras, M. (2015). Cognitive characterization of children with Dravet syndrome: A neurodevelopmental perspective. *Child Neuropsychology*, 21:5, 693-715, Doi: 10.1080/09297049.2014.959480
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36. Siegelman, N., Bogaerts, L., Christiansen, M.H., & Frost, R. (2017). Towards a theory of individual differences in statistical learning. *Philosophical Transactions of the Royal Society: Biological Sciences*, 372: 20160059. Doi: 10.1098/rstb.2016.0059
37. Siegelman, N., Bogaerts, L., & Frost, R. (2017). Measuring individual differences in statistical learning: Current pitfalls and possible solutions. *Behavior Research Methods,* 49:418–432. Doi:10.3758/s13428-016-0719-z
38. Smeds, E., Piitulainen, H., Bourguignon, M., Jousmäki, V., & Hari, R. (2017). Effect of interstimulus interval on cortical proprioceptive responses to passive finger movements. *European Journal of Neuroscience,* 45: 290–298. DOI: 10.1111/ejn.13447
39. Smeds, E., Vanhatalo, S., Piitulainen, H., Bourguignon, M., Jousmäki, V., & Haria, R. (2017). Corticokinematic coherence as a new marker for somatosensory afference in newborns. *Clinical Neurophysiology,* 28(4), 647-655. Doi: 10.1016/j.clinph.2017.01.006
40. Soto, D. (2017) How do we keep information 'on-line'? *Trends in Cognitive Sciences,* 21(2), 63-65. Doi: 10.1016/j.tics.2016.12.009
41. Vergara-Martínez, M., Comesaña, M., & Perea, M. (2017). The ERP signature of the contextual diversity effect in visual word recognition. *Cognitive, Affective, & Behavioral Neuroscience,* 17: 461. doi:10.3758/s13415-016-0491-7
42. Voon, V., Napier, C.T., Frank, M.J., Sgambato-Faure, V., Grace, A.A., Rodriguez-Oroz, M.C., Obeso, J., Bezard, E., & Fernagut, P.O. (2017). Impulse control disorders and levodopa-induced dyskinesias in Parkinson's disease: an update. *The Lancet Neurology,* 16:3, 238-250. Doi: 10.1016/S1474-4422(17)30004-2.
43. Zheng, Y., & Samuel, A.G. (2017). Does seeing an Asian face make speech sound more accented? *Attention, Perception & Psychophysics,* 79:1841–1859. Doi: 10.3758/s13414-017-1329-2

Book chapters/books

1. Kartushina, N. (2017). *Interactions between native and non-native vowels in French-Danish contact: production training study.* In M.Yavas, M.Kehoe, and W.Cardoso (Eds.), Bilingual Phonology: Romance in Contact with Germanic. Equinox: Sheffield, UK, pp. 137-156. Doi: 10.1558/equinox.27351
2. Guediche, S. (2017). Flexible and adaptive processes in speech perception. In A. Lahiri, S. Kotzor (Eds.). *The speech processing lexicon: neurocognitive and behavioural approaches* (pp. 155-186). Berlin, Germany: De Gruyter Mouton.

In press

1. Branzi, F.M., Calabria, M., Gade, M., Fuentes, L.J., & Costa, A. (In press). On the bilingualism effect in task switching. *Bilingualism: Language and Cognition.*
2. Caffarra, S., Barber, H., Molinaro, N., & Carreiras, M. (in press). When the end matters: influence of gender cues during agreement computation in bilinguals. *Language, Cognition and Neuroscience.*
3. Campanella, S., Absil, J., Sinde, C. C., Schroder, E., Peigneux, P., Bourguignon, M., Petieau, M., Metens, T., Nouali, M., Goldman, S., Cheron, G., Verbanck, P., & De Tiège, X. (In Press). Neural correlates of correct and failed response inhibition in heavy versus light social drinkers: an fMRI study during a go/no-go task by healthy participants. *Brain Imaging and Behavior.* Doi: 10.1007/s11682-016-9654-y **(online publication)**
4. de Bruin, A., & Della Sala, S. (In Press). Effects of age on inhibitory control are affected by task-specific features. *The Quarterly Journal of Experimental Psychology.* Doi: 10.1080/17470218.2017.1311352 **(online publication)**
5. Dias, P., Villameriel, S., Giezen, M.R., Costello, B., & Carreiras, M. (in press). Language switching across modalities: evidence from bimodal bilinguals. *Journal of Experimental Psychology: Learning, Memory, and Cognition.* Doi: 10.1037/xlm0000402 **(online publication)**

6. Gomez, D., Mok, P., Ordin, M., Mehler, J., & Nespor, M. (in press). Statistical speech segmentation in tone languages: The role of lexical tones. *Language and Speech.* Doi: 10.1177/0023830917706529 **(online publication)**
7. Iglesias, J.E., Lerma-Usabiaga, G., Garcia-Peraza-Herrera, L., Martinez, S., & Paz-Alonso, P.M. (in press). Retrospective head motion estimation in structural brain MRI with 3D CNNs. *Medical Image Computing and Computer Assisted Intervention (MICCAI).*
8. Malik-Moraleda, S., Orihuela, K., Carreiras, M., & Duñabeitia, J.A. (in press). The consequences of literacy and schooling for parsing strings. *Language, Cognition and Neuroscience.* Doi: 10.1080/23273798.2017.1313436 **(online publication)**
9. Martin, A.E., Monahan, P.J., & Samuel, A.G. (In Press). Prediction of agreement and phonetic overlap shape sublexical identification. *Language and Speech.* DOI: 10.1177/0023830916650714 **(online publication)**
10. Polyanskaya, L., Ordin, M., & Busa, M. (in press). Relative Salience of Speech Rhythm and Speech Rate on Perceived Foreign Accent in a Second Language. *Language and Speech.* Doi: 10.1177/0023830916648720 **(online publication)**
11. Semenza, C.*, Salillas, E.*, Di Pellegrin, S., & Della Puppa, A. (In Press). Balancing the two hemispheres in simple calculation. Evidence from direct cortical electrostimulation. *Cerebral Cortex.* *Equal contribution, corresponding authors.
12. Wedmore, F., Musil, S., & Soto, D. (in press). How ageing changes the mnemonic bias of visual behaviour. *Visual Cognition.*

6.4 Annex IV. Knowledge transfer. Databases 2014-2017

1- **Chronset:** An automated tool for detecting speech onset.

The analysis of speech onset times has a longstanding tradition in experimental psychology as a measure of how a stimulus influences a spoken response. Yet the lack of accurate automatic methods to measure such effects forces researchers to rely on time-intensive manual or semiautomatic techniques. Chronset is a fully automated tool that estimates speech onset on the basis of multiple acoustic features extracted via multitaper spectral analysis. Using statistical optimization techniques, we show that the present approach generalizes across different languages and speaker populations, and that it extracts speech onset latencies that agree closely with those from human observations. Chronset is publicly available online at www.bcbl.eu/databases/chronset
Roux, F., Armstrong, B.C., & Carreiras, M. (2017). **Chronset: An automated tool for detecting speech onset.** *Behavior Research Methods* (online publication). Doi:10.3758/s13428-016-0830-1
SJR 2016: 1,882, Area: Psychology (miscellaneous), Quartile 1, Decile 1

2- **LSE-Sign:** A database of 2,400 LSE (Spanish Sign Language) signs and 2,500 pseudo signs.

The LSE-Sign database is a free online tool for selecting Spanish Sign Language stimulus materials to be used in experiments. It contains 2,400 individual signs taken from a recent standardized LSE dictionary, and a further 2.700 related nonsigns. Each entry is coded for a wide range of grammatical, phonological, and articulatory information, including handshape, location, movement, and non-manual elements. The database is accessible via a graphically based search facility which is highly flexible both in terms of the search options available and the way the results are displayed.
Gutierrez, E., Costello, B., Baus, C. & Carreiras, M. (2016). **LSE-Sign: A Lexical Database for Spanish Sign Language.** *Behavior Research Methods,* 48:950–962. Doi:10.3758/s13428-014-0560-1
SJR 2016: 1,882, Area: Psychology (miscellaneous), Quartile 1, Decile 1

3- **The eDom** software package was developed to facilitate the collection of dominance ratings -- the proportion of times each meaning of a word is encountered -- for ambiguous words like <river/money>.

Relative meaning frequency is a critical factor to consider in studies of semantic ambiguity. This work examines how this measure may change across the European and Rioplatense dialects of Spanish, as well as how the overall distributional properties differ between Spanish and English, using a computer-assisted norming approach based on dictionary definitions (Armstrong,Tokowicz, &Plaut, 2012, BRM). The results show that the two dialects differ considerably in terms of the relative meaning frequencies of their constituent homonyms and that the overall distributions of relative frequency vary considerably across languages, as well. These results highlight the need for localized norms to design powerful studies of semantic ambiguity and suggest that dialectal differences may be responsible for some discrepant effects related to homonymy. In quantifying the reliability of the norms, it was also established that as few as seven ratings are needed to converge on a highly stable set of ratings. This approach is therefore a very practical means of acquiring essential data in studies of semantic ambiguity relative to past approaches, such as those based on the classification of free associates. The norms also present new possibilities for studying semantic ambiguity effects within and between populations who speak one or more languages.
Armstrong, B. C., Zugarramurdi, C., Alvaro, C., Valle Lisboa, J., & Plaut, D. C. (2016). **Relative meaning frequencies for 578 homonyms in two Spanish dialects: A cross-linguistic extension of the English eDom norms.** *Behavior Research Methods,* 48:950–962. DOI: 10.3758/s13428-015-0639-3.
SJR 2016: 1,882, Area: Psychology (miscellaneous), Quartile 1, Decile 1

4- **ESPAL** (Web interface to Spanish word frequency data and other word properties based on written and subtitle corpora).

EsPal is a Web-accessible repository containing a comprehensive set of properties of Spanish words. EsPal is based on an extensible set of data sources, beginning with a 300 million token written database and a 460 million token subtitle database. Properties available include word frequency, orthographic structure and neighbourhoods, phonological structure and neighbourhoods, and subjective ratings such as imageability. Subword structure properties are also available in terms of bigrams and trigrams, biphones, and bisyllables. Lemma and part-of-speech information and their corresponding frequencies are also indexed. The website enables users either to upload a set of words to receive their properties or to receive a set of words matching constraints on the properties. The properties themselves are easily extensible and will be added over time as they become available.
Duchon, A., Perea, M., Sebastián-Gallés, N., Martí, A., Carreiras, M. (2013). **EsPal: One-stop Shopping for Spanish Word Properties.** *Behavior Research Methods, 45: 1246-1258*
SJR 2016: 1,882, Area: Psychology (miscellaneous), Quartile 1, Decile 1

6.5 Annex V. Full list of oral presentations and posters 2014-2017

2014

Poster Presentations

1. Antón, E., Thierry, G., Carreiras, M. & Duñabeitia, J.A. (July, 2014). Mixing languages in a bilingual learning context: beneficial or detrimental? Poster presented at Neurogune, 2nd Basque Neuroscience Meeting, Donostia, Spain.
2. Antón, E., Thierry, G., Carreiras, M. & Duñabeitia, J.A. (November, 2014). Multilingual vs. Monolingual Concept Acquisition: Which is Stronger?. Poster presented at the 55th Annual Meeting of the Psychonomic Society Annual Meeting, Long Beach, USA.
3. Antzaka, A., Lallier, M., Acha, J., & Carreiras, M. (December, 2014). The visual attention span in young readers´ lexical decision: Does the presence of morphological information modulate its role? Poster presented at "APPREC – Learning Written Language: Diversity of languages, Uniqueness of disorders", in Strasbourg, France.
4. Antzaka, A. & Yee, E. (June, 2014). How does recent attention to colour modify colour's salience as a semantic feature? Poster presented at the workshop "Color in Concepts: Color Representation and Processing in Language and Cognition", Düsseldorf, Germany.
5. Armstrong, B.C., Barreiro Abad, E., & Samuel, A.G. (November, 2014). Cascaded vs. Stage-like Semantic Access in Spoken and Written Word Recognition: Insights from Lexical Decision. Poster presented at the 55th Annual Meeting of the Psychonomic Society Annual Meeting, Long Beach, USA.
6. Armstrong, B.C.*, Ruiz-Blondet, M., & Laszlo, S. (2014, November). A neural network method for simulating the time-course of simple context-sensitive word recognition simultaneously in the time and frequency domains. Poster presented at the 2014 Annual Meeting of the Society for Neuroscience, Washington, D. C. USA.
7. Aurtenetxe, S., Castellanos, N.P., Cuesta, P., Garces, P., & Lopez, M.E., Pineda, J., Bajo, R., Marcos, A., Delgado, M., Llanero, M., & Maestu, F. (October, 2014). Aberrant oscillations during memory retention in mild cognitive impairment. Poster presented at Tübingen MEG symposium, Tübingen, Germany.
8. Baart, M., & Samuel, A.G. (November, 2014). The N200 Lexicality Effect is Unaffected by Lip-read Context. Poster presentation at the 55th Annual Meeting of the Psychonomic Society, Long Beach, USA.
9. Baart, M., & Samuel, A.G. (August, 2014). Early robust auditory lexical processing revealed by ERPs. Poster presented at the the 6th Annual Meeting of the Society for the Neurobiology of Language(SNL), Amsterdam, The Netherlands.
10. Baart, M., & Samuel, A.G. (June, 2014). Audiovisual speech integration is not modulated by the lexicon. Poster presented at the 15th International Multisensory Research Forum (IMRF), Amsterdam, The Netherlands.
11. Bastarrika, A.,& Davidson, D.J. (August, 2014). Is eye-closure alpha related to memory-success alpha? Poster presented at the 19th Conference on Biomagnetism (BIOMAG 2014), Halifax, Canada.
12. Bergouignan, L., Nyberg, L. & Ehrsson, H. (July, 2014). Hippocampus dependency to in-body encoding. Poster presented at Neurogune, 2nd Basque Neuroscience Meeting, Donostia-San Sebastian.
13. Blanco, B., Molnar, M., Carreiras, M., & Caballero-Gaudes, C. (July, 2014). Investigating resting state functional connectivity in bilingual and monolingual infants with near infrared spectroscopy. Poster presented at Neurogune, 2nd Basque Neuroscience Meeting, Donostia, Spain.
14. Boddy, P., Yee, E. (April, 2014). What the Ear Hears Affects What the Eyes See: Semantic Interference on Visual Task. Poster presented at 21st Annual Meeting of Cognitive Neuroscience Society (CNS), Boston, USA.
15. Boddy, P., Yee, E. (May, 2014). What the Ear Hears Affects What the Eyes See: Semantic Interference on Visual Task. Poster presented at the Workshop on Concepts, Actions and Objects, Rovereto, Italy.
16. Bortfeld, H., Shaw, K., & Baart, M. (August, 2014). Infants can perceive audiovisual speech asynchrony (if it's asynchronous enough). Poster presented at the 6th Annual Meeting of the Society for the Neurobiology of Language (SNL), Amsterdam, The Netherlands.
17. Caballero-Gaudes, C. (July, 2014). Investigating the dynamics of human brain function at rest with paradigm free mapping and BOLD fMRI. Poster presented at Neurogune, 2nd Basque Neuroscience Meeting, Donostia, Spain.
18. Caffarra, S. & Barber, H. (April, 2014). The role of gender-to-ending consistency in Spanish sentence processing. Poster presented at 21st Annual Meeting of Cognitive Neuroscience Society (CNS), Boston, USA.
19. Casaponsa, A., Carreiras, M., Duñabeitia, J. A. (July, 2014). Bilingual language discrimination: Electrophysiological evidence for language selectivity. Poster presented at Neurogune, 2nd Basque Neuroscience Meeting, Donostia, Spain.
20. Casaponsa, A., Antón, E., Carreiras, M., & Duñabeitia, J.A. (August, 2014). Masked language switch cost effects: now you see them, now you don´t. Poster presented at the Society for the Neurobiology of Language (SNL), Amsterdam, The Netherlands.
21. Casaponsa, A., Carreiras, M., Antón, E., Pérez, A., & Duñabeitia, J. A. (November, 2014). Psycholinguistic forecast of nonnative language comprehension achievement. Poster presented at the 55th Annual Meeting of the Psychonomic Society, Long Beach, USA.
22. Chow, W. Y., MacMillan, G., Shah, S., Kurenkov, I., Lau, E., & Phillips, C. (2014). Partial use of available information in the early stages of verb prediction. Poster presented at the 27th annual CUNY Human Sentence Processing Conference, Columbus, OH, USA.
23. Dumay, N., & Aristei, S. (July 16-18, 2014). Semantic cumulative interference and the cascading of information in speech production. Poster presented at International Workshop on Language Production, Geneva, Switzerland.
24. Duñabeitia, J.A., Carreiras, M., & Pérez-Fernández, A. (August, 2014). Fading out a foreign language. Poster presented at the 2014 meeting of the Society for the Neurobiology of Language (SNL), Amsterdam, The Netherlands.
25. Duñabeitia, J.A., Ivaz, L., Casaponsa, A. & Carreiras, M. (November, 2014). Word translation processes across childhood and adolescence. Poster presented at the 55th Annual Meeting of the Psychonomic Society, Long Beach, USA.
26. Duñabeitia, J.A., Quiñones, I., & Carreiras, M. (2014). Reading minds: How and where does orthographic processing occur in the brain? Poster presented at Neurogune, 2nd Basque Neuroscience Meeting, Donostia, Spain.
27. Fariña, N., Betancort, M. & Gutiérrez-Sigut, E. (June, 2014). Effect of iconicity in deaf readers. Poster presented at FEAST (Formal and Experimental Advances in Sign Language Theory) Coloquium, Venice, Italy.

28. Fernández-García, Y., García-Pentón, L., Carreiras, M. & Duñabeitia, J.A. (24, July 2014). Digging into the bilingual brain in the elderly. Poster presented at Development, Functions and Disorders of the Nervous System 2014, Montreal, Canada.
29. Fernández-García, Y., García-Pentón, L., Quiñones, I., Carreiras, M. & Duñabeitia, J.A. (June, 2014). Does age of second language acquisition modulate grey-matter volume in the elderly?. Poster Presented at the 20th Annual Meeting of the Organization for Human Brain Mapping (OHBM 2014), Hamburg, Germany.
30. García-Pentón, L., Duñabeitia, J.A., Fernández-García, Y., Pérez Fernández, A., Quiñones, I., & Carreiras, M. (June, 2014). How does bilingualism shape neural networks in the youth and the elderly?. Poster presented at the 20th Annual Meeting of the Organization for Human Brain Mapping (OHBM 2014), Hamburg, Germany.
31. García-Pentón, L., Duñabeitia, J.A., Fernández, Y., Pérez, A. & Carreiras, M. (July, 2014). How does lifelong bilingualism alter the structure and connectivity of the brain: Preliminary results. Poster presented at Neurogune, 2nd Basque Neuroscience Meeting, Donostia, Spain.
32. Gil, C., Carreiras, M., & Salillas, E. (January, 2014). Bilingual number codes differ in the access of the mental number line: electrophysiological evidence during a Working Memory task. Poster presented at the 32nd European Workshop on Cognitive Neuropsychology, Bressanone, Italy.
33. Ishida, M., Samuel, A.G., & Arai, T. (November, 2014). Perception of locally time-reversed words and pseudo-words. Poster presentation at the the 55th Annual Meeting of the Psychonomic Society, Long Beach, USA.
34. Lallier, M., Lizarazu, M., Molinaro, N., Bourguignon, M. & Carreiras, M. (April, 2014). Oscillations cérébrales et troubles phonologiques dans la dyslexie développementale. Poster presented at 2ème Réunion de printemps de la SOFTAL, Société Francophone des Troubles d'Apprentissage et du Langage, Paris, France.
35. Lerma-Usabiaga, G., García-Penton, L., Bunge, S., Carreiras, M. & Paz-Alonso, P.M. (June, 2014). Functional and structural changes associated with nmemonic control. Poster Presented at the 20th Annual Meeting of the Organization for Human Brain Mapping (OHBM 2014). Hamburg, Germany.
36. Lerma-Usabiaga, G, Iglesias, J.E., Carreiras, M., Paz-Alonso, P.M. (July, 2014). Optimization of the hippocampal segmentation along its longitudinal axis. Poster presented at Neurogune, 2nd Basque Neuroscience Meeting. Donostia – San Sebastián, Spain.
37. Lerma-Usabiaga, G., Quiñones, I., Caballero, C., Oliver, M., Duñabeitia, J.A., Carreiras, M. & Paz-Alonso, P.M. (August, 2014). Multimodal MRI converging evidence underlying the role of the left thalamus in dyslexia. Poster presented at the Society for Neurobiology of Language (SNL), Amsterdam, the Netherlands.
38. Lerma-Usabiaga, G.,Quiñones, I., Caballero, C.,Oliver, M., Duñabeitia, J.A., Carreiras, M., Paz-Alonso, P.M.(August 2014). Structural and functional correlates of the left thalamus in dyslexia. Poster presentation at the Neurobiology of Language congress, Amsterdan, Netherlands.
39. Lizarazu, M., Lallier, M., Bourguignon, M., Paz-Alonso, P.M., Lerma, G., Carreiras, M., & Molinaro, N. (August, 2014). Evidence for age-related effects in auditory entrainment in dyslexia: an MEG study. Poster presented at the 19th International Conference on Biomagnetism (BIOMAG 2014), Halifax, Canada.
40. Lizarazu, M., Lallier, M., Bourguignon, M., Carreiras, M. & Molinaro, N. (July, 9). Atypical neural synchronization to auditory stimuli in adults and children with and without dyslexia: an MEG study. Poster Presented at Neurogune, 2nd Basque Neuroscience Meeting. Donostia – San Sebastián, Spain.
41. Marin-Garcia, E., Mattfeld, A.T., Candon K.C., & Gabrieli, J.D.E. (April, 2014). The "testing effect": Retrieval related functional neuroimaging differences after a week delay. Poster presented at 21st Annual Meeting of Cognitive Neuroscience Society (CNS), Boston, USA.
42. Marin-Garcia, E., Mattfeld, A.T., Candon, K.C. & John D. E. Gabrieli, J.D.E. (July, 2014). Neurobiological bases of the testing effect: functional neuroimaging after a week delay. Poster presented at Neurogune, 2nd Basque Neuroscience Meeting, San Sebastián, Spain.
43. Marin-Garcia, E., Mattfeld, A.T., Candon, K.C. & John D. E. Gabrieli, J.D.E. (July, 2014). The 'testing effect': functional neuroimaging and connectivity differences after a week delay. Poster presented at International Workshop on Learning and Memory Consolidation, San Sebastián, Spain.
44. Marin-Garcia, E., Mattfeld, A.T., & Gabrieli, J.D.E. (November, 2014). Resting state connectivity related with retrieval practice. Poster presented at 44th Annual Meeting of Society for Neuroscience (SfN), Washington, DC, USA.
45. Martin, C.D., Duñabeitia, J.A., Niziolek, C.A., Carreiras, M., & Houde, J.F. (April, 2014). What affects auditory feedback in speech motor control? Poster presented at 21st Annual Meeting of Cognitive Neuroscience Society (CNS), Boston, USA.
46. Martin, C., Molnar, M., & Carreiras, M. (August, 2014). It's good to see you again: Bilinguals rely on visual interlocutor identity for activating appropriate language modes. Poster presented at the Society for the Neurobiology of Language (SNL), Amsterdam, The Netherlands.
47. Martínez, A. & Salillas, E. (January, 2014). A dominant code for math in balanced bilinguals. Electrophysiological evedence from code switching. Poster presented at the 32nd European Workshop on Cognitive Neuropsychology, Bressanone, Italy.
48. Massol, S., Berdasco, E., Molinaro, N., Duñabeitia, J.A., & Carreiras, M. (2014). Cross-Language Effects in a Picture-Word Matching Task: An ERP Investigation. Poster presented at the 55th Annual Meeting of the Psychonomic Society Annual Meeting, Long Beach, California, USA.
49. Mattfeld, A.T.,Marin-Garcia, E., Candon, K.C., & Gabrieli, J.D.E. (April, 2014). Transfer of "testing effect": Generalization of memory benefits derived from testing practice to studied only items. Poster presented at 21st Annual Meeting of Cognitive Neuroscience Society (CNS), Boston, USA.
50. Medeiros, J.A.V., & Duñabeitia, J.A. (December, 2014). Factors determining suffix priming. Poster presented at "3º Colóquio Internacional sobre Leitura: Processos de leitura e perturbações", in Lisbon, Portugal.
51. Molinaro, N., Lizarazu, M., Bourguignon, M., Lallier, M., & Carreiras, M. (August, 2014). Phonological disorders in dyslexia: MEG evidence for left inferior frontal locus of the impairment. Poster presented at the 19th Conference on Biomagnetism (BIOMAG 2014), Halifax, Canada.
52. Molinaro, N., Lizarazu, M., Bourguignon, M., Lallier, M., & Carreiras, M. (April, 2014). Reduced low-frequency sampling of speech in dyslexic readers. Poster presented at 21st Annual Meeting of Cognitive Neuroscience Society (CNS), Boston, USA.
53. Molinaro, N., Quiñones, I., Mancini, S., & Carreiras, M. (June, 2014). Fine-grained Selectivity of the Anterior Temporal Cortex to Agreement Features. Poster Presented at the 20th Annual Meeting of the Organization for Human Brain Mapping (OHBM 2014). Hamburg, Germany.

54. Molinaro, N., Quiñones, I., Mancini, S., & Carreiras, M. (July, 2014). Fine-grained Selectivity of the Anterior Temporal Cortex to Agreement Features. Poster Presented at Neurogune, 2nd Basque Neuroscience Meeting. Donostia – San Sebastián, Spain.
55. Molnar, M., Blanco, B., Carreiras, M. & Caballero-Gaudes, C. (August, 2014). Functional connectomes in monolingual and bilingual infants during resting state. Poster presented at the Society for the Neurobiology of Language (SNL), Amsterdam, The Netherlands.
56. Molnar, M. & Carreiras, M. (July, 2014). Young bilingual infants ability of linking novel interlocutors to familiar languages. Poster presented at International Workshop on Learning and Memory Consolidation. San Sebastián, Spain.
57. Molnar, M., Pejović, J., Yee, E. & Carreiras, M. (July 3-5, 2014). Are all bilingual infants created equal? Cognitive gains in preverbal Basque-Spanish bilingual and Spanish monolingual infants. Poster presented at XIX Biennial International Conference on Infant Studies, Berlin, Germany.
58. Monsalve, I.F., Pérez, A., & Molinaro, N. (August, 2014). Oscillatory responses to highly predictable words differentiate between expectations based on semantic or associative contextual constraints. Poster presented at the Annual Meeting of the Society for the Neurobiology of Language (SNL), Amsterdam, The Netherlands.
59. Monsalve, I.F., Pérez, A., & Molinaro, N. (July, 2014). Oscillatory responses to highly predictable words differentiate between expectations based on semantic or associative contextual constraints. Poster presented at Neurogune, 2nd Basque Neuroscience Meeting, Donostia, Spain.
60. Oliver, M., Carreiras, M. & Paz-Alonso, P.M. (August, 2014). Ventral and dorsal reading networks are modulated by task demands and language orthography: Regional and functional connectivity evidence. Poster presented at the Society for the Neurobiology of Language (SNL), Amsterdam, The Netherlands.
61. Oliver, M., Carreiras, M. & Paz-Alonso, P.M. (June, 2014). Task and language orthography modulation of the ventral and dorsal reading networks. Poster Presented at the 20th Annual Meeting of the Organization for Human Brain Mapping (OHBM 2014). Hamburg, Germany.
62. Paz-Alonso, P.M., Frost, S.J., Oliver, M., Molfese, P.J., Bick, A., Wen-Jui, K., Wu, D.H., Tzeng, O., Pugh, K.R., Rueckl, J., Frost, R., & Carreiras, M. (April, 2014). Network dynamics of reading and speech systems across languages. Poster Presented at the 21st Annual Meeting of the Cognitive Neuroscience Society (CNS). Boston, US.
63. Pejovic, J., Molnar, M., & Martin, C. (2014). What is the shape of bubano? The sound-shape correspondence in 4-month-old-infants. Poster presented at the 21st Annual Meeting of Cognitive Neuroscience Society (CNS), Boston, USA.
64. Pejovic, J., Molnar, M., Martin, C., & Yee, E. (August,2014).Shape-sound matching abilities are limited in young monolingual and bilingual infants.Poster presented at the Society for the Neurobiology of Language(SNL), Amsterdam, The Netherlands.
65. Pérez, A., García-Pentón, L., Canales-Rodríguez, E.J., Lerma-Usabiaga, G., Davidson, D., Alemán-Gómez, Y., Iturria-Medina, Y. Acha, J., & Carreiras., M. (19-24, July 2014). Brain morphometry of Dravet Syndrome. Poster presented at the International Society for Developmental Neuroscience (ISDN) & NeuroDevNet 2014 Joint Meeting, Montreal, Canada.
66. Pérez, A., García, L., Lerma, G., Canales, E., & Carreiras, M. (July, 2014). Brain Morphology of Dravet Syndrome. Poster presented at Neurogune, 2nd Basque Neuroscience Meeting, Donostia, Spain.
67. Quiñones, I., Duñabeitia, J.A., & Carreiras, M. (June, 2014). Recycled brain regions for reading? Evidence for interconnectivity between face and word processing. Poster presented at the 20th Annual Meeting of the Organization for Human Brain Mapping (OHBM 2014), Hamburg, Germany.
68. Quiñones, I., Duñabeitia, J.A., & Carreiras, M. (July, 2014). Look at my face and tell me what's written... if you can! Poster presented at Neurogune, 2nd Basque Neuroscience Meeting, Donostia, Spain.
69. Quiñones, I., Duñabeitia, J.A., & Carreiras, M. (August, 2014). Recycling the fusiform gyrus for reading? Poster presentation at the Society for the Neurobiology of Language (SNL), Amsterdam, The Netherlands.
70. Romero-Rivas, C., Martin, C., & Costa, A. (October, 2014). On-line adaptation in spoken sentence comprehension: processing foreign-accented speech. Poster presented at Congress of the Spanish Society for Experimental Psychology (SEPEX), Murcia, Spain.
71. Romero-Rivas, C., Martin, C., & Costa, A. (October, 2014). Is semantic memory shaped by the speaker's accent? Converging evidences from speech comprehension and the DRM false memory paradigm studies. Poster presented at Congress of the Spanish Society for Experimental Psychology (SEPEX), Murcia, Spain.
72. Roux, F., Mohr, H., Wibral, M., Singer, W., & Uhlhaas, P.(July, 2014). Age Related Changes of MEG Alpha and Gamma-Band Activity Reflect the Late Maturation of Distractor-Inhibition during Working Memory Maintenance.Poster presented at the 12th International Conference on Cognitive Neuroscience (ICON 2014), Brisbane, Australia.
73. Rueckl, J., Frost, S.J., Molfese, P.J., Paz-Alonso, P.M., Wen-Jui, K., Bick, A., Mencl, E., Wu, D.H., Tzeng, O., Frost, R., Carreiras, M., & Pugh, K.R. (April, 2014). How Properties of the Writing System Determine the Convergence of the Speech and Reading Systems in the Brain. Poster Presented at the 21st Annual Meeting of the Cognitive Neuroscience Society (CNS). Boston, US.
74. Schlöffel, S., Lallier, M., Martin, C., & Carreiras, M. (December, 2014). How does language proficiency influence the decoding of unfamiliar letter strings in bi-literate children? Poster presented at "APPREC – Learning Written Language: Diversity of languages, Uniqueness of disorders", in Strasbourg, France.
75. Schlöffel, S., Martin, C., Lallier, M., Caffarra, S. & Carreiras, M. (July, 2014). Does orthographic depth influence non-linguistic processing. Poster presented at NeuroGune, 2nd Basque Neuroscience Meeting, San Sebastián, Spain.
76. Schlöffel, S., Martin, M., Lallier, S., Caffarra, S. , & Carreiras, M. (September, 2014). Does the orthographic depth of one language affect reading in another? Poster presented at the 24th annual conference of the European Second Language Association (EUROSLA), York, United Kingdom.
77. Shaw, K., Gaafar, J., Baart, M., & Bortfeld, H. (November 2014). Infants perceptually tune to multisensory Speech. Poster presentation at the 55th Annual Meeting of the Psychonomic Society, Long Beach, USA
78. Zhang, X., & Samuel, A.G. (November, 2014). Phonological and semantic activation and lexical competition in spoken word recognition. Poster presentation at the the 55th Annual Meeting of the Psychonomic Society, Long Beach, USA.

Oral Presentations

1. Antón. E., Thierry, G., Carreiras, M., & Duñabeitia, J.A. (September, 2014). On the positive effects of mixing languages for concept learning. Oral presentation at Congress of the Spanish Society for Experimental Psychology (SEPEX), Murcia, Spain.
2. Arganda-Carreras, I., Iglesias, J.E., Jenett, A., Manoliu, T., Rouyer, F., & Andrey, P. (October, 2014). Group-wise registration methods to construct statistical atlases of Drosophila adult brains. Oral presentation at the VIB Conference on Bioimage Informatics, Leuven, Belgium.
3. Armstrong, B. C. (2014). Probing the structure of neural representations via the frequency and time Domains: Co-ordinated computational and electrophysiological studies. Oral presentation at the 26th Annual Winter Conference on Neural Plasticit, Vieques Island, U. S. Caribean.
4. Armstrong, B. C. (2014, July). Understanding the time-course of ambiguous word comprehension. Oral presentation at the European Cognitive Psychology (ESCOP) Society Summer School, San Sebastian, Spain.
5. Armstrong, B. C. (2014, July). SOS: An algorithm and software for the Stochastic Optimization of Stimuli. Oral presentation at the European Cognitive Psychology (ESCOP) Society Summer School, San Sebastian, Spain.
6. Armstrong, B. C., Martin, C., Carreiras, M., & Frost, R. (2014, July). Grapheme-phoneme mappings are not necessarily symmetrical: A cross-linguistic comparison. Oral presentation at the 29th Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science, Toronto, Canada.
7. Casaponsa, A., Carreiras, M., Antón, E., Pérez, A., & Duñabeitia, J.A. (September, 2014). Predicting nonnative language achievement with the cognate effect. Oral presentation at Congress of the Spanish Society for Experimental Psychology (SEPEX), Murcia, Spain.
8. Chow, W. Y., Li, N., Wang, S., & Phillips, C. (2014). Are our eyes really faster than our brains? Evidence from Mandarin Chinese reading. Oral presentation at the second East Asian Psycholinguistics Colloquium, Chicago, IL, USA.
9. Gil, C., Carreiras, M., & Salillas, E. (September, 2014). The impact of speaking two languages on the Mental Number Line: Electrophysiological evidence during a verbal WM task. Oral presentation at Congress of the Spanish Society for Experimental Psychology (SEPEX), Murcia, Spain.
10. Iglesias, J.E., Van Leemput, K., Augustinack, J., Fischl, B., Lerma-Usabiaga, G., Paz-Alonso P.M. & Carreiras, M. (July, 2014). Segmenting substructures from in vivo brain MRI using priors derived from autopsy brain samples. Oral Presentation at Neurogune meeting. Donostia, Spain.
11. Lallier, M., Martin, C., Acha, J., & Carreiras, M. (December 3-5, 2014). Impact of cross-linguistic interactions on reading in bilingual children. Oral presentation at the International Conference "Learning Written Language: Diversity of languages, Uniqueness of disorders" Strasbourg, France.
12. Martínez, A. & Salillas, E. (January, 2014). A dominant code for math in balanced bilinguals. Electrophysiological evedence from code switching. Oral presentation at the 32nd European Workshop on Cognitive Neuropsychology, Bressanone, Italy.
13. Martinez, A. & Salillas, E. (September, 2014). Balanced bilinguals show unbalanced dominance for the linguistic math codes: Electrophysiological evidence from code switching. Oral Presentation at Congress of the Spanish Society for Experimental Psychology (SEPEX), Murcia, Spain.
14. Molnar, M., Martin, C. Ibañez, A, & Carreiras, M (August, 2014). It's good to see you again: Bilinguals rely on interlocutor identity as a cue for language activation. Oral presentation at ESLP. Rotterdam, The Netherlands.
15. Molnar, M., Quiñones, I., Baart, M., Caballero, C., Peña, M., & Carreiras, M. (July, 2014). Neural specialization for native speech processing in young Spanish monolingual and Basque-Spanish bilingual infants. Oral Presentation at Neurogune meeting. Donostia, Spain.
16. Paz-Alonso, P.M.(November 2014). Functional and structural evidence underlying the role of thalamus in dyslexia. Oral presentation at the Annual conference on the Biological Foundation of Languages. Hong Kong, Hong Kong.
17. Paz-Alonso, P.M. (May, 2014). Neurodevelopmental changes in network dynamics underlying encoding and retrieval of true and false memories. Talk presented at the 2nd conference of the European Society for Cognitive and Affective Neuroscience (ESCAN). Dortmund, Germany.
18. Paz-Alonso, P.M.,(November 2014). Neural dynamics underlying reading and speech systems as a function of language orthography. Oral presentation at the symposium on L1 reading across different languages and L2 literacy acquisition,Taipei, Taiwán.
19. Paz-Alonso, P.M. & Carreiras, M. (April, 2014). Network dynamics of reading and speech systems across languages. Oral presentation at the First and Second Language Literacy Conference: New Directions in Cross-Language Research. New Haven, CT, US.
20. Paz-Alonso, P.M. & Carreiras, M. (October, 2014). Neural dynamics underlying the retrieval practice effect. Oral presentation at the Congress of the Spanish Society for Experimental Psychology (SEPEX), Murcia, Spain.
21. Paz-Alonso, P.M., Lerma-Usabiaga, G. & Carreiras, M. (April, 2014). Neural correlates of verse improvisation. Oral presentation at the First and Second Language Literacy Conference: New Directions in Cross-Language Research. New Haven, CT, US.
22. Ruiz-Blondet, M., Khalifian, N., Armstrong, B. C., Jin, Zanpeng, J., Kurtz, K. J., Laszlo, S. (July, 2014). Brainprint: Identifying unique features of neural activity with machine learning. Oral presentation at the 36th Annual Conference of the Cognitive Science Society. Mahwah, Quebec City, Canada.
23. Roux, F., de Baene, W., & Carreiras, M. (November, 2014). A framework for the automated analysis of speech production data. Oral presentation at the 55th Annual Meeting of the Psychonomic Society, Long Beach, USA.
24. Roux, F., Wibral, M., Singer, W., & Uhlhaas, P. (November, 2014). Age related changes of MEG alpha and gamma-band activity reflect the late maturation of distractor-inhibition during adolescence. Oral presentation at the Annual meeting of the society for Neuroscience, Washington, USA.
25. Samuel, A.G. (November, 2014). How much processing time is needed to drive perceptual recalibration of speech? Poster presentation at the the 55th Annual Meeting of the Psychonomic Society, Long Beach, USA.
26. Shaw, K., Baart, M., & Bortfeld, H. (June, 2014). Infants can perceive asynchronies in audiovisual speech. Oral presentation at the 15th International Multisensory Research Forum, Amsterdam, The Netherlands.
27. Villameriel, S., Dias, P., Costello, B., & Carreiras, M. (September, 2014). Bilingüismo LSE/castellano: activando y cambiando entre lenguas. Oral presentation at Congreso CNLSE sobre adquisición, aprendizaje y evaluación de la lengua de signos española, Madrid, Spain.

Invited Talks

1. Armstrong, B. C. (2014). Understanding the time-course of ambiguous word comprehension. Invited talk at the Department of Psychology, Exeter University, UK.
2. Armstrong, B. C. (2014). SOS: An algorithm and software for the Stochastic Optimization of Stimuli. Invited talk at the Department of Psychology, Exeter University, UK.
3. Armstrong, B. C. (November 2014). The temporal dynamics of ambiguous word comprehension. Invited talk at the Department of Psychology, Binghamton University, USA.
4. Armstrong, B. C. (November 2014). Diffusion Model and Connectionist Approaches to Decision Making. Invited talk at the Computational Modeling Research Group, Binghamton University, USA.
5. Bastarrika, A. (November 6, 2014). El aprendizaje fuera de las aulas: La investigación. Invited talk at Curso de formación para FLL Euskadi dentro de la sesión "En clase o en la calle: nunca dejamos de aprender", Tecnun, Donostia.
6. Boddy, P. (2014, September). Context and Concepts. Invited talk at the European Campus of Excellence (ECE) Memory and Mind Summer School, Bochum, Germany.
7. Caballero, C. (October 6, 2014). Paradigm Free Mapping: Mathematical foundations, models and applications. Invited talk at the Scientific and Statistical Computing Core, NIH Medical Center, Bethesda, Washington DC, USA.
8. Carreiras, M. (March 20, 2014). The bilingual brain: Plasticity and processing from cradle to grave. Invited talk at 4th Latin American School for Education, Cognitive and Neuronal Sciences. Universidad de la República Uruguay, Punta del Este, Uruguay.
9. Carreiras, M. (April, 2014). Orthographic coding: Processing letters and digits. First and Second Language Literacy: New Directions in Cross-Language Research. Invited talk at Haskins Laboratories, New Haven, USA.
10. Carreiras, M. (May 16-17, 2014). Avances en la investigación: cerebro, lectura y dislexia. Invited talk at IV Jornadas Técnicas de ASANDIS-Dislexia: Legislación y Realiad Educativa, SANDIS, Málaga, Spain.
11. Carreiras, M. (June 20, 2014). The Literate Multilingual Brain. Invited talk at a seminar at the Instituto Cajal, CSIC, Madrid.
12. Carreiras, M. (June 27, 2014). Procesamiento del lenguaje y bilingüismo. Invited talk at the XIII Curso Nacional de Neurociencia at the Universidad Pablo de Olavide, Carmona, Sevilla.
13. Carreiras, M. (September 2, 2014). La ciencia del habla. Invited talk at La ciencia de nuestras vidas, XXXIII Cursos de Verano at UPV/EHU, Donostia-San sebastián.
14. Carreiras, M. (September 14, 2014). Gestionando dos lenguas: Mecanismos cognitivos y plasticidad cerebral en bilingües. Invited talk at the Congress of the Spanish Society for Experimental Psychology (SEPEX), Murcia.
15. Carreiras, M. (September 19, 2014). Neurociencia y Educación: un viaje a través del bilingüismo y la lectura. Invited talk at Universidad de La Laguna, La Laguna.
16. Carreiras, M. (October 10, 2014). The bilingual brain: Plasticity and processing from cradle to grave. Invited talk at Brain & Language Research Institute, Marseille, France.
17. Carreiras, M. (October 17, 2014). The Literate Brain. Invited talk at jornada de inauguración de Máster en Neurociencia Cognitiva y del Comportamiento, Granada, Spain.
18. Carreiras, M. (November 5, 2014). Reading in two languages. Invited talk at The Biological Foundation of Languages, Taiwan.
19. Carreiras, M. (November 7, 2014). Reading and dislexia: Cognitive processes and Brain mechanisms. Invited talk at International Symposium on the Biological Foundations of Language, Hong-Kong.
20. Davidson, D.J. (September 26, 2014). Electrophysiological models of connectivity. Invited talk at Basque Center for Applied Mathematics, Bilbao, Spain.
21. Davidson, D.J. (October 4, 2014). Electrophysiological changes during grammar learning and the role of feedback. Invited talk at the symposium "Second Language in the Brain", University of Greenwich, London, UK.
22. Davidson, D.J. (October 6, 2014). Neural correlates of second language plasticity. Invited talk at University of York, York, UK.
23. Duñabeitia, J.A. (June, 2014). Las ventajas y desventajas del cerebro bilingüe. Invited talk at Laboragune, Leioa, Spain.
24. Duñabeitia, J.A. (July, 2014). Neurociencia cognitiva de las lenguas. Invited talk at TuInnovas, Bilbao, Spain.
25. Duñabeitia, J.A. (October 9, 2014). Ordering letters in the brain: How, when, where and why does orthographic coding occur? Invited talk at the University of Kent, Canterbury, UK.
26. Duñabeitia, J.A. (November, 2014). Impacto del bilingüismo en las personas de edad avanzada. Invited talk at the Segundo Encuentro Vasco-Chileno de Investigación Biomédica, Bilbao, Spain.
27. Fariña, N. (November, 2014). El proyecto LSE-Sign y los últimos estudios sobre lengua de signos e interpretación [The LSE-Sign project and recent studies on sign language and interpretation]. Invited talk for Trainee Sign Language Interpreters, La Laboral Institute, San Cristóbal de La Laguna (Tenerife), Spain.
28. Iglesias, J.E. (December 18, 2014). An algorithm for optimal fusion of atlases with different labeling protocols. Invited talk at Invited talk at the Computational Radiology Laboratory, Boston Children's Hospital / Harvard Medical School, Boston, USA.
29. Lallier, M. (December 8, 2014). Atypical auditory sampling in Developmental Dyslexia. Invited talk at Learning, Educational Achievement, and Life Course Development (LEAD) Graduate School, Tübingen University, Germany.
30. Lallier, M. (December 8, 2014). Impact of bilingualism on Reading Development. Invited talk at Learning, Educational Achievement, and Life Course Development (LEAD) Graduate School, Tübingen University, Germany.
31. Larraza, S. (May 6, 2014). Hizkuntza eta Burmuinaren Arteko Elkarrizketa (The Conversation Between Language and Brain). nvited talk at Workshop about the Transmission of Basque organized by the ..eta kitto! Association for the Basque Language. Eibar, Spain.
32. Mancini, S. (May 27, 2014). Mechanisms of Agreement. Invited talk at CISCL, Interdepartmental Center on Cognitive Studies on Language. Siena, Italy.
33. Martin, C.D. (November 19, 2014). Estructura gramatical y contenido semántico. Shakespeare y la neurociencia. Invited talk at Workshop Mestizajes Donostia International Physics Center (DIPC), Donostia, Spain.
34. Martin, C.D. (November 2014). Anticipation during language comprehension in a bilingual environment. Invited talk at the University of Lyon, Neurconference, Lyon, France.
35. Martin, C.D. (November 2014). The active role of comprehenders during L2 sentence processing. Invited talk at the Laboratory DDL, University of Lyon, France.

36. Massol, S. (November 14, 2014). The time-course of visual word recognition: an ERP perspective. Invited talk at the department of Psychology, DePaul University, Chicago, Illinois, USA.
37. Massol, S. (November 19, 2014). Does the context modulate semantic access in bilinguals? Invited talk at Neurocognition Lab, San Diego, California, USA.
38. Massol, S. (November 24, 2014). The time-course of visual word recognition: an ERP perspective. Invited talk at the department of Psychology, Binghamton, New York state, USA.
39. Molinaro, N. (June 19, 2014). The "Neural entrainment" phenomenon in dyslexic readers. Invited talk at Department of Biomedical Sciences, University of Modena and Reggio Emilia, Italy.
40. Molinaro, N. (July, 2014) Tracking the generation of prediction while reading. Invited talk at workshop on "Language Prediction, Experimental Evidence and Theoretical Implications". Rovereto,TN, Italy.
41. Oliver, M. (October, 2014). Modulation of the ventral and dorsal networks as a function of language orthography and reading tasks: fMRI evidence. Invited talk at Congress of the Spanish Society for Experimental Psychology (SEPEX), Murcia, Spain.
42. Roux, F. (January, 2014). Alpha and Gamma Oscillations in MEG-data: Networks, Function and Development. Invited talk at CNRS, Toulousse, France.
43. Roux, F. (March 10, 2014). Alpha and Gamma-Band Oscillations in MEG-Data: Networks, Function & Development. Invited talk at University of Glasgow, Institute for Neuroscience and Psychology, Glasgow, UK.
44. Roux, F. (April, 2014). A model of oscillatory activity in visual WM: possible applications to auditory WM? Invited talk at University College London (UCL), London, UK.
45. Roux, F. (August, 2014). Alpha and gamma-band oscillations during working memory: Networks, function. Invited talk at symposium 1: The functional role of cross frequency coupling, at the 19th Conference on Biomagnetism (BIOMAG 2014), Halifax, Canada.
46. Roux, F. (August, 2014). Age related changes of MEG alpha and gamma-band activity reflect the late maturation of distractor-inhibition during working memory maintenance. Invited talk at symposium 2: Brain oscillations and network connectivity in typical and atypical neurocognitive development, at the 19th Conference on Biomagnetism (BIOMAG 2014), Halifax, Canada.
47. Samuel, A. G. (February, 2014). Second Language Listening: Three Current Projects. Colloquium at the Speech–Language–Hearing Sciences Program, City University of New York Graduate Center, NY, USA.

2015

Poster Presentations

1. Adam-Darque, A. Grouiller, F., Leuchter, R.H., Caballero-Gaudes, C., Lazeyras, F. & Huppi, P. (June, 2015). Olfactory perception in newborns using fMRI. Poster presentation at Annual Meeting of the Organization for Human Brain Mapping (OHBM 2015), Honolulu, Hawaii, USA.
2. Aganj, I., Iglesias, J.E., Reuter, M., Sabuncu, M.R., & Fischl, B. (October 5-9, 2015). Mid-space-independent symmetric data term for pairwise deformable image registration. Poster presentation AT MICCAI 2015, Munich, Germany.
3. Antón, E., Thierry, G. & Duñabeitia, J.A. (September, 2015). Concept learning in mixed-language contexts. Poster presented at the 19th Conference of the European Society for Cognitive Psychology (ESCOP), Paphos, Cyprus.
4. Antzaka, A., Carreiras, M. & Lallier, M. (September, 2015). The visual attention span and reading in transparent orthographies: when is a large orthographic grain useful? Poster presentation at the 2015 Architectures and Mechanisms for Language Processing, Valletta, Malta.
5. Antzaka, A., Lallier, M., Caffarra, S., Schlöffel, S., Martin, C., & Carreiras, M. (October, 2015). Learning to read in Basque: Investigating the influence of phonological awareness, rapid automatized naming, visual attention span and language background on reading development in bilingual children. Poster presentation at the 2015 Reading in the Forest-International Workshop on Reading and Dyslexia, Kaiserslautern, Germany.
6. Aristia, J. & Armstrong, B.C. (June, 2015). Adaptive Effects in Lexical Decision: Implications for Models of Response Selection. Poster presented at the Model-based Neuroscience Summer School, Amsterdam, Netherlands.
7. Aurtenetxe, S., Molinaro, N., Davidson, D. & Carreiras, M. (March 28-31, 2015). How are numbers and letters processed in the human brain? Poster presented at the Cognitive Neuroscience Society (CNS 2015) Annual Meeting, San Francisco, USA.
8. Baart, M. (June, 2015). Digitizing the electrophysiological N1 and P2 to reveal general effects of audiovisual speech integration. Poster presented at the 16th International Multisensory Research Forum (IMRF), Pisa, Italy.
9. Bastarrika, A. (October, 2015). Helduen burmuinek berdin prozesatzen al dituzte ikasi berri duten hizkuntza eta ama hizkuntza? Bizitza zientifikoen 5. topaketa, Eureka Zientza Museoa, Donostia, Gipuzkoa, Spain.
10. Bastarrika, A. & Davidson. D.J. (2015, October). MEG correlates of short-term grammatical plasticity: Grammatical number processing in Spanish learners of Basque. Poster presentation at the 7th Annual Meeting of the Society for the Neurobiology of Language (SNL 2015), Chicago, USA.
11. Blanco, B., Caballero, C., Molnar, M. & Carreiras, M. (June, 2015). Influence of bilingual exposure in the developing brain networks. Poster presented at the 2015 Brain Networks satellite meeting, Zaragoza, Spain.
12. Boddy, P. & Yee, E. (2015, October). Experience Related Interference to Object Semantics from Visual Task. Poster presentation at the 2015 meeting of the Society for the Neurobiology of Language (SNL 2015), Chicago, USA.
13. Boddy, P. & Yee, E. (May, 2015). Experience Related Interference to Object Semantics from Visual Task. Poster presentation at Concepts Actions and Objects workshop (CAOS), Rovereto, Italy.
14. Boddy, P. & Yee, E. (July, 2015). Visual Properties of Object Semantics are Experience Related. Poster presented at Embodied and Situated Language Processing (ESLP), Lyon, France.
15. Boddy, P. & Yee, E. (October, 2015). Visual properties of object semantics are experience related. Poster presentation at the 7th Annual Meeting of the Society for the Neurobiology of Language (SNL 2015), Chicago, USA.
16. Caballero-Gaudes, C., Saad, Z., Raemaekers, M., Ramsey, N. & Petridou, N. (June, 2015). Few spontaneous BOLD events are sufficient for single subject mapping of functional networks at 7T. Poster presentation at Annual Meeting of the Organization for Human Brain Mapping (OHBM 2015), Honolulu, Hawaii, USA.

17. Caballero-Gaudes, C., Saad, Z., Raemaekers, M., Ramsey, N. & Petridou, N. (June, 2015). Individual-subject mapping of functional networks from sparse spontaneous BOLD events. Electronic poster presentation at the International Meeting of the International Society for Magnetic Resonance in Medicine (ISMRM 2015), Toronto, Canada.
18. Caffarra, S., Molinaro, N., Davidson, D. & Carreiras, M. (March 28-31, 2015). Influence of L1-L2 similarity, AoA, proficiency, immersion on L2 syntactic processing: an empirical review on available ERP results. Poster presented at the Cognitive Neuroscience Society (CNS 2015) Annual Meeting, San Francisco, USA.
19. Dias, P. (October, 2015). El procesamiento del lenguaje en personas sordas. Poster presentation at the 5º ENCUENTRO DE VIDAS CIENTIFICAS, Museo de la ciencia Eureka! San Sebastian, Gipuzkoa, Spain.
20. Dias, P., Villameriel, S., Costello, B. & Carreiras, M. (July, 2015). Language switch cost in bimodal bilinguals: is there a price? Poster presented at the 2nd International Conference on Sign Language Acquisition (ICSLA), Amsterdam, Netherlands.
21. Delgado Alvarado, M.., García Penton, L., Jimenez Urbieta, H., Gago Calderón, B., Ruiz Martinez, J., Bergareche Yarza, A.M Martí Masso, J. F., Caballero, C. , Carreiras, M., & Rodriguez Oroz, M. C. (November, 17-21, 2015). Cambios en sustancia gris en pacientes con enfermedad de Parkinson y bloqueos de la marcha. Poster presentation at LXVII Reunión Anual de la Sociedad Española de Neurología, Valencia, Spain.
22. Dumay, N. (September 17-20, 2015). Sleep promotes reminiscence more than it protects against forgetting. Poster presentation at the 19th Conference of the European Society for Cognitive Psychology (ESCOP), Paphos, Cyprus.
23. Ho, N.F., Iglesias, J.E., Sum, M.Y., Fischl, B., Zhou, J., & Sim, K. (28 March – 01 April, 2015). Longitudinal study of hippocampal subfield volumes in schizophrenia and bipolar disorder. Poster presentation at International Congress of Schizophrenia Research, the Broadmoor, Colorado Springs, Colorado, USA. Abstract can be found in Schizophrenia Bulletin, 41, S257-258.
24. Larraza, S., Molnar, M. & Samuel, A. (June, 2015). The Development of Phonemic Discrimination in Basque-Spanish Bilingual Infants. Poster presentation at Workshop on Infant Language Development (WILD 2015), Stockholm, Sweden.
25. Lerma-Usabiaga, G., Iglesias, J.E. & Paz-Alonso, P.M. (March 28-31, 2015). PCA-based automatic segmentation of hippocampal longitudinal axis. Poster presented at the Cognitive Neuroscience Society (CNS 2015) Annual Meeting, San Francisco, CA, USA.
26. Lerma-Usabiaga, G., Carreiras, M., Paz.-Alonso, P.M. (October, 2015). Neurodevelopmental trajectories of thalamic volume in control and dyslexic readers. Poster presentation at the annual meeting of the Society for Neurobiology of Language (SNL 2015), Chicago, Illinois, USA.
27. Ivaz, L., Costa, A. & Duñabeitia, J. A. (July, 2015). Do automatic emotional responses depend on the language? The case of foreign languages. Poster presented at the 12th International Symposium of Psycholinguistics, Valencia, Spain.
28. Ivaz, L., Costa, A. & Duñabeitia, J. A. (September, 2015). The emotional impact of being myself: Emotions and foreign language processing. Poster presented at the 19th Conference of the European Society for Cognitive Psychology (ESCOP), Paphos, Cyprus.
29. Ivaz, L., Costa, A., & Duñabeitia, J. A. (November, 2015). How Much Do I Like Myself in a Foreign Language Context? Poster presented at the 56th Annual Meeting of the Psychonomic Society, Chicago, USA.
30. Mancini, S. Ristic, B. Molinaro, N. & Carreiras, M. (March 19-21, 2015). Morphosyntax can be stronger than discourse: evidence from agreement processing. Poster presented at the 27th conference on human sentence processing (CUNY). Los Angeles, USA.
31. Martin, C.D., Niziolek, C.A., Duñabeitia, J.A., Carreiras, M. & Houde, J.F. (March 28-31, 2015). How to explain individual variability in speech motor control. Poster presented at the Cognitive Neuroscience Society (CNS 2015) Annual Meeting, San Francisco, CA, USA.
32. Martinez, A. & Salillas, E. (September, 2015). Developmental dyscalculia in bilinguals. A combined ERP–source analysis study. Poster presented at the 19th Conference of the European Society for Cognitive Psychology (ESCOP), Paphos, Cyprus.
33. Massol, S., Molinaro, N., Duñabeitia, J. A. & Carreiras, M. (July, 2015). An ERP investigation of lexico-semantic access in bilinguals engaged in a language-specific context. 12th International Symposium of Psycholinguistics. Valencia, Spain.
34. Massol, S., Molinaro, N., Duñabeitia, J. A., & Carreiras, M. (September, 2015). Bilinguals' lexical interactions between languages in monolingual contexts. Poster presented at the 19th Conference of the European Society for Cognitive Psychology (ESCOP), Paphos, Cyprus.
35. Medeiros, J. (October 26, 2015). Por qué, cómo y dónde hacer divulgación científica. Poster presentation at the 5º ENCUENTRO DE VIDAS CIENTIFICAS, Museo de la ciencia Eureka! San Sebastian, Gipuzkoa, Spain.
36. Medeiros, J. & Duñabeitia, J. A. (August, 2015). Impact of individual differences on masked suffix priming. Poster presented at the XII International Symposium of Psycholinguistics, Valencia, Spain.
37. Molnar, M., Blanco, B., Carreiras, M., & Caballero, C. (2015, October). Inter-hemispheric resting-state connections and language development in the first year of life. Poster presentation at the 7th Annual Meeting of the Society for the Neurobiology of Language (SNL 2015), Chicago, USA.
38. Molnar, M. & Carreiras, M. (June, 2015). Bilingual infants' ability of associating languages to voices. Poster presentation at Workshop on Infant Language Development (WILD 2015), Stockholm, Sweden.
39. Molnar, M. & Carreiras, M. (June, 2015). Language preferences of monolingual infants from bilingual and monolingual communities. Poster presentation at Workshop on Infant Language Development (WILD 2015), Stockholm, Sweden.
40. Molnar, M., Pejovic, J., & Carreiras, M. (2015, October). Neuro-physiological adaptation to bilingual and monolingual environments begins in infancy. Poster presentation at the 7th Annual Meeting of the Society for the Neurobiology of Language (SNL 2015), Chicago, USA.
41. Monsalve, I. & Molinaro, N. (November, 2015). Beta oscillations mediate lexical predictions in the visual domain. Poster presentation at the 2015 Tübingen MEG Symposium, Tübingen, Germany.
42. Oliver, M., Carreiras, M. & Paz-Alonso, P.M. (2015, October). Age of acquisition of the second language modulates structural and functional dynamics in bilingual reading. Poster presentation at the 7th Annual Meeting of the Society for the Neurobiology of Language (SNL 2015), Chicago, USA.
43. Oliver, M., Carreiras, M. & Paz-Alonso, P.M. (November, 2015). The influence of age of acquisition in bilingual reading. Poster presented at the 45th meeting of the Society for Neuroscience (SfN 2015), Chicago, USA.

44. Oliver, M., Paz-Alonso, P.M., Quiñones, I., Caballero, C., Suarez-Coalla, M.P., Duñabeitia, J.A., Cuetos, F.& Carreiras, M. (March 28-31, 2015). Neural correlates of orthographic consistency in readers with and without dyslexia. Poster presented at the Cognitive Neuroscience Society (CNS 2015) Annual Meeting, San Francisco, CA, USA.
45. Paz-Alonso, P.M. & Carreiras, M. (March 28-31, 2015). Neural dynamics underlying retrieval-practice effects. Poster presented at the Cognitive Neuroscience Society (CNS 2015) Annual Meeting, San Francisco, CA, USA.
46. Pejovic, J., Molnar, M., Yee, E. & Martin, M. (June 10-12, 2015). Development of the sound-shape correspondence effect. Poster presented at Workshop on Infant Language Development (WILD 2015), Stockholm, Sweden.
47. Pejovic, J., Molnar, M., Yee, E. & Martin, M. (June, 2015). Cross-modal correspondence changes over development. Poster presented at the 12th International Symposium of Psycholinguistics, Valencia, Spain.
48. Postiglione, F., Finocchiaro, C., De Martino, M. & Molinaro, N. (June 2015). More than a noun, less than a verb. Observing the noun-verb distinction from the noun-verb continuum perspective. Poster presentation at the 9th International Morphological Processing Conference. Potsdam, Germany.
49. Pourquié, M. (September 17-22, 2015). Testing the lexical/functional divide in aphasia. Poster presentation at the 16th Science of Aphasia conference, Aveiro, Portugal.
50. Pourquié, M. & Royle, P. (May 28-29, 2015). Multilingual language assessment: More benefits than challenges. Poster presented at the Bilingual Brain Symposium, Montreal, Canada.
51. Ríos, P., Molnar, M., Lizarazu, M., & Lallier, M. (October 25-28, 2015). The importance of attentional tracking of slow speech modulations for speech intelligibility and reading development. Poster presentation at Reading in the Forest - International Workshop on Reading and Dyslexia, University of Kaiserlautern, Germany.
52. Rosenblum, L.D., Dorsi, J., & Samuel, A.G. (November, 2015). Lexical and visual influences on selective adaptation of speech. Poster presentation at Psychonomic Society, Chicago, IL, USA.
53. Roux, F., Frost, R., & Carreiras, M. (2015, June). Predicting individual differences in sequence learning from oscillatory activity in human MEG-data. Poster presentation at the ESI Systems Neuroscience Conference, Frankfurt am Main, Germany.
54. Roux, F., Frost, R., & Carreiras, M. (June, 2015). Predicting individual differences in sequence learning from oscillatory activity in MEG-data. Poster presentation at Interdisciplinary Advances in Statistical Learning, Donostia-San Sebastian, Spain.
55. Roux, F., Frost, R. & Carreiras, M. (July, 2015). Predicting individual differences in sequence learning from oscillatory activity in human MEG-data. Poster presentation at 9th World Congress International Brain Research Organization (IBRO 2015), Rio de Janeiro, Brazil.
56. Roux, F., Frost, R., & Carreiras, M. (October, 2015). Predicting sequence learning from oscillatory activity in MEG-data. Poster presentation at the 2015 meeting of the Society for Neuroscience (SfN 2015), Chicago, USA.
57. Roux, F., Frost, R., & Carreiras, M. (November, 2015). Predicting individual differences in sequence learning from oscillatory activity in MEG-data. Poster presentation at Thuebingen MEG Symposium, Thuebingen, Germany.
58. Sacchet, M.D., Livermore, E., Iglesias, J.E., Glover, G.H. & Gotlib, I.H. (June 14-18, 2015). Subcortical Volumes Differentiate Among Affective Disorders. Poster presented at the Organization for Human Brain Mapping (OHBM), Honolulu, Hawaii, USA.
59. Schlöffel, S., Lallier, M., Carreiras, M., & Martin, C. (October, 2015). On the influence of the orthographic system beyond linguistic processes. Poster presentation at International Workshop on Reading and Dyslexia, Kaiserslautern, Germany
60. Schlöffel, S., Lallier, M., Carreiras, M., & Martin, C. (September, 2015). Does noun capitalization in German affect auditory speech perception? Poster presented at Conference of the European Society for Cognitive Psychology (ESCOP), Paphos, Cyprus.
61. Sundara, M., Molnar, M. & Frota, S. (June, 2015). When infants get the question: The development of boundary tone perception. Poster presentation at Workshop on Infant Language Development (WILD 2015), Stockholm, Sweden.
62. Zhang, X., & Samuel, A.G. (November, 2015). Is spoken word recognition automatic? The effect of cognitive load on lexical activation and competition. Poster presentation at Psychonomic Society, Chicago, IL, USA.
63. Zheng, Y., & Samuel, A.G. (November, 2015). Transfer effects between language and music. Poster presentation at Psychonomic Society, Chicago, IL, USA.

Oral Presentations

1. Armstrong, B. C. (2015, January). Neurocomputational underpinnings of lexical semantic processing dynamics. Oral presentation at the 2015 Winter Conference on the Neurobiology of Learning and Memory, Park City, Utah,USA.
2. Armstrong, B. C. (2015, February). Brainprint: Assessing the uniqueness, collectability, and permanence of a novel method for ERP biometrics. Oral presentation. at the 27th Annual Winter Conference on Neural Plasticity, Barbados.
3. Armstrong, B. C., & Frost, R. (2015, June). Critical synthesis of the interdisciplinary advances in statistical learning, introduction to the round-table discussion, & closing remarks [Co-chairs of the session & co-presenters]. Oral presentation. at Interdisciplinary Advances in Statistical Learning, San Sebastian, Spain.
4. Armstrong, B., Martin, C., Carreiras, M. & Frost, R. (June 28, 2015). Orthographic depth and the impact of feedforward and feedback consistency: evidence from visual and auditory noise. Oral presentation at workshop on Reading in different Orthographies, BCBL, Donostia, Spain.
5. Armstrong, B.C.*, Perea, M. & Samuel, A.G. (June, 2015). Semantic Access in Written and Spoken Word Comprehension: Evidence for Interactions between the Time-course of Stimulus Presentation and Modality. Oral presentation at the 30th Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science, Ottawa, Canada.
6. Adam-Darque, A. Grouiller, F., Leuchter, R.H., Caballero-Gaudes, C., Lazeyras, F. & Huppi, P. (June, 2015). Olfactory perception in newborns using fMRI. Oral presentation at Annual Meeting of the Organization for Human Brain Mapping, (OHBM 2015), Honolulu, Hawaii, USA.
7. Antón, E., Thierry, G., Goborov, A. & Duñabeitia, J.A. (December, 2015). Languages in formal schooling: Where are the negative consequences?. Oral presentation at Night Whites, St. Petersburg, Russia.
8. Baese-Berk, M., & Samuel, A.G. (November, 2015). Effects of production and task-switching on learning to perceive speech sounds. Oral presentation at the 56th Annual Meeting of the Psychonomic Society (PS 2015), Chicago, USA.

9. Barberà, G. & Costello, B. (September, 2015). ¿Cómo se expresa la referencia impersonal? Análisis contrastivo entre LSC y LSE. Oral Presentation at Congreso 2015 del Centro de Normalización de la lengua de signos española, Madrid.
10. Bastarrika, A., Caballero, C., & Davidson, D. (December, 2015). MEG correlates of short-term grammatical plasticity: Grammatical number processing in Spanish learners of Basque. Oral presentation at Night Whites: The Third St. Petersburg Winter Workshop on Experimental Studies of Speech and Language, St Petersburg, Russia.
11. Blanco, B., Molnar, M., Caballero-Gaudes, C. & Carreiras, M. (June, 2015). Brain network activity in 4-month-old bilingual and monolingual infants. Oral presentation at Workshop on Infant Language Development (Wild 2015), Stockholm, Sweden.
12. Caballero-Gaudes, C., Saad, Z.S., Raemaekers, M., Ramsey, N.F., & Petridou, N. (May 30-21, 2015). Individual-subject mapping of functional networks from sparse spontaneous BOLD events. Oral presentation at Annual Meeting of International Society of Magnetic Resonance in Medicine (ISMRM 2015). Toronto, Canada.
13. Dias, P. (October, 2015). El procesamiento del lenguaje en personas sordas. Oral presentation at the 5º ENCUENTRO DE VIDAS CIENTIFICAS, Museo de la ciencia Eureka! San Sebastian, Gipuzkoa, Spain.
14. Dumay, N., & Aristei, S. (September 17-20, 2015). Cumulative semantic interference without lexical selection. Oral presentation at the 19th Conference of the European Society for Cognitive Psychology (ESCOP), Paphos, Cyprus.
15. Dumay, N., & Aristei, S. (November 19-22, 2015). Cumulative semantic interference without lexical selection. Oral presentation at the 56th Annual Meeting of the Psychonomic Society (PS 2015), Chicago, USA.
16. Duñabeitia, J.A. & Carreiras, M. (September, 2015). How does bilingualism shape non-linguistic cognitive abilities across lifespan? Oral presentation at the 19th Conference of the European Society for Cognitive Psychology (ESCOP), Paphos, Cyprus.
17. Duñabeitia, J.A. & Carreiras, M. (March, 2015). Looking beyond letters: The impact of literacy on visual discrimination. Oral presentation at the inaugural International Convention of Psychological Science (ICPS), Amsterdam, The Netherlands.
18. Laszlo, S.*, & Armstrong, B.* (2015, September). Using advanced statistics in Psychophysiology [Co-chairs/presenters: Laszlo & Armstrong]. Invited contribution as part of the Education and Training Committee Roundtable Discussion Series. Oral Presentation at the 2015 Annual Meeting of the Society for Psychophysiology, Seattle, USA.
19. Lerma-Usabiaga, G., Iglesias, J.E. & Paz-Alonso. P.M. (October 21, 2015). Hippocampal longitudinal axis segmentation: PCA-based automated segmentation tool. Oral presentation at 45th meeting of the Society for Neuroscience (SfN 2015), Chicago, USA.
20. Martin, C.D., Molnar, M.,& Carreiras, M. (October 2015). The proactive bilingual brain: Using interlocutor identity to generate predictions for language processing. Oral presentation at 34th Second Language Research Forum, Atlanta, USA.
21. May, L., Gervain, J., Carreiras, M. & Werker, J. (March 19-21, 2015). Tuned for Speech?: Neural Activation to Spoken and Whistled Language in Young Infants. Oral presentation at Symposium: Tuning Into Language: Behavioral and Neural Differentiation of Speech and Non-Speech in Infancy at the Society for Research in Child Development (SRCD), 2015 Biennial Meeting, Philadelphia, Pennsylvania, USA.
22. Medeiros, J. & Duñabeitia, J. A. (August, 2015). Impact of individual differences on masked suffix priming. Oral presentation at the 7th International Summerschool on Literacy Research (Ludo School), Egmond an Zee, Netherlands.
23. Molnar, M., Blanco, B., Caballero, C. & Carreiras, M. (July 20-23, 2015). Bilingual Exposure Shapes Resting State Brain Networks by 4 Months of Age. Oral presentation at the Symposium "How Exposure to Language Shapes the Human Infant Brain During the First 6 Months of Life", at the ISDP meeting, San Sebastian, Spain.
24. Oliver, M. (June 4, 2015). The left ventral occipito-temporal cortex in reading: a focal point of the current debate, Oral presentation at Psychologie & Gehirn, Frankfurt, Germany.
25. Oliver, M.,Carreiras, M., & Paz-Alonso, P.M. (June 2015).Neural modulation of the left VOT in bilingual reading. Oral presentation at the German Psychological Society, Section Biological Psychology, Frankfurt, Germany.
26. Oliver M., Carreiras M. & Paz-Alonso, P.M. (July, 2015). Functional dynamics of the bilingual brain. Oral presentation at International Symposium of Psycholinguistics, Valencia, Spain.
27. Paz-Alonso, P.M., Guerra, S., Carreiras, M. & Rueda, M.R. (March, 2015). Functional connectivity changes over middle childhood induced by training higher cognitive functions. Oral presentation at the International Conference in Psychological Science (ICPS), Amsterdam, The Netherlands.
28. Paz-Alonso, P.M., Lerma-Usabiaga, G., Oliver, M., Quiñones, I., Caballero, C. & Carreiras, M. (June 28, 2015). Thalamic-cortical connections in dyslexia. Oral presentation at workshop on Reading in different Orthographies, BCBL, Donostia, Spain.
29. Perea, M., Abu Mallouh, R., & Carreiras, M. (November 19-22, 2015). Masked Repetition Priming in a Semi-Cursive Script (Arabic). Oral presentation at the 56th Annual Meeting of the Psychonomic Society (PS 2015), Chicago, USA.
30. Pourquié, M., (November, 2015). A cross-linguistic behavioral study of agrammatism in Basque and French. Oral presentation at IV Clinical Linguistics International Congress, Barcelona, Spain.
31. Quiñones, I., Molinaro, N., Mancini, S. & Carreiras, M. (June, 2015). From minimal dependencies to sentence context: Evidence for a common neural system involving different functional networks working hand by hand. Oral presentation at the 9th International Morphological Processing Conference 2015, Potsdam, Germany.
32. Ríos, P., Molnar, M., Lizarazu, M. & Lallier, M. (July, 2015). Role of attentional tracking of slow speech amplitude envelope for speech intelligibility and reading development. Oral presentation at the XII International Symposium of Psycholinguistics, Valencia, Spain.
33. Ríos, P., Molnar, M., Lizarazu, M. & Lallier, M. (August, 2015). Role of attentional tracking of slow speech amplitude envelope for speech intelligibility and reading development. Oral presentation at the 7th International Summerschool on Literacy Research (Ludo School), Egmond an Zee, Netherlands.
34. Ristic, B., Molinaro, N. & Mancini, S. (December, 2015). Number attraction in Serbian: What is more attractive? Oral presentation at The Third St. Petersburg Winter Workshop on Experimental Studies of Speech and Language, St. Petersburg, Russia.
35. Schlöffel, S., Lallier, M., Carreiras, M., & Martin, C. (September, 2015). On the influence of the orthographic system beyond linguistic processes. Oral presentation at Conference of the European Society for Cognitive Psychology (ESCOP), Paphos, Cyprus.
36. Sundara, M., Molnar, M. & Frota, S. (August 10-14, 2015). The perception of boundary tones in infancy. Oral presentation at the 18th International Congress of Phonetic Sciences (ICPhS 2015). Glasgow, Scotland, UK.

37. Villameriel, S., Dias, P., Costello, B. & Carreiras, M. (July, 2015). Cross-language and cross-modal activation in hearing bimodal bilinguals. Oral presentation at the 2nd International Conference on Sign Language Acquisition (ICSLA), Amsterdam, Netherlands.

Invited Talks

1. Armstrong, B. C. (2015, June). Interdisciplinary Approaches to Language Research: A Brief Overview. Invited talk at the Psychology Department at Bishop's University, Québec.
2. Armstrong, B. C. (2015, April). What can Biologically-Inspired Models Teach Us about Statistical Learning? Invited talk at the Advances in Statistical Learning Seminar, The Hebrew University, Jerusalem, Israel.
3. Bourguignon, M. (October 2015). The corticokinematic coherence. In the symposium "Coherence analysis between electrophysiological signals provides new insights into the mechanisms underlying control and perception of motor action" at the 16th ACAPS International Congress, Nantes, France.
4. Caballero-Gaudes, C. (June, 2015). Paradigm Free Mapping: Mathematical foundations and Applications. Invited talk at the Section on Functional Imaging Methods, NIH, Bethesda, MD, USA.
5. Caffarra, S. (June 18 ,2015). Does the ending matter? Influence of gender-to-ending consistency during agreement processing. Invited talk at the 9th International Morphological Processing Conference, Potsdam, Germany.
6. Carreiras, M. (January, 2015). Brain correlates in first and second language reading. Invited talk at Bilingualism and learning to read across languages and writing systems. NIAS Workshop, Amsterdam, Netherlands.
7. Carreiras, M. (April 18, 2015). Neurociencia y educación: demoliendo mitos para construir puentes. Invited talk at TEDxRíodelaPlata (TEDx), Buenos Aires, Argentina.
8. Carreiras, M. (April 24, 2015). The bilingual brain: Plasticity and processing from cradle to grave. Invited talk at seminario of University of Minho, Oporto, Portugal.
9. Carreiras, M. (May 29, 2015). Mecanismos cognitivos y plasticidad cerebral en bilingües. Invited talk at seminario at Universidad d Castilla la Mancha, Albacete, Spain.
10. Carreiras, M. (September 7, 2015). The bilingual brain: Plasticity and processing from cradle to grave. Invited talk at 12th Polish Neuroscience Society Congress, Medical University of Gdansk, Gdansk, Poland.
11. Carreiras, M. (October 2, 2015). Neurociencia y Dislexia: Detección temprana. Invited talk at I Foro de dislexia y otras dificultades de aprendizaje, Dislebi, Bilbao, Spain.
12. Carreiras, M. (October 7, 2015). Mechanisms of Agreement. Invited talk at the Experimental Psycholinguistics Conference, U.N.E.D., Madrid, Spain.
13. Carreiras, M. (October 27, 2015). Atypical auditory sampling and impaired connectivity in dyslexia. Invited talk at Reading in the Forest, International Workshop on Reading and Dyslexia, University of Kaiserslautern, Annweiler, Germany.
14. Carreiras, M. (October 31, 2015). Mechanisms of agreement. Invited talk at the workshop/seminar Gender and Number in Romance Conference, Bergische Universität Wuppertal, Wuppertal, Germany.
15. Carreiras, M. (November 7, 2015). Lenguaje y envejecimiento. Invited talk at 6º Congreso Nacional CENTAC de Tecnologías de la Accesibilidad, CENTAC, Bilbao, Spain.
16. Carreiras, M. (December 7, 2015). Neurociencia Cognitiva del Lenguaje. Invited talk at VI Reunión Gallega de Jóvenes Investigadores en el Extranjero, INIBIC. UDC, USC and Fundación Barrié, A Coruña, Spain.
17. Costello, B. (February 6, 2015). How do you/we/they get impersonal in Spanish Sign Language (LSE)? A first look. Invited talk at the Workshop on sign languages and R-impersonal pronouns at the CNRS Pouchet, Paris, France.
18. Costello, B. (June 15, 2015). Getting (more) impersonal in LSE. Invited talk at Meeting on impersonals and passives in sign languages, Universitat Pompeu Fabra, Barcelona.
19. Costello, B. (November 25, 2015). Space, reference and identity: agreement in LSE (Spanish Sign Language). Invited talk at LANGUAGE Seminar, LSPC, Paris, France.
20. Costello, B. (November 25, 2015). Idiosyncratic aspects of LSE (lengua de signos española). Invited talk at LANGUAGE Seminar, LSPC, Paris, France.
21. Davidson, D.J. (May 13, 2015). Electrophysiological studies of lexical and grammatical plasticity. Invited talk at University of Hong Kong, Hong Kong, China.
22. Davidson, D.J. (May 15, 2015). Multi-level regression models. Invited talk at University of Hong Kong, Hong Kong, China.
23. Dias. P., Fariña, N. & Villameriel, S. (June, 2015). Zeinu hizkuntza burmuinean/La lengua de signos en el cerebro. Invited talk at Gipuzkoako Pertsona Gorren Elkartea/Asociación de Personas Sordas de Gipuzkoa, Donostia-San Sebastian.
24. Duñabeitia, J.A. (January, 2015). Questioning bilingual myths. Invited talk at Utrecht University, Holland.
25. Duñabeitia, J.A. (June, 2015). Breaking bilingual education rules. Invited talk at the Language Learning Workshop: Issues on Second language processing, Barcelona.
26. Duñabeitia, J.A. (September 4, 2015). Cambiando la educación desde la neurociencia cognitiva. Invited talk at the Curso Singularidad Tecnológica, Mejoramiento Humano y Neuroeducación at the Universidad Internacional Menéndez Pelayo (UIMP), Santander.
27. Duñabeitia, J.A. (September 12, 2015). ¿Qué es y cómo se hace la neurociencia? Invited talk at the Curso Nuevos Paradigmas en Educación: Inteligencias Múltiples, Neurociencia y Pensamiento, Granada.
28. Duñabeitia, J.A. (October 23, 2015). Lifelong bilingualism in the elderly. Invited talk at the Language and perception across the lifetime workshop, Sevilla.
29. Duñabeitia, J.A. (December 1, 2015). Proyecto Garuna: reserva cognitiva y bilingüismo adquirido en la tercera edad. Invited talk at the III Jornadas Vasco-Chilenas de Investigación Biomédica, Chile.
30. Duñabeitia, J.A. (December 11, 2015). Bilingüismo y neurociencia. Invited talk at the Universidad Europea del Atlántico, Santander, Spain.
31. Fernández García, Y. (December 11, 2015). Cambios neuroanatómicos asociados al bilingüismo en el envejecimiento normal. Invited talk at the Universidad Europea del Atlántico, Santander, Spain.
32. García-Pentón, L. (December 11, 2015). Cambios neuroanatómicos asociados al bilingüismo en niños y jóvenes. Invited talk at the Universidad Europea del Atlántico, Santander, Spain.

33. Giezen, M.R. (October, 2015). A new window on bilingualism: Insights from bilinguals of signed and spoken languages. Invited talk in the VL2 Student Network Lecture Series, NSF Center on Visual Language and Visual Learning, Gallaudet University, United States.
34. Lallier, M. (February 24, 2015). Learning to read in biliterate/bilingual children. Invited talk at Laboratoire de Psychologie et Neurocognition, Grenoble, France.
35. Lallier, M. (March 6, 2015). Impact of the age of bilingual exposure on reading development: The role of cross-linguistic phonological similarity. Invited talk at the Symposium on "Multilingualism and early childhood: an educational challenge". University of Luxembourg. Luxembourg. (participation to a Public Round Table).
36. Lerma-Usabiaga, G., Iglesias, J.E., & Paz-Alonso, P.M. (December 4, 2015). Hippocampal longitudinal axis segmentation: PCA-based automated segmentation tool. Invited talk at Stanford University Psychology Department, Stanford, CA, USA.
37. Mancini, S. (May 5, 2015). Decomposing Agreement: The What, When and Where of Agreement processing. Invited talk at University of Siena, Italy.
38. Mancini, S. (November 25, 2015). The importance of (dis-)agreeing in language comprehension. Invited talk at Cross Experimental Workshop on Agreement, University of Nis, Serbia.
39. Martin, C.D. (May, 2015). How to explain individual variability in speech motor control. Invited talk at workshop on speech monitoring and action control, Laboratoire Parole et Language, Aix-en-Provence, France.
40. Martin, C.D. (October 2015). ERP evidence for word prediction in L2, Invited talk at the Colloquium on Anticipation and Expectation in L2 Processing and Learning, 34th Second Language Research Forum, Atlanta, USA.
41. Martin, C.D. (November 27, 2015). Interlocutors' faces prime language activation in bilinguals. Invited talk at School of Psychology, Bangor University, UK.
42. Molinaro, M. (November 23, 2015). Neural entrainment in Developmental Dyslexia. Invited talk at the Department of Psychology, Complutense University, Madrid, Spain.
43. Molnar, M. (October 22-23, 2015). Preverbal infants' adaptation to monolingual and bilingual environments. Invited talk at the 3rd Training School on "Language and perception across the lifetime". University of Seville, Spain.
44. Molnar, M. (October 28, 2015). What is all the bilingual fuss about? Invited talk at the Donostia Week INN. Innovation Week. Donostia, Spain.
45. Pourquié , M. (April 22, 2015). Aphasiology from a cross-language perspective (focus on agrammatic verb processing). Invited talk at Euskal Herriko Unibertsitatea, Hizkuntzalaritza eta Euskal ikasketak saila, Vitoria-Gasteiz, Spain.
46. Ristic, B. (November 25, 2015). Number attraction in subject-verb agreement: the case of Serbian. Invited talk at Cross-Experimental Workshop on Agreement, University of Nis, Serbia.
47. Roux, F. (July, 2015). Predicting individual differences in sequence learning from oscillatory activity in human MEG-data. Instituto de Biofísica Carlos Chagas Filho, Universidade Federal do Rio de Janeiro (UFRJ), Rio de Janeiro, Brazil.
48. Roux, F. (October 29, 2015). Decoding sequential structure from rhythmic brain activity. Invited talk at ICREA, Catalan Institution for Research and Advanced Studies, Barcelona, Spain.
49. Vadillo, O., Lalier, M. & Cafarra, S. (April 28, 2015). Haur elebidunen garapena. Invited talk at the workshop Haur Hekuntzako Tailerrak at Easo Politeknikoa, Donostia, Spain.
50. Villameriel, S. (January 19, 2015). Activation and Changing between languages in bimodal bilinguals. Invited talk at Centro López Vicuña, Palencia, Spain.
51. Villameriel, S. (November 28, 2015) La lengua de signos en el cerebro y los bilingües bimodales. invited talk at Fundación Vinjoy, Oviedo, Spain.

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Poster Presentations

1. Aguilar-Mateu, K., Fernández García, Y., Llibre, J., Morgade, R.M., Garrudo, A., Galán, L., Bobes, M.A., Castro, A.M., & Santos, Y. (December 8-12, 2016). Mild Cognitive Impairment longitudinal study in a Cuban population: 10 years later. Poster presentation at Global Brain Health Institute (GBHI) Annual Conference & Cuban Neurosciences Center (CNEURO) Meeting, Havana, Cuba.
2. Antzaka, A., Lallier, M., Acha, J., & Carreiras, M. (May 6, 2016). Morphological awareness and visual attention span in reading development: Is their role modulated by lexicality and morphological complexity when reading aloud or copying? Poster presentation at IWORDD 2016- International Workshop on Reading and Developmental Dyslexia, Bilbao, Spain.
3. Armstrong, B.C., Dumay, N., Kim, W., & Pitt, M.A. (May 6, 2016). Generalization from newly learned words reveals structural properties of the human reading system. Poster presentation at IWORDD 2016- International Workshop on Reading and Developmental Dyslexia, Bilbao, Spain.
4. Arnaez-Telleria, J., Lerma-Usabiaga, G., Carreiras, M., & Paz-Alonso, P.M. (July, 2016). Functional and structural evidence of hippocampal involvement on the Testing effect. Poster presentation at the International Conference on Memory (ICOM6), Budapest, Hungary.
5. Arnaez-Telleria, J., Lerma-Usabiaga, G., Carreiras, M, & Paz-Alonso, P.M. (April, 2016). Functional and structural correlates of the testing effect. Poster presentation at the 2016 annual meeting of the Cognitive Neuroscience Society (CNS), New York, USA.
6. Arnaez-Telleria, J., Oliver, M., Carreiras, M., & Paz-Alonso, P. M. (June, 2016). Age-of-acquisition of the L2 alters bilinguals' reading networks connectivity at rest. Poster presentation at at the 22nd Annual Meeting of the Organization for Human Brain Mapping (OHBM 2016), Geneve, Switzerland.
7. Baart, M. (September 1-3, 2016). Quantifying early electrophysiological effects of audiovisual speech integration. Poster presentation at the 22nd Architectures and Mechanisms for language processing conference (AMLaP 2016), Bilbao, Spain.
8. Bastarrika, A. (October, 2016). Burmuina ezagutzeko teknikak. Poster presentation at Bizitza zientifikoen topaketak, Eureka! Zientzia Musoea, Donostia.
9. Bastarrika, A. (November, 2016). Burmuina ezagutzeko teknikak. Poster presentation at Bizitza zientifikoen topaketak, Eureka! Zientzia Musoea, Donostia.

10. Biondo, N., Vespignani, F., Rizzi, L. & Mancini, S. (September 1-3, 2016). A matter of time (and features): comparing temporal concord and subject-verb agreement. Poster presentation at the 22nd Architectures and Mechanisms for language processing conference (AMLaP 2016), Bilbao, Spain.
11. Boddy, P., & Yee, E. (November 17-20, 2016). Does Smelling Pine Cones Make it Harder to Think About Strawberries? Poster presentation at the 57th Annual Meeting of the Psychonomic Society (PS 2016), Boston, USA.
12. Bourguignon, M., Piitulainen, H., Smeds, E., Zhou, G., Jousmäki, V., & Hari, R. (October 2016). Below-3-Hz cortical dynamics adjusts steady muscle contraction. Poster presentation at the 20th international conference on biomagnetism (BIOMAG 2016), Seul, South Korea.
13. Blanco, B., Molnar, M., & Caballero, C. (June, 2016). Application of Network Based Statistics to Investigate Infants' Functional Connectivity. Poster presentation at the 22nd Annual Meeting of the Organization for Human Brain Mapping (OHBM 2016), Geneve, Switzerland.
14. Blanco, B., Molnar, M., & Caballero, C. (October, 2016). Influence of bilingual exposure on early brain network development. Poster presentation at the 2016 meeting of the Society for functional Near Infra-red Spectroscopy (fNIRS), Paris, France.
15. Branzi, F.M., Martin, C.D., Carreiras, M., & Paz-Alonso, P. (August 17-20, 2016). Proactive and reactive control during bilingual lexical access is driven by different portions within the prefrontal cortex. Poster presentation at the 8th Annual Meeting of the Society for the Neurobiology of Language (SNL 2016), London, UK.
16. Branzi, F.M., Martin, C.D., Carreiras, M., & Paz-Alonso, P. (September 1-3, 2016). Proactive and reactive control during bilingual lexical access is driven by different portions within the prefrontal cortex. Poster presentation at the 22nd Architectures and Mechanisms for language processing conference (AMLaP 2016), Bilbao, Spain.
17. Branzi, F.M., Paz-Alonso, P.M., Martin, C.D., & Carreiras, M. (April 2-5, 2016). Proactive and reactive control during bilingual lexical access is driven by different portions within the prefrontal cortex. Poster presentation at the 2016 annual meeting of the Cognitive Neuroscience Society (CNS), New York, USA.
18. Caffarra, S., Barber, H., Molinaro, N., & Carreiras, M. (March, 2016). The role of language dominance on early bilinguals' syntactic analysis. Poster presented at Cuny, Gainsville, Florida, USA.
19. Caffarra, S., Martin,C. D., Lizarazu, M., Lallier, M., Zarraga, A., Molinaro, N., & Carreiras, M. (June, 2016). The effects of reading acquisition on verbal and nonverbal skills. Poster presentation at Neurogune 2016 conference, Bilbao, Spain.
20. Caffarra, S., Molinaro, N., Davidson, D., & Carreiras, M. (September, 2016). Influential factors of second language syntactic analysis: An empirical review. Poster presentation at the Conference of Multilingualism (COM), Ghent, Belgium.
21. Doñate, U., Fariña, N., Galparsoro, N., Sierra, C., & Vadillo, O. (June 30-July 2, 2016). Detección y evaluación del TEL. Poster Presentation at XXX Congreso Internacional de la Asociación Española de Logopedia, Foniatría y Audiología e Iberoamericana de Fonoaudiología (AELFA-IF), Bilbao, Spain.
22. Doñate, U., Fariña, N., Galparsoro, N., Sierra, C., & Vadillo, O. (June 30-July 2, 2016). El lenguaje en el cerebro. Poster Presentation at XXX Congreso Internacional de la Asociación Española de Logopedia, Foniatría y Audiología e Iberoamericana de Fonoaudiología (AELFA-IF), Bilbao, Spain.
23. Doñate, U., Fariña, N., Galparsoro, N., Sierra, C., & Vadillo, O. (June 30-July 2, 2016). Introducción y desarrollo típico del lenguaje infantil. Poster Presentation at XXX Congreso Internacional de la Asociación Española de Logopedia, Foniatría y Audiología e Iberoamericana de Fonoaudiología (AELFA-IF), Bilbao, Spain.
24. Doñate, U., Fariña, N., Galparsoro, N., Sierra, C., & Vadillo, O. (June 30-July 2, 2016). La investigación y su aplicación. Poster Presentation at XXX Congreso Internacional de la Asociación Española de Logopedia, Foniatría y Audiología e Iberoamericana de Fonoaudiología (AELFA-IF), Bilbao, Spain.
25. Doñate, U., Fariña, N., Galparsoro, N., Sierra, C., & Vadillo, O. (June 30-July 2, 2016). Trastorno específico del lenguaje: prevalencia y variabilidad. Poster Presentation at XXX Congreso Internacional de la Asociación Española de Logopedia, Foniatría y Audiología e Iberoamericana de Fonoaudiología (AELFA-IF), Bilbao, Spain.
26. Doñate, U., Fariña, N., Galparsoro, N., Sierra, C., & Vadillo, O. (June 30-July 2, 2016). ¿Cómo ayudar? Las ayudas cambian a medida que evoluciona el TEL. Poster Presentation at XXX Congreso Internacional de la Asociación Española de Logopedia, Foniatría y Audiología e Iberoamericana de Fonoaudiología (AELFA-IF), Bilbao, Spain.
27. Doñate, U., Fariña, N., Galparsoro, N., Sierra, C., & Vadillo, O. (March 14-20, 2016). El lenguaje en el cerebro. Poster Presentation at Brain Awareness Week, Donostia-San Sebastián, Spain.
28. Doñate, U., Fariña, N., Galparsoro, N., Sierra, C., & Vadillo, O. (March 14-20, 2016). Hizkuntza garunean. Poster Presentation at Brain Awareness Week, Donostia-San Sebastián, Spain.
29. Doñate, U., Fariña, N., Galparsoro, N., Sierra, C., & Vadillo, O. (March 14-20, 2016). La investigación y su aplicación. Poster Presentation at Brain Awareness Week, Donostia-San Sebastián, Spain.
30. Doñate, U., Fariña, N., Galparsoro, N., Sierra, C., & Vadillo, O. (March 14-20, 2016). Ikerketa eta bere aplikazioak. Poster Presentation at Brain Awareness Week, Donostia-San Sebastián, Spain.
31. Doñate, U., Fariña, N., Galparsoro, N., Sierra, C., & Vadillo, O. (March 14-20, 2016). Detección y evaluación del TEL. Poster Presentation at Brain Awareness Week, Donostia-San Sebastián, Spain.
32. Doñate, U., Fariña, N., Galparsoro, N., Sierra, C., & Vadillo, O. (March 14-20, 2016). AHAE hauteman eta ebaluatzea. Poster Presentation at Brain Awareness Week, Donostia-San Sebastián, Spain.
33. Doñate, U., Fariña, N., Galparsoro, N., Sierra, C., & Vadillo, O. (March 14-20, 2016). Introducción y desarrollo típico del lenguaje infantil. Poster Presentation at Brain Awareness Week, Donostia-San Sebastián, Spain.
34. Doñate, U., Fariña, N., Galparsoro, N., Sierra, C., & Vadillo, O. (March 14-20, 2016). Haurraren hizkuntza garapenerako sarrera. Poster Presentation at Brain Awareness Week, Donostia-San Sebastián, Spain.
35. Doñate, U., Fariña, N., Galparsoro, N., Sierra, C., & Vadillo, O. (March 14-20, 2016). ¿Cómo ayudar? Poster Presentation at Brain Awareness Week, Donostia-San Sebastián, Spain.
36. Doñate, U., Fariña, N., Galparsoro, N., Sierra, C., & Vadillo, O. (March 14-20, 2016). Nola lagundu? Poster Presentation at Brain Awareness Week, Donostia-San Sebastián, Spain.
37. Doñate, U., Fariña, N., Galparsoro, N., Sierra, C., & Vadillo, O. (March 14-20, 2016). Trastorno específico del lenguaje: prevalencia y variabilidad. Poster Presentation at Brain Awareness Week, Donostia-San Sebastián, Spain.
38. Doñate, U., Fariña, N., Galparsoro, N., Sierra, C., & Vadillo, O. (March 14-20, 2016). Adierazpen hizkuntzaren arazo espezifikoa: prebalentzia eta aldakortasuna. Poster Presentation at Brain Awareness Week, Donostia-San Sebastián, Spain.

39. Duñabeitia, J.A., Carreiras, M., Gillon-Dowens, M., & Pérez, A. (April, 2016). Brain oscillations in bilingual speech processing. Poster presentation at the Annual Meeting of the Cognitive Neuroscience Society, New York, USA.
40. Fariña, N., Duñabeitia, J.A., & Carreiras, M. (May 5-8, 2016). The role of phonological and orthographic coding in skilled deaf readers. Poster presentation at International Meeting of the Psychonomics Society, Granada, Spain.
41. Fariña, N., Pérez, A., Duñabeitia, J.A., & Carreiras, M. (August 17-20, 2016). Do skilled deaf readers access phonological codes?. Poster presentation at the 8th Annual Meeting of the Society for the Neurobiology of Language (SNL 2016), London, UK.
42. Fariña, N., Pérez, A., Duñabeitia, J.A., & Carreiras, M. (June 27, 2016). Reading in deaf. Poster presentation at Neurogune 2016 conference, Bilbao, Spain.
43. Fernández García, Y. García-Pentón, L., Carreiras, M., & Duñabeitia, J.A. (September 11-13, 2016). Structural brain changes associated with lifelong bilingualism. Poster presentation at Conference on Multilingualism (COM 2016), Ghent, Belgium.
44. Garcia-Penton, L., Fernandez, Y., Duñabeitia, J.A., & Carreiras, M. (August, 2016). Grey matter changes associated to bilingualism across lifespan: combining voxel-based morphometry (VBM) and cortical thickness (CT). Poster presentation at the 8th Annual Meeting of the Society for the Neurobiology of Language (SNL 2016), London, UK.
45. Gascoyne, L., & Bastarrika, A., Caballero, C., Davidson, D., & Brookes, M. (October, 2016).The role of cortical oscillations in speech processing in adult naive speakers of a second language. Poster presentation at Biomag 2016 Conference, Seul, South Korea.
46. Giezen, M., Villameriel, S., Dias, P., & Carreiras, M. (November 17-20, 2016). Lexical Access and Cross-Language Activation in Deaf Readers: Evidence From the Visual World Paradigm. Poster presentation at the 57th Annual Meeting of the Psychonomic Society (PS 2016), Boston, USA.
47. Guediche, S., Reilly, M., Santiago, C., Laurent, P., & Blumstein, S.E. (31 October - 1 November, 2016). Sentence meaning relationships influence the perception of speech under adverse listening conditions. Poster presentation at 2nd Workshop on Psycholinguistic Approaches to Speech Recognition in Adverse Condition, Nijmegen, the Netherlands.
48. Ivaz, L., Costa, A., & Duñabeitia, J.A. (August, 2016). Won't get fooled again? Lie production and lie perception in native and non-native languages. Poster presentation at the 8th Annual Meeting of the Society for the Neurobiology of Language (SNL 2016), London, UK.
49. Ivaz, L., Costa, A., & Duñabeitia, J. A. (September, 2016). How Much Do I Like Myself in a Foreign Language Context? Poster presentation at the 22nd Architectures and Mechanisms for language processing conference (AMLaP 2016), Bilbao, Spain.
50. Ivaz, L., Costa, A., & Duñabeitia, J. A. (November, 2016). Won't get fooled again? Lie production and lie perception in native and non-native languages. Poster presentation at the 57th Annual Meeting of the Psychonomic Society (PS 2016), Boston, USA.
51. Kapnoula, E.C., Edwards, J., & McMurray, B. (October, 2016). Phoneme categorization gradiency is advantageous for coping with ambiguities: Evidence from individual differences. Poster presentation at the 2nd Workshop on Psycholinguistic Approaches to Speech Recognition in Adverse Conditions, Nijmegen, the Netherlands.
52. Kartushina, N. (June, 2016). The relationship between non-native speech perception and production in L2 learners: Revisited. Poster presentation at Current and future challenges in Psycholinguistics: Workshop in honour of Uli H. Frauenfelder, University of Geneva, Geneva, Switzerland.
53. Kartushina, N., & Martin, C. (September 3, 2016). Variability and plasticity in L2 speech production: An articulatory-feedback training study. Poster presentation at the 22nd Architectures and Mechanisms for language processing conference (AMLaP 2016), Bilbao, Spain.
54. Lerma-Usabiaga, G., Carreiras, M, & Paz-Alonso, P.M. (April, 2016). Maturational differences in thalamic structural asymmetry in control and dyslexic readers. Poster presentation at the 2016 annual meeting of the Cognitive Neuroscience Society (CNS), New York, USA.
55. Lerma-Usabiaga, G., Iglesias, J.E., Insausti, R., Greve, D., & Paz-Alonso. P.M. (June, 2016). Automated Segmentation of the Human Hippocampus Longitudinal Axis. Poster presentation at the 22nd Annual Meeting of the Organization for Human Brain Mapping (OHBM 2016), Geneve, Switzerland.
56. Lindborg, A., Baart, M., & Andersen, T. S. (2016). Speech specific audiovisual integration suppresses induced theta-band oscillations. Poster presentation at the 17th International Multisensory Research Forum (IMRF), June 15 -18, Suzhou, China.
57. Lizarazu, M., Lallier, M., Bourguignon, M., Carreiras, M., & Molinaro, N. (May 5, 2016). Neural mechanisms underlying speech pre-processing. Poster presentation at IWORDD 2016- International Workshop on Reading and Developmental Dyslexia, Bilbao, Spain.
58. Lizarazu, M., Lallier, M., Bourguignon, M., Carreiras, M., & Molinaro, N. (May 5, 2016). Speech on the edge in dyslexia. Poster presentation at IWORDD 2016- International Workshop on Reading and Developmental Dyslexia, Bilbao, Spain.
59. Lizarazu, M., Lallier, M., Bourguignon, M., Carreiras, M., & Molinaro, N. (October, 2016). Low frequency oscillations mediate de-multiplexing and encoding mechanisms during speech pre-processing. Poster presentation at the 20th International Conference on Biomagnetism (Biomag 2016), Seoul, Korea.
60. Luthra, S., Fuhrmeister, P., Guediche, S., Blumstein, S.E., & Myers, E.B. (November 17-20, 2016). Neural correlates of task-irrelevant perceptual learning of non-native speech sounds.Poster presentation at the 57th Annual Meeting of the Psychonomic Society (PS 2016), Boston, USA.
61. Malik-Moraleda, S., Carreiras, M., & Duñabeitia, J.A. (September, 2016). Character processing in literacy acquisition. Poster presentation at the 22nd Architectures and Mechanisms for language processing conference (AMLaP 2016) , Bilbao, Spain.
62. Mancini, S., Massol, S., Duñabeitia, J.A., Carreiras, M., & Molinaro, M. (August 17-20, 2016). What verbs can do: an ERP study on Basque. Poster presentation at the 8th Annual Meeting of the Society for the Neurobiology of Language (SNL 2016), London, UK.
63. Mancini, S., Ristic, B., Carreiras, M., & Molinaro, N. (September 1-3, 2016). Timing the contribution of morphosyntax and context to sentence comprehension: an eyetracking study. Poster presentation at the 22nd Architectures and Mechanisms for language processing conference (AMLaP 2016), Bilbao, Spain.
64. Marín-García, E. (July, 2016). How is my research contributing to society? Cognitive and neural consequences of being bilingual. Poster presentation at Marie Skłodowska-Curie Actions Conference ESOF Satellite Event, Manchester, UK.

65. Marin-Garcia, E., & Paz-Alonso, P.M. (April, 2016). When Language meets Memory: Language use modulates relational semantic processing in bilinguals. Poster presentation at the 2016 annual meeting of the Cognitive Neuroscience Society (CNS), New York, USA.
66. Marin-Garcia, E., & Paz-Alonso, P.M. (July, 2016). Language use modulates relational semantic processing. Poster presentation at the International Conference on Memory (ICOM 2016), Budapest, Hungary.
67. Marin-Garcia, E., Paz-Alonso, (November 17-20, 2016). Semantic Processing in Bilinguals: The Role of Implicit and Explicit Manipulations on False Memories. Poster presentation at the 57th Annual Meeting of the Psychonomic Society (PS 2016), Boston, USA.
68. Martin, C.D., Molnar, M., & Carreiras, M. (June 27, 2016). The proactive bilingual brain: Using interlocutor identity to generate predictions for language processing. Poster presentation at Neurogune 2016 conference, Bilbao, Spain.
69. Martin, C.D., Underwood, A., & Molinaro, N. (September, 2016). Second language vocabulary learning: Adults suffer social inhibition. Poster presentation at the Conference on Multilingualism. Ghent, Belgium.
70. Martin, C.D., Branzi, F., & Bar, M. (August, 2016). Prediction is production: ERP evidence in sentence comprehension. Poster presentation at the Society for the Neurobiology of Language (SNL 2016), London, UK.
71. Martin, C., Underwood, A., & Molinaro, N. (November 17-20, 2016). I'm Doing Better on My Own: Social Inhibition in Vocabulary Learning in Adults. Poster presentation at the 57th Annual Meeting of the Psychonomic Society (PS 2016), Boston, USA.
72. Martinez, A., & Salillas E. (June 27, 2016). Distance Effect in Bilinguals. An ERP study. Poster presentation at Neurogune 2016 conference, Bilbao, Spain.
73. Martinez, A., & Salillas E. (August, 2016). Unbalanced Math in Bilingual Minds. Poster presentation at the 8th Annual Meeting of the Society for the Neurobiology of Language (SNL 2016), London, UK.
74. Molnar, M., Blanco, B., Carreiras, M., & Caballero, C. (May 26-28, 2016). The relationship between inter-hemispheric resting-state connections and vocabulary development in the first year of life. Poster presentation at XX Biennial International Conference on Infant Studies New Orleans, Louisiana, USA.
75. Molnar, M., & Pejovic, J. (May, 2016). Early visual perceptual development in monolingual and bilingual 4-month-old infants. Poster presentation at the XX Biennial International Conference of Infant Studies, New Orleans, USA.
76. Molinaro, N., Giannelli, F., Caffarra, S., & Martin, C.D. (April 3, 2016). The native language tunes prediction processes across multiple languages. Poster presentation at the 23rd Annual Meeting of Cognitive Neuroscience Society (CNS 2016), New York, USA.
77. Monsalve, I.F., & Molinaro, N. (October, 2016) Phonemic properties of expected words modulate pre-stimulus alpha oscillations. Poster presentation at the 20th International Conference on Biomagnetism (Biomag 2016), Seoul, Korea.
78. Nozari, N., Martin, C., McCloskey, N., & Gordon, B. (September 1-3, 2016). An adjustable-resource model of cognitive control in sentence production. Poster presentation at the 22nd Architectures and Mechanisms for language processing conference (AMLaP 2016), Bilbao, Spain.
79. Oliver, M., Carreiras, M., Iturria-Medina, Y., & Paz-Alonso, P.M. (February 28-29, 2016). Age of acquisition of the second language modulates structural and functional dynamics of bilingual reading. Poster presentation at Conference on Educational Neuroscience, Abu Dhabi, UAE.
80. Oliver, M., Carreiras, M., Iturria-Medina, Y., & Paz-Alonso, P.M. (April 2-5, 2016). Structural and functional dynamics of bilingual reading as a function of the age-of-acquisition. Poster presentation at the 2016 annual meeting of the Cognitive Neuroscience Society (CNS), New York, USA.
81. Oliver, M., Carreiras, M., & Paz-Alonso, P.M. (June, 2016). Age-of-acquisition induces structural and functional changes in bilinguals. Poster presentation at at the 22nd Annual Meeting of the Organization for Human Brain Mapping (OHBM 2016), Geneve, Switzerland.
82. Ordin, M., & Mennen, I. (September, 2016). Switching pitch profile in bilingual speech as a socially-determined behavioral pattern. Poster presentation at Workshop on Language Evolution "Linking social effects in language processing to social effects in language evolution", Nijmegen, the Netherlands.
83. Ostiz-Blanco, M. (November, 2016). Videojuegos y música para ayudar a las personas. Poster presentation at the 6º ENCUENTRO DE VIDAS CIENTIFICAS, Museo de la ciencia Eureka! San Sebastian, Gipuzkoa, Spain.
84. Ostiz-Blanco, M., Pina, A., Lizaso, M., & Grau, S. (December 5-7, 2016). ACMUS: Comparative assessment of a musical multimedia tool. Poster presentation at the Game and Learning Alliance International Conference (Gala Conf 2016), Utrecht, Netherlands.
85. Pejovic, J., Molnar, M., & Yee, E. (May, 2016). Audiovisual matching abilities of 4.5-month-old monolingual and bilingual infants . Poster presentation at the XX Biennial International Conference of Infant Studies, New Orleans, USA.
86. Pejovic, J., Yee, E., & Molnar, M. (August, 2016). Audiovisual matching ability in 4.5-month old monolingual and bilingual infants. Poster presentation at the 8th Annual Meeting of the Society for the Neurobiology of Language (SNL 2016), London, UK.
87. Pérez, A., Carreiras, M., & Duñabeitia, J.A. (August, 2016). Do you listen to your brain? Oscillatory activity and speech perception.Poster presentation at the 8th Annual Meeting of the Society for the Neurobiology of Language (SNL 2016), London, UK.
88. Pourquié, M., Royle, P., & St Denis A. (September 1-3, 2016). Verb processing assessment in Specific Language Impairment. Poster presentation at the 22nd Architectures and Mechanisms for language processing conference (AMLaP 2016), Bilbao, Spain.
89. Quiñones, I., Mancini, S., Caballero, C., Hernández-Cabrera, J.A., Barber, H., Molinaro, N., & Carreiras, M. (August 17-20, 2016). Parietal circuit distinguishing between feminine and masculine entities: an fMRI study of gender agreement processing. Poster presentation at the 8th Annual Meeting of the Society for the Neurobiology of Language (SNL 2016), London, UK.
90. Ríos, P., Molnar, M., Lizarazu, M., & Lallier, M. (May 5, 2016). The importance of attentional tracking of slow speech modulations for speech intelligibility and reading development. Poster presentation at IWORDD 2016- International Workshop on Reading and Developmental Dyslexia, Bilbao, Spain.
91. Ristic, B., Mancini, S., & Molinaro, N. (July 25-27, 2016). Attraction from afar: What influences verb number choice in Basque sentence production. Poster presentation at the 9th International Workshop on Language Production, San Diego, USA.

92. Ristic, B., Mancini, S., & Molinaro, N. (September 1-3, 2016). Proactive number attraction: The case of Basque sentence production. Poster presentation at the 22nd Architectures and Mechanisms for language processing conference (AMLaP 2016), Bilbao, Spain.
93. Rosenthal, C.R., Andrews, S.R., Miller, T.D., Kennard, C., & Soto, D. (July 19, 2016). Discrete networks underlie learning to recognise conscious and non-conscious sequences of events. Poster presentation at the International Conference on Memory (ICOM6), Budapest, Hungary.
94. Roux, F. et al. (October 1-6, 2016). Neuronal oscillations track the statistical structure of visual sequences and correlate with learning performance. Poster presentation at 20th international BIOMAG meeting, Seoul, Korea.
95. Samuel, A.G., & Dumay, N. (June 24, 2016). How long do perceptual adjustments from selective adaptation last? Poster presentation at Current and future challenges in Psycholinguistics: Workshop in honour of Uli H. Frauenfelder, University of Geneva, Geneva, Switzerland.
96. Samuel, A., & Dumay, N. (June 24, 2016). Selective adaptation lasts for hours and is resilient to other speech interference. Poster presentation at current and future challenges in Psycholinguistics: workshop in honour of Uli H. Frauenfelder, University of Geneva, Switzerland.
97. Schlöffel, S., Marie, L., Manuel , C., & Martin, C. (May 5, 2016). Do abstract orthographic features affect auditory speech perception? Poster presentation at IWORDD 2016- International Workshop on Reading and Developmental Dyslexia, Bilbao, Spain.
98. Wolpert, M., Caffarra, S., & Mancini, S. (September 1-3, 2016). Addressee Identity and Basque Allocutivity. Poster presentation at the 22nd Architectures and Mechanisms for language processing conference (AMLaP 2016), Bilbao, Spain.
99. Zarraga, A., Lizarazu, M. Lallier, M., & Molinaro, N. (March, 2016). Beta Oscillations and reading abilities. Poster presentation at the 2016 Latin American School for Education (LASchool), Buenos Aires, Argentina.
100. Zarraga, A., Lizarazu, M., Lallier, M., Bourguignon, M., Carreiras, M. and Molinaro, N. (October, 2016) Neural entrainment to speech edges in dyslexia: an MEG study. Poster presentation at the 20th international conference on biomagnetism (BIOMAG 2016), Seul, South Korea.
101. Zheng, Y., & Samuel, A.G. (November 17-20, 2016). Does Seeing an Asian Face Make Speech Sound More Accented? Poster presentation at the 57th Annual Meeting of the Psychonomic Society (PS 2016), Boston, USA.
102. Zugarramurdi, C., Armstrong, B.C., Cabana, A., Valle Lisboa, J., & Plaut, D.C. (May 5-8, 2016). Relative meaning frequencies for homonyms in two Spanish dialects. Poster presentation at International Meeting of the Psychonomics Society, Granada, Spain.
103. Zugarramurdi, C., Lallier, M., Valle-Lisboa, J.C., & Carreiras, M. (August, 2016). Using Brain Rhythms to improve behavioral predictors of reading. Poster presentation at the Society for the Neurobiology of Language (SNL 2016), London, UK.

Oral Presentations

1. Armstrong, B.C., Dumay, N., Kim, W.J., & Pitt, M.A. (November 17-20, 2016). Generalization from Newly Learned Words Reveals Structural Properties of the Human Reading System. Oral presentation at the 57th Annual Meeting of the Psychonomic Society (PS 2016), Boston, USA.
2. Arnaez-Telleria, J., Lerma-Usabiaga,G., Carreiras, M., & Paz-Alonso, P.M. (July, 2016). Functional and structural evidence of hippocampal involvement on the Testing effect. Oral presentation at the International Conference on Memory (ICOM6). Budapest, Hungary.
3. Blumenfeld, H.K., Giezen, M.R., & Wade, S. (2016, May). Unexpected non-target-language cues reveal language-cognition links in Spanish-English bilingual listeners. Oral presentation at a panel on Cognitive control and language processing in bilinguals and monolinguals, International Meeting of the Psychonomic Society (PS 2016). Granada, Spain.
4. Caffarra, S. (2016). Influence of L1-L2 similarity, AoA, proficiency, immersion on L2 syntactic processing: a meta-analysis on available ERP results. Oral presentation at the Workshop on sentence processing in multilingual and other less commonly studies populations, Potsdam, Germany.
5. Caffarra, S., Martin, C., Likarazu, M., Lallier,M., Zarraga, A., Molinaro, N., & Carreiras, M. (May 5, 2016). Consequences of learning to read on word and object recognition: MEG evidence. Oral presentation at IWORDD 2016- International Workshop on Reading and Developmental Dyslexia, Bilbao, Spain.
6. Costello, B. (February, 2016) "Defective" agreeing verbs in LSE: An OT account. Oral presentation at the DGfS Workshop Sign language agreement revisited: new theoretical and experimental perspective, Konstanz, Germany.
7. Dumay, N., & Massol, S. (November 17-20, 2016). No Lexical Engagement Without Memory Consolidation: Behavioural and Electrophysiological Evidence From Masked Priming and Reicher-Wheeler. Oral presentation at the 57th Annual Meeting of the Psychonomic Society (PS 2016), Boston, USA.
8. Duñabeitia, J.A., & Carreiras, M. (May 7, 2016). Learning a new language in the elderly. Oral presentation at the International Meeting of the Psychonomic Society (PS 2016), Granada, Spain.
9. Iglesias, J.E., Paz-Alonso, P.M., Lerma-Usabiaga, G., Insausti, R., Miller, K., & Caballero-Gaudes, C. (April 13-16, 2016). Simultaneous Bayesian correction of slab boundary artifacts and bias field for high resolution ex vivo MRI. Oral presentation at International Symposium on Biomedical Imaging (ISBI) 2016, Prague, Czech Republic.
10. Hoareau, M., Pejovic, J., & Yeung, H. (May 2016). Infants´ oral gestures influence their auditory speech perception. Oral presentation at the XX Biennial International Conference of Infant Studies, New Orleans, USA.
11. Kartushina, N., Hervais-Adelman, A., Frauenfelder, U., & Golestani, N. (June, 2016). How and why learning to produce non-native sounds affects native production. Oral presentation at the 8th International Symposium on Second Language Speech (New Sounds, 2016), Aarhus, Denmark.
12. Lerma-Usabiaga, G., Iglesias, J.E., Insausti, R., Greve, D., & Paz-Alonso. P.M. (July 17-22, 2016). Automated segmentation of the human hippocampus along its longitudinal axis. Oral presentation at International Conference On Memory (ICOM 2016), Budapest, Hungary.
13. Lizarazu, M., Lallier, M., Bourguignon, M., Carreiras, M., & Molinaro, N. (October, 2016). Integration and prediction in language. Oral presentation at the 20th international conference on biomagnetism (BIOMAG 2016), Seul, South Korea.

14. Martin, C.D., Branzi, F., & Bar, M. (September 1-3, 2016). Prediction is production: ERP evidence in sentence comprehension. Oral presentation at the 22nd Architectures and Mechanisms for language processing conference (AMLaP 2016), Bilbao, Spain.
15. Martin, C.D., Molnar, M., & Carreiras, M. (June, 2016). The proactive bilingual brain: Using interlocutor identity to generate predictions for language processing. Oral presentation at Neurogune 2016 conference, Bilbao, Spain.
16. Massol, S., Carreiras, M., Grainger, J., & Duñabeitia, J.A. (May, 2016). The locus of letter-specific position coding mechanisms. Oral presentation at International meeting of the International Meeting of the Psychonomic Society (PS 2016). Granada, Spain.
17. Molinaro, N. (October, 2016). Entraining to auditory stimuli in developmental dyslexia. Oral presentation at the 20th international conference on biomagnetism (BIOMAG 2016), Seul, South Korea.
18. Molinaro, N., Lizarazu, M., Lallier, M., Bourguignon, M., & Carreiras, M. (May 6, 2016). Auditory rhythms in developmental dyslexia. Oral presentation at IWORDD 2016- International Workshop on Reading and Developmental Dyslexia, Bilbao, Spain.
19. Oliver, M., Carreiras, M.,& Paz-Alonso, P.M. (September 7-9, 2016). Age of acquisition of the second language modulates structural and functional dynamics of bilingual reading. Oral presentation at VIIIth International Conference of Language Acquisition, Palma de Mallorca, Spain.
20. Oliver, M., Paz-Alonso, P.M., Lerma, G., Caballero, C., Quiñones, I., Suarez-Coalla, M.P., Duñabeitia, J.A., Cuetos, F., & Carreiras, M. (May 6, 2016). Functional dynamics of orthographic consistency in dyslexic and control readers. Oral presentation at IWORDD 2016- International Workshop on Reading and Developmental Dyslexia, Bilbao, Spain.
21. Paz-Alonso, P.M., Arnaez-Telleria, J., Lerma-Usabiaga, G., & Carreiras, M. (July, 2016). Neurodevelopmental correlates of the testing effect. Oral presentation at the International Conference on Memory (ICOM6). Budapest, Hungary.
22. Paz-Alonso, P.M., & Carreiras, M. (January, 2016). Neural dynamics of print and speech in four contrasting languages. Oral presentation at the Literacy Dialog NBRC international Meeting. Manesar, India.
23. Perea, M., Mallouh, R.A., Mohammed, A., Khalifa, B., & Carreiras, M. (November 17-20, 2016). The Role of Diacritical Marks in the Early Stages of Written- Word Recognition in Arabic. Oral presentation at the 57th Annual Meeting of the Psychonomic Society (PS 2016), Boston, USA.
24. Pourquié, M. (October 27-28, 2016). Disentangling atypical from typical forms of agrammatism. Oral presentation at Language Contact from an I-language Perspective, Donostia, Spain.
25. Pourquié, M. (November 15, 2016). Verb inflection and argument structure in Specific language Impairment. Oral presentation at International conference on Speech Language Pathology and Audiology, University of Montreal, Montreal, Canada.
26. Pourquié, M. (November 17, 2016). Verb lexical and inflectional processing assessment in Specific Language Impairment. Oral presentation at VOCUM conference 3rd edition, Language under scrutiny: technology and corpus. University of Montreal, Montreal, Canada.
27. Salillas E. (May 7, 2016). ERPs reveal a preferred code for complex calculation in proficient bilinguals. Symposium at the International Meeting of the Psychonomic Society (PS 2016), Granada, Spain.
28. Samuel, A.G. (November 17-20, 2016). Long-Term Priming Effects of Embedded Words. Oral presentation at the 57th Annual Meeting of the Psychonomic Society (PS 2016), Boston, USA.
29. Shing, Y.L., Brod, G., Meyer, A-K., Paz-Alonso, P.M., & Fandakova, Y. (July, 2016). Neural mechanisms of episodic memory development: Effects of school entry. Oral presentation at the International Conference on Memory (ICOM6). Budapest, Hungary.

Invited Talks

1. Aleman-Bañon, J. (April 5 , 2016). Using event-related potentials to examine morphosyntactic processing in adult second language learners. Invited talk at the Centre for Research on Bilingualism, Stockholm University, Stockholm, Sweden.
2. Armstrong, B. C. (2016, January). Computational and Empirical Investigations of Semantics, Reading, & Language. Invited talk at the Psychology Department and the Center for French & Linguistics, University of Toronto Scarborough, Ontario, USA.
3. Arnaez, J. (May 23, 2016). Ikasteko teknikak: Ikasi ahazteko edo ikasi gogoratzeko? Invited talk at Pint of Science 2016, DonoStia, Spain.
4. Baart, M. (September 30, 2016). Perceiving non-speech as speech based on a moving mouth. Findings from infants, children, and adults. Invited talk at the Beyond Language Learning Workshop, Barcelona, Spain.
5. Bastarrika, A. (May 23, 2016). Zer ikusi dute Jennifer Anistonek eta zure amamak? Kontzeptu zelulak. Invited talk at Pint of Science 2016, Donostia, Spain.
6. Bergouignan, L. (June 9, 2016). When mind and body interacts: childhood memories, an example of body constrained memory access. Invited talk at Memory and Subjectivity; A philosophy-psychology workshop, Grenoble, France.
7. Caballero-Gaudes, C. (September 21-23, 2016). The power of BOLD deconvolution for mapping the brain's functional dynamics in individual subjects. Invited talk in symposium Dynamic Functional Connectivity - Resting state conference, Vienna, Austria.
8. Caffarra, S. (May 25, 2016). Diferencias que cuentan: no todos los bilingües se crean iguales. Invited talk at Pint of Science 2016, Donostia, Spain.
9. Caffarra, S. (February 18-21, 2016). Influence of gender-to-ending consistency on monolingual and bilingual agreement processing. Invited talk at 17th International Morphology Meeting, Vienna, Austria.
10. Carreiras, M. (January 22, 2016). Cognitive assessment in bilingual patients. Invited talk at Low Grade Glioma. Approach & Technology to become chronic disease, QuirónSalud/ Hospital Ramón y Cajal/ Hospital Universitario de Cruces, Madrid, Spain.
11. Carreiras, M. (January 26, 2016). Understanding Language in the Brain: from the lab to the actual world. Invited talk at seminario of CIC Biomagune, San Sebastián, Spain.
12. Carreiras, M. (February 1-2, 2016). Brain changes associated with learning to read in children. Invited talk at The Role of native language literacy in multi-literate societies, National Brain Research Centre of India, Manesar, India.

13. Carreiras, M. (February 12, 2016). Atypical auditory sampling and impaired connectivity in dyslexia. Invited talk at seminario of Instituto de Neurociencias (INCYL), Salamanca, Spain.
14. Carreiras, M. (February 26, 2016). Lenguaje: bases biológicas y mecanismos cognitivos. Invited talk at seminario of Universidad de Santiago de Compostela, Santiago de Compostela, Spain.
15. Carreiras, M. (April, 2016). The bilingual brain: Plasticity and processing from cradle to grave. Invited talk at 4th Panhellenic Conference on Cognitive Psychology, University of Athens, Athens, Greece.
16. Carreiras, M. (May 27, 2016). Bases biológicas y mecanismos cognitivos. Invited talk at I Jornadas sobre avances en investigación Biomédica Traslacional, Tenerife, Spain.
17. Carreiras, M. (June 15-17, 2016). Neuroscience and Education: Second Language Learning and Early Biomarkers for Dyslexia. Invited talk at VIII International Congress of Psychology and Education (CIPE 2016), Universidad de Alicante, Alicante, Spain.
18. Carreiras, M. (June 30, 2016). Avances en la investigación: cerebro y lectura. Invited talk at XXX Congreso Internacional AELFA - IF/CLPV, Colegio de Logopedas del Pais Vasco, Bilbao, Spain.
19. Carreiras, M. (August 17-20, 2016). The consequences of bilingualism for cognitive and neural function. Invited talk at 8th Annual Meeting of the Society for the Neurobiology of Language (SNL 2016), London, UK.
20. Carreiras, M. (September 25-28, 2016). Brain activation during bilingual reading in shallow and deep L2 orthographies. Invited talk at Hebrew University of Jerusalem, Jerusalem, Israel.
21. Carreiras, M. (October 6-7, 2016). Understanding Language in the Brain. Invited talk at III Jornadas "Y tú, ¿qué investigas?, Instituto de Biología Molecular y Celular (IBMC), Elche, Spain.
22. Carreiras, M. (October 8, 2016). Neurociencia y Educación:de los neuromitos a la evidencia. Invited talk at Universidad de la rioja, Logroño, Spain.
23. Carreiras, M. (December 12, 2016). Wine, Mind and Brain. Invited talk at Jornadas de Culinary Interación ¿Qué pasa cuando la cocina se asoma a otras realidades?, Basque Culinary Center, Donostia-San Sebastián, Spain.
24. Costello, B. (November 25, 2016). Las bases neurológicas del procesamiento de la lengua de signos española. INvited talk given at II Jornada Científica de Reflexión “Estudios sobre la situación del alumnado con sordera en España” (organized by Confederación Española de Familias de Personas Sordas – FIAPAS), Ministerio de Educación, Cultura y Deporte, Madrid, Spain.
25. Dumay, N. (June 6, 2016). On the key role of memory consolidation in the formation of lexical representations. Invited talk at a seminar at the University of Geneva, Switzerland.
26. Duñabeitia, J.A. (January 22, 2016). Neurociencia y educación: ¿Sabemos cómo aprende nuestro cerebro? Invited talk at the Congreso Innovación iDuka, Murcia, Spain.
27. Duñabeitia, J.A. (February 10, 2016). Educando cerebros: Neurociencia y Educación. Invited talk at the Programa Educando Para el Futuro 2016 IberCaja, Zaragoza, Spain.
28. Duñabeitia, J.A. (May 27, 2016). Emotions and foreign languages: oil and water. Invited talk at the School of Psychology Seminar series, University of Bangor, Bangor, UK.
29. Duñabeitia, J.A. (June 28-29, 2016). Neurociencia y educación. Invited workshop at San Viator School, Vitoria-Gasteiz, Spain.
30. Duñabeitia, J.A. (September 11, 2016). Breaking bilingual education rules. Invited talk at the Conference on Multilingualism (COM) 2016, Ghent, Belgium.
31. Duñabeitia, J.A. (September 24, 2016). La neurociencia cognitiva y el aprendizaje. Invited talk at the Congreso Cambio Educativo, Desarrollo del Talento, Gijón, Spain.
32. Giezen, M.R. (2016, June). Language development in deaf children following cochlear implantation. Invited talk at Facultat de Traducció i Interpretació, Universitat Pompeu Fabra, Barcelona.
33. Giezen, M.R. (2016, June). Language processing in bilinguals of signed and spoken languages. Invited talk at Laboratori de llengua de signes catalana, Universitat Pompeu Fabra, Barcelona.
34. Iglesias, J.E. (February 13, 2016). Building brain atlases with ex vivo MRI and histology for automated analysis of in vivo MRI: Application to substructures of the hippocampus, amygdala and thalamus. Invited talk at Institute of Biomedicine of Seville (IBiS), Seville, Spain.
35. Ivaz, L. (October 7, 2016). Emotions and lie perception and production in native and non-native languages. Invited talk at the Amsterdam Center for Language and Communication (ACLC), Faculty of Humanities, University of Amsterdam, Amsterdam, the Netherlands.
36. Lallier, M. (September, 2016). Lineas de investigación de desarrollo bilingüe en niños con desarrollo atípico. Curso de Verano de las Universidades Navarras 2016: Proceso inclusivo de niñas y niños con desarrollo atípico en un sistema educativo y social plurilingue. Lesaka, Navarra.
37. Lallier, M., (October 28, 2016) Reading acquisition in Bilinguals. Invited talk at Mente-Cerebro research group, Navarra University, Pamplona, Spain.
38. Mancini, S. (May 25, 2016). El cerebro y las reglas universales del lenguaje. Invited talk at Pint of Science 2016, Donostia, Spain.
39. Martin, C.D. (October, 2016). Reading in the brain. invited talk at Universidad de Navarra, San Sebastian, Spain.
40. Molnar, M. (September 30, 2016). The building blocks of language in early childhood. Invited talk at Rehabilitation Sciences Institute, Faculty of Medicine, University of Toronto,Toronto, Canada.
41. Ostiz, M., & Grau, S. (June 30, 2016). Una aproximación desde la música al tratamiento de la dislexia. Invited talk at Universidad Pública de Navarra, Pamplona, Spain.
42. Paz-Alonso, P.M. (July, 2016). Functional and structural correlates of atypical reading. Invited talk at the Center for Cognitive Sciences, University of Kaiserslautern. Kaiserslautern, Germany.
43. Paz-Alonso, P.M. (October, 2016). Multimodal MRI converging evidence underlying the role of thalamus in developmental dyslexia. Invited talk at the Department of Anatomy & Graduate Program in Neuroscience, School of Medicine, Autónoma de Madrid University, Madrid, Spain.
44. Ríos, P. (May 24, 2016). ¿Por qué somos inconsecuentes durante la adolescencia? Una perspectiva cerebral. Invited talk at Pint of Science 2016, Donostia, Spain.
45. Salillas, E. (January 22, 2016). Functional pre & post surgical evaluation of the LGG. Role of MEG in plasticity evaluations. Invited talk at Low Grade Glioma course, at Hospital Universitario Quirón, Madrid, Spain.

46. Salillas E. (May 7, 2016). ERPs reveal a preferred code for complex calculation in proficient bilinguals. Invited talk at the Symposium SY21 of the International Meeting of the Psychonomic Society, Granada , Spain.
47. Salillas E. (March 4, 2016). How the language for early learning shapes the bilingual numerical system. Invited talk at University of North Florida, USA.
48. Salillas, E. (May 19-20, 2016). Linguistic Traces in Core Numerical Knowledge. Keynote speaker at Math Cognition and Learning Conference 2016, Fort Worth, Texas, USA.
49. Samuel, A. (April 1, 2016). Picking Apart Perceptual Recalibration: An Exercise in Applying Experimental Methods. Invited talk at Sociolinguistic Variation and Language Processing (SVALP) conference, at Virginia Tech University, Blacksburg, USA.Virginia Tech University.
50. Samuel, A.G., & Dumay, N. (January 4, 2016). The When and Where of Selective Adaptation for Speech. Invited talk at the Auditory Cognitive Neuroscience Society, Tucson Arizona, USA.
51. Villameriel, S. (April 11, 2016). Bilingües sordos y oyentes en lengua de signos y lengua oral. Invited talk at Centro de FPE López Vicuña, Palencia, Spain.
52. Villameriel, S. (May 24, 2016). Mitos y realidades del uso de gestos y signos con bebés. Invited talk at Pint of Science 2016, Donostia, Spain.
53. Villameriel, S. (September 2, 2016). Cerebro y lengua de signos, adquisición y bilingües bimodales. Invited talk at Berritzegune Nagusia, Bilbao.
54. Villameriel, S. (October 29, 2016). Centro de investigación en neurociencia cognitiva y lenguage: sinergias entre investigación, universidad y empresa. Invited talk at III jornada autonómica de ILSE: servicios comunitarios, centros docentes, grado universitario. Centro Margarita Nelken, Coslada, Spain.
55. Villameriel, S. (November 8, 2016). La lengua de signos en el cerebro. Invited talk at Aretoa Gorbeia, Vitoria-Gasteizko Berritzeguneetan, Spain.
56. Wilson, L.B. (June 3, 2016). A behavioural and functional imaging investigation of phonological processing in autism. Invited talk at University of Seville, Seville, Spain.

2017

Poster Presentations

1. Antón, E., Thierry, G., Dimitropoulou, M., & Duñabeitia, J.A. (March, 2017). Learning by mixing languages: electrophysiological and behavioral consequences. Poster presentation at the ICPS 2017 conference in Vienna, Austria.
2. Arnaez-Telleria, J., Carreiras, M., & Paz-Alonso, P.M. (November, 2017). Testing leads to consolidated-like memories. Poster presentation at the Society for Neuroscience Meeting 2017, Washington DC, USA.
3. Arnaez-Telleria, J., Oliver, M., Carreiras, M., & Paz-Alonso, P.M. (November, 2017). Spontaeous fluctuations of dorsal and ventral reading networks in bilinguals. Poster presentation at the Ninth Annual meeting of the Society for the Neurobiology of Language, Baltimore, MD, USA.
4. Borragan, M., Martin, C.D., & Duñabeitia, J.A. (April, 2017). Exploring language inhibition during multitasking. Poster presentation at the International Symposium of Psicholingistics (ISP), Braga, Portugal.
5. Bortfeld, H., Shaw, K. E., & Baart, M. (May, 2017). Infant sensitivity to audiovisual timing driven by articulator-speech sound relationship. Poster presentation at the 18th International Multisensory Research Forum (IMRF), Nashville, USA.
6. Caballero-Gaudes, C., Ezama, O., Delgado-Alvarado, M., & Rodriguez-Oroz, M.C. (24-28 June, 2017). Investigating the feasibility of classifying independent components in resting state BOLD fMRI with sparse paradigm free mapping. Poster presentation at the Annual Meeting of the Organization of Human Brain Mapping, Vancouver, Canada.
7. Caffarra, S., & Martin, C.D. (June, 2017). When we can tolerate a morphosyntactic error: an ERP study on non-native accented speech. Poster presentation at the International Morphological Processing Conference (MoProc 2017), Trieste, Italy.
8. Caffarra, S., Mendoza, M., & Davidson, D. (August 5-8, 2017). Is the LAN effect an ERP artifact? Poster presentation at the 13th International Conference for Cognitive Neuroscience, Amsterdam, Netherlands.
9. Costello, B., Paz-Alonso, P.M., & Carreiras, M. (September, 2017). Neural correlates underlying sign language processing in hearing bilinguals. Poster presentation at the 20th ESCoP conference (ESCOP 2017), Potsdam, Germany.
10. Costello, B., Paz-Alonso, P.M., & Carreiras, M. (November, 2017). Neural signatures of sign language processing in bimodal bilinguals. Poster presentation at the Ninth Annual meeting of the Society for the Neurobiology of Language, Baltimore, MD, USA.
11. Costello, B., Paz-Alonso, P.M., & Carreiras, M. (November, 2017). The neural basis of sign language processing: Evidence from hearing bimodal bilinguals. Poster presentation at the Society for Neuroscience Meeting 2017, Washington DC, USA.
12. de Bruin, A., Samuel, A.G., & Duñabeitia, J.A. (November, 2017). Bilingual language switching across the lifespan. Poster presentation at the 58th Annual Meeting of the Psychonomic Society, Vancouver, Canada.
13. Dias, P., Villameriel, S., Caffara, S., Costello, B. & Carreiras, M. (September, 2017). The neurophysiological signature for reading in deaf adults. Poster presentation at the 20th ESCoP conference (ESCoP 2017), Potsdam, Germany.
14. Frances, C., & Duñabeitia, J. A. (September, 2017). Ew! Disgust perception in native and foreign languages. Poster presentation at the 20th ESCoP Conference (ESCoP 2017), Potsdam, Germany.
15. Guediche, S., Samuel, A.G., & Baart, M. (November, 2017). Effects of Semantic Context and Crosslinguistic interactions, on Non-native Word Recognition in Noise. Poster presentation at the 58th Annual Meeting of the Psychonomic Society, Vancouver, Canada.
16. Giezen, M.R., & Carreiras, M. (June, 2017). Phonological priming across languages in deaf and hearing bilinguals of Spanish Sign Language and Spanish. Poster presentation at the 11th International Symposium on Bilingualism (ISB), Limerick, Ireland.
17. Ivaz, L., & Duñabeitia, J. A. (September, 2017). How late do foreign languages catch our (visual) attention? Poster presentation at the 20th ESCoP conference (ESCOP 2017), Potsdam, Germany.
18. Kapnoula, E.C., & Samuel. A.G. (September 3-6, 2017). Information about the talker's voice can affect word meaning. Poster presentation at the 20th ESCoP conference (ESCOP 2017), Potsdam, Germany.

19. Kapnoula, E.C., & Samuel. A.G. (November, 2017). Information about talker's voice can affect word meaning. Poster presentation at the 20th Meeting of the European Society for Cognitive Psychology (ESCoP 2017), Potsdam, Germany.
20. Kapnoula, E.C., & Samuel. A.G. (November, 2017). Talker's voice can affect word meaning: Evidence from eye movements. Poster presentation at the 58th Annual Meeting of the Psychonomic Society, Vancouver, Canada.
21. Kartushina, N., Baart, M., & Martin, C.D. (September 2017). The role of stimulus variability in non-native sound production learning: evidence from behavioral and neuronal measures. Poster presentation at the 20th Meeting of the European Society for Cognitive Psychology (ESCoP 2017), Potsdam, Germany.
22. Lerma-Usabiaga, G., Carreiras, M. & Paz-Alonso, P.M. (March, 2017). Multimodal characterization of ventro-occipito-temporal reading regions. Poster presentation at the 2017 meeting of the Cognitive Neuroscience Society (CNS 2017), San Francisco, California, USA.
23. Lerma-Usabiaga, G, Carreiras, M., & Paz-Alonso, P.M. (June, 2017). Functional characterization of ventro-occipito-temporal reading regions. Poster presentation at Organization for Human Brain Mapping (OHBM 2017), Vancouver, Canada.
24. Lerma-Usabiaga, G., Carreiras, M., & Paz-Alonso, P.M. (November 8–10, 2017). Multimodal MRI converging evidence on the role of ventro-occipito-temporal cortex in reading: Integrating opposing views. Poster presentation at the 9th meeting of the Society for the Neurobiology of Language (SNL 2017), Baltimore, USA.
25. Martin, C.D., Pérez, A., & Caffarra, S. (November 2017). Electrophysiological activity in native, dialectal and foreign accented speech processing. Poster presentation at the Ninth Annual meeting of the Society for the Neurobiology of Language, Baltimore, MD, USA.
26. Marín-García, E., & Paz-Alonso, P.M. (August. 2017). Language use in true and false DRM memories: An fMRI study comparing monolinguals and bilinguals. Poster presentation at ICON 2017, Amsterdam, The Netherlands.
27. Medeiros, J., & Armstrong, B. (July, 2017). Semantic ambiguity effects: A matter of time? Poster presentation at 39th Annual Meeting of the Cognitive Science Society, London, UK.
28. Medeiros, J., & Armstrong, B.C* (2017, November). Are semantic ambiguity effects modulated by response latency? Insights from lexical decision. Poster presentation at the 58th Annual meeting of the Psychonomic Society, Vancouver, Canada.
29. Molinaro, N., Lizarazu, M., Bourguignon, M, & Zarraga, A. (August, 2017). Do we need meaning to brain-synchronize to speech? Poster presentation at the 13th International Conference for Cognitive Neuroscience (ICON 2017), Amsterdam, the Netherlands.
30. Monsalve, I.F., & Molinaro, N. (2017). Visual wordform preactivation: differential response to long vs short words starts before stimulus onset. Poster presentation at the 13th International Conference for Cognitive Neuroscience (ICON 2017), Amsterdam, the Netherlands.
31. Oliver, M., Carreiras, M., & Paz-Alonso, P.M. (March, 2017). Neural correlates of word frequency effects in bilinguals. Poster presentation at the CNS 2017, San Francisco, CA, US.
32. Ordin, M. (July 2017). Speech rhythm in ontogenesis as an analogue window on speech rhythm in phylogenesis and speech evolution. Poster presentation at the 7th International Conference on Speech Motor Control, section on Evolution of Speech, Groningen, the Netherlands.
33. Ormel, E., Giezen, M.R., Van Diggelen, E.M., Klomp, U., Buts, K., & Van Zuilen, M. (June, 2017). Cognitive control in deaf and hearing bimodal bilingual children. Poster presentation at the 11th International Symposium on Bilingualism (ISB), Limerick, Ireland.
34. Paz-Alonso, P.M., & Arnaez-Telleria, J. (June, 2017). Neurodevelopmental correlates of the retrieval-practice effect. Poster presentation at the annual meeting of the Organization for the Human Brain Mapping (OHBM 2017), Vancouver, Canada.
35. Polyanskaya, L. (April, 2017). Retained memory traces of a lost language can influence the perception of foreign accent. Poster presentation at International Symposium on Psycholinguistics, Braga, Portugal.
36. Polyanskaya, L., Ordin, M. (April, 2017). Non-native speech rhythm can contribute to accentedness of L2 speech only when the target and native languages of the learner are rhythmically contrastive. Poster presentation at International Symposium on Psycholinguistics, Braga, Portugal.
37. Quiñones I., Molinaro N., Barber H., & Carreiras M. (March, 2017). Tracing the interplay between syntactic and lexical features: fMRI evidence from agreement comprehension. Poster presentation at the 2017 meeting of the Cognitive Neuroscience Society (CNS 2017), San Francisco, California, USA.
38. Ristic, B., Mancini, S., & Molinaro, N. (April, 2017). How to influence the verb number without disrupting it. Poster presentation at CUNY, Boston, USA.
39. Soto, D., Theodoraki, M., & Paz-Alonso, P.M. (September 6-8, 2017). How the human brain introspects about one's own cognition and behavior. Poster presentation at the Conference on Cognitive Computational Neuroscience (CCN), Columbia University in New York, USA.
40. Vergara-Martinez, M., Carreiras, M., Gutierrez-Sigut, E., Gil, C., & Perea, M. (March 2017). When Script met Sally: An ERP study on the impact of lexical processing during the early encoding of handwritten words. Poster presentation at the 2017 meeting of the Cognitive Neuroscience Society (CNS 2017), San Francisco, California, USA.
41. Villameriel, S., Dias P., Giezen, M., Costello, B. & Carrerias, M. (September, 2017). Language modality shapes the dynamics of lexical access: Word and sign recognition in bimodal bilinguals. Poster presentation at the 20th ESCoP Conference (ESCoP 2017), Potsdam, Germany.
42. Zarraga, A., Bourguignon, M., Lizarazu. M, Molinaro, N. (August, 2017). Audiovisual speech integration in predictive vs. non-predictive visual conditions. Poster presentation at the 2017 conference of International conference for Cognitive Neuroscience (ICON), Amsterdam, The Netherlands.

Oral Presentations

1. Bañón, J.A., & Martin, C.D. (November 2017). Second Language Learners Generate Predictions at the Level of the Discourse: Evidence from Event-related Potentials. Oral presentation at the Boston University Conference on Language Development, Boston, USA.

2. Carreiras, M., Costello, B., Dias, P., Duñabeitia, J.A., Fariña, N., & Villameriel, S. (February, 2017). Leyendo el cerebro: la lectura de las personas sordas. Oral presentation at 1er Congreso Internacional sobre Escritura y Sordera (CIES), Jerez de la Frontera, Spain.
3. de Bruin, A., Samuel, A. G., & Duñabeitia, J. A. (September, 2017). Voluntary language switching: When and why do bilinguals switch between languages? Oral presentation at the 20th ESCoP Conference (ESCoP 2017), Potsdam, Germany.
4. Dias, P., Costello, B., Carreiras, M. (June, 2017). Reading a language never heard: EEG evidence for reading comprehension in deaf people. Oral presentation at World Congress on Brain Behavior and Emotion (BRAIN), Porto Alegre, Brazil.
5. Dias, P., & Fariña, N. (May 16, 2017). ¿Cómo leer una lengua que nunca has escuchado? Oral presentation at Pint of Science Alboka bar, San Sebastian, Spain.
6. Garcia-Penton, L., Duñabeitia, J.A., & Carreiras, M. (April, 2017). Is there a bilingual advantage in executive function? Oral presentation at XIII International Symposium of Psycholinguistics, Braga, Portugal.
7. Guediche, S. (May 17, 2017). “Nose” or “noise”? Sniffing out words in a crowd. Oral presentation at Pint of Science Alboka bar, San Sebastian, Spain.
8. Heinzova, P. (May 16, 2017). How to detect bullshit in cognitive neuroscience. Oral presentation at Pint of Science Alboka bar, San Sebastian, Spain.
9. Ivaz, L., Costa, A., & Duñabeitia, J. A. (April, 2017). This is foreign to me: self-perception and non-native languages. Oral presentation at the sub-symposium Language and Emotion at the XIII International Symposium of Psycholinguistics, Braga, Portugal.
10. Kartushina, N. (May 17, 2017). Acento extranjero: mitos y realidad. Oral presentation at Pint of Science Alboka bar, San Sebastian, Spain.
11. Kartushina, N. & Martin, C. (June, 2017). Processing variability in L2 learning: insights from articulatory training. Oral presentation at the Bilingualism vs. monolingualism: A new perspective to limitations on L2 acquisition workshop, Toulouse, France.
12. Lallier, M., Molinaro, N., Lizarazu, M., Bourguignon, M., & Carreiras, M. (May, 2017). Atypical oscillatory Activity in Developmental Dyslexia. Oral presentation in Integrated Symposium: New insights on typical and atypical reading development from brain and intervention studies, at 5th International Congress of Educational Sciences and Development, Santander, Spain.
13. Lerma-Usabiaga, G., Carreiras, M., & Paz-Alonso, P.M. (November 8–10, 2017). Multimodal MRI converging evidence on the role of ventro-occipito-temporal cortex in reading: Integrating opposing views. Oral presentation at the 9th meeting of the Society for the Neurobiology of Language (SNL 2017), Baltimore, USA.
14. Lerma-Usabiaga, G., Carreiras, M., & Paz-Alonso, P.M. (November 11-15, 2017). Anterior-posterior gradient within ventro-occipito-temporal reading regions: Functional and structural MRI converging evidence. Oral presentation at 47th annual meeting of the Society for Neuroscience (SfN 2017), Washington DC, USA.
15. Martin, C.D., Caffarra, S., Schloeffel, S., Antzaka, A., Lallier, M., & Carreiras, M. (September 2017). Cognate effect in noise: Selective activation of the unattended language in bilingual word recognition. Oral presentation at the 20th ESCoP Conference (ESCoP 2017), Potsdam, Germany.
16. Martin, C.D., Pérez, A., & Caffarra, S. (September 2017). Dialectal and foreign accented speech processing: Electrophysiological evidence for the Perceptual Distance Hypothesis. Symposium at the 20th ESCoP Conference (ESCoP 2017), Potsdam, Germany.
17. Ordin, M., Polyanskaya, L., & Gomez, D. (April, 2017). The role of native language and of the general auditory properties in detecting rhythmic changes. Oral presentation at International Symposium on Psycholinguistics, Braga, Portugal.
18. Pourquié, M., & Munarriz, A. (February 8, 2017). Basque adaptation of the Comprehensive Aphasia Test. Oral presentation at the Final COST conference: Collaboration of Aphasia Trialists, Erasmus University Medical Center, Rotterdam, Netherlands.
19. Ríos-López, P., Molinaro, N., & Lallier, M. (July 12-15, 2017). Exploring reading readiness in pre-schoolers: Rhythmic abilities predict brain sensitivity to orthographic stimuli in the N100 window before formal reading instruction. Oral presentation at SSSR meeting 2017 in Halifax, Canada.
20. Soto, D. (January 6, 2017). How the human brain replays prior attentional episodes. Oral presentation at the Experimental Psychology Society Meeting, London, UK.
21. Soto, D. (May 15, 2017). El cerebro inconsciente. Oral presentation at Pint of Science Alboka bar, San Sebastian, Spain.
22. Zugarramurdi, C. (May 15, 2017). Leyendo al ritmo del cerebro. Oral presentation at Pint of Science Alboka bar, San Sebastian, Spain.

Invited Talks

1. Bergouignan, L. (March 14-16, 2017). Does the body takes part in amnesia symptoms? Invited talk at the Jean Louis Ségnoret Congress 2017 on Amnesia Symptoms, Caen, France.
2. Caballero-Gaudes, C. (June 25, 2017). Overview of noise in fMRI. Invited talk at Educational course Advanced Methods for Cleaning up fMRI Time-Series, Organization for Human Brain Mapping (OHBM 2017), Vancouver, Canada.
3. Caffarra, S. (June, 2017). The weighting of formal cues during agreement processing: does language experience matter? Invited talk at the Workshop on Syntax Processing, Rovereto, Italy.
4. Carreiras, M. (January 27-28, 2017). Neurociencia y educación: aprendizaje, marcadores tempranos y neuromitos. Invited talk at "Simposio de Educación Cognición y Neurociencia", Huelva, Spain.
5. Carreiras, M. (March 16-19, 2017). Neurociencia, Lenguaje y Educación. Invited talk at "I Congreso Nacional en Atención Temprana: Retos educativos, sociales, tecnológicos y de la salud en Atención Temprana", Montevideo, Uruguay.
6. Carreiras, M. (April 2-5, 2017). The bilingual brain: plasticity and processing form cradle to grave. Invited talk at LaP2017 3rd Learning and Plasticity Meeting, Äkäslompolo, Finland.
7. Carreiras, M. (May 5, 2017). Lenguaje: mecanismos cognitivos y neurales. Invited talk at Universidad Santiago de Compostela, Santiago de Compostela, Spain.

8. Carreiras, M. (June 2017). Language and cognition evaluation in awake brain surgery. Invited talk at Osakidetza / European Low grade Glioma Network, Bilbao, Spain.
9. Carreiras, M. (July 2017). The bilingual brain: Plasticity and processing from cradle to grave. Invited talk at 7th IMPRS NeuroCom Summer School, London, UK.
10. de Bruin, A. (May 30, 2017). Language switching and executive control in younger and older adults. Invited talk at the University of Groningen, the Netherlands.
11. Dias, P. (June 6, 2017). Reading a language never heard: EEG evidence for reading comprehension in deaf people. Invited talk at the Brain Institute (Inscer), Porto Alegre, Brazil.
12. Dias, P. (June 7, 2017). Reading a language never heard: EEG evidence for reading comprehension in deaf people. Invited talk at the Pontifical Catholic University of Rio Grande do Sul, School of Psychology and Medicine. Porto Alegre, Brazil.
13. Dias, P. (June 9, 2017). Parallel language activation and language control in Bimodal Bilinguals. Invited talk at the Pontifical Catholic University of Rio Grande do Sul, School of Linguistics. Porto Alegre, Brazil.
14. Duñabeitia, J.A. (March 7, 2017). Neurociencia cognitiva y altas capacidades. Invited talk at the Congreso Altas Capacidades en la Escuela Inclusiva, Santander, Spain.
15. Duñabeitia, J.A. (April 1, 2017). Emociónale. Invited talk at the IV Xornadas Galegas de Linguas Estranxeiras from Xunta de Galicia, Santiago de Compostela, Spain.
16. Duñabeitia, J.A. (April 22, 2017). Neurociencia y bilingüismo. Invited talk at the Jornadas ELE Junto al Báltico 2017, Tallin, Estonia.
17. Duñabeitia, J.A. (April 27, 2017). Neurociencia y coaching para el aula de idiomas. Invited talk at the CFPI of the Junta de Castilla y León, Valladolid, Spain.
18. Duñabeitia, J.A. (June, 2017). Morphology and Neuroscience. Invited talk at the International Morphological Processing Conference MoProc 2017, Trieste, Italy.
19. Duñabeitia, J.A. (June 29, 2017). The multilingual school: where are we and where should we go? Invited Summer Lecture at the Institute of Education of the University College London (UCL), London, UK.
20. Fariña, N. (June 9, 2017). "Lenguaje, cerebro y las personas sordas". Invited talk at the Deaf Federation of Castilla-León, Valladolid, Spain.
21. Fariña, N., Costello, B. & Giezen, M. (March 6, 2017). Lenguaje, cerebro y las personas Sordas. Invited talk given at Arabako Gorrak [The Araba Association of Deaf People], Vitoria-Gasteiz, Spain.
22. Kapnoula, E.C. (June, 2017). Is it a word yet? Discussing the definition of lexicality in the context of word learning. Invited talk at the Workshop on Conversational Speech and Lexical Representations, Nijmegen, The Netherlands.
23. Lallier M. (May, 2017). Reading development in early bilinguals. Keynote speaker at the International Conference on Interfaces in Linguistics, Université Toulouse-Jean Jaurès. Toulouse, France.
24. Lallier, M. (June, 2017). Neuroaprendizaje de la lectoescritura y detección temprana de la dislexia. Invited talk at XI Jornadas Educativas Apsid, Bilbao, Spain.
25. Mancini, S. (June 5-6, 2017). Agreement and (illusion of) disagreement: reconciling theoretical analyses and sentence processing data. Invited talk at Workshop on Syntax Processing, Rovereto, Italy.
26. Martin, C.D. (July 11, 2017). El cerebro eléctrico percibe el lenguaje. Oral presentation at UPV Summer courses: "Una aventura científica: De las partículas elementales al conocimiento". Donostia, Spain.
27. Molinaro, N. (March 27, 2017). Low-Frequency Oscillations Mediate Top-Down Activity During Speech Processing. Invited talk at CNS 2017, San Francisco, CA, USA.
28. Munarriz, A., & Pourquié, M. (May 10, 2017). CAT: afasia aztertzeko tresnaren euskal egokitzapena. [CAT:Basque adaptation of the Comprehensive Aphasia Test.] Invited talk at IkerGazte, NPU-Public University of Navarre, Pamplona, Spain.
29. Ostiz, M. (April 7, 2017). ¿Está creando la tecnología una nueva humanidad? Invited talk at VI Olimpiada de Filosofía de Navarra, Universidad de Navarra, Pamplona, Spain.
30. Pourquié, M. (January 17, 2017). "fLEX: flexioa eta lexikoaren aztertzeko aplikazio eleanizduna euskaraz, frantsesez eta gaztelaniaz. Motibazioa, helburuak eta erabilera." [fLEX : a multilingual application for assessing inflection and lexicon in Basque, French and Spanish. Motivation, objectives and usability]. Invited talk at Elebilab Bilingualism lab, EHU, Vitoria-Gasteiz, Spain.
31. Soto, D. (February 2017). Brain mechanisms of human consciousness. Invited talk at conference series initiated by Jakiunde to enhance young's people intellectual and personal development. Jakin-mina, San Sebastián, Spain.
32. Soto, D. (February 23, 2017) Non-conscious working memory. Invited talk at the Department of Experimental Psychology, University of Oxford, UK.
33. Villameriel, S. (February 18, 2017). Lengua de signos, cerebro y adquisición. Invited talk at Centro Cultural de Personas Sordas de Palencia, Palencia, Spain.
34. Villameriel, S. (January 31, 2017). Cerebro y lengua de signos, adquisición y bilingües bimodales. Invited talk at the Centro López Vicuña, Palencia, Spain.
35. Villameriel, S. (January 31, 2017). Cerebro y lengua de signos, adquisición y bilingües bimodales. Invited talk at the Centro San Viator, Valladolid, Spain.
36. Villameriel, S. (March 31, 2017). Lengua de signos, cerebro y bilingües. Invited talk at 30 Aniversario de la Escuela Oficial de Idiomas de Palencia, Palencia, Spain.
37. Villameriel, S. (June 9, 2017). La investigación en lengua de signos, personas sordas y bilingües bimodales. Invited talk at the Jornadas CFGS ILSE, 13 años de historia, Las Palmas de Gran Canaria, Spain.

6.6. Annex VI. Individual fellowships 2014-on

SPANISH MINISTRY

	PI	Grant	Amount	Period
1	Kepa Paz-Alonso	Ramón y Cajal	208.600,00 €	01/01/2016-31/12/2020
2	Marie Lallier	Ramón y Cajal	208.600,00 €	01/04/2017-31/03/2022
3	Joana Cholin	Ramón y Cajal	208.600,00 €	24/11/2009-23/11/2014
4	Eiling Yee	Ramón y Cajal	208.600,00 €	01/01/2012-31/12/2016
5	Mireia Hernández	Ramón y Cajal	208.600,00 €	01/01/2018-31/12/2023
6	Cesar Caballero	Juan de la Cierva	58.000,00 €	01/11/2016-31/10/2018
7	Leona Polyanskaya	Juan de la Cierva	50.000,00 €	01/12/2016-30/11/2018
8	José Alemán	Juan de la Cierva	58.000,00 €	29/06/2015-30/09/2016
9	Martijn Baart	Juan de la Cierva	58.000,00 €	17/11/2014-16/11/2016
10	Effie Kapnoula	Juan de la Cierva	50.000,00 €	01/01/2018-31/12/2019
11	Jesús Cespón	Juan de la Cierva	58.000,00 €	01/01/2018-31/12/2019
12	Joao Correia	Juan de la Cierva	58.000,00 €	01/05/2017- 30/04/2019
13	Sendy Caffarra	Juan de la Cierva	50.000,00 €	01/01/2018-31/12/2019
14	Lela Ivaz	Formación Personal Investigador	82.400,00 €	03/02/2014-02/02/2018
15	Aina Casaponsa	Formación Personal Investigador	82.400,00 €	02/11/2010-01/11/2014
16	Noemí Fariña	Formación Personal Investigador	82.400,00 €	13/01/2014-12/11/2018
17	Candice Frances	Formación Personal Investigador	82.400,00 €	01/05/2017-30/04/2021
18	Eugenia Navarra	Formación Personal Investigador	82.400,00 €	01/05/2017-30/04/2021
19	Jose Javier Javarro	Formación Personal Investigador	82.400,00 €	01/05/2017-30/04/2021
20	Maddi Ibarbia	Formación Personal Investigador	82.400,00 €	01/05/2017-30/04/2021
21	Sandra Gisbert-Muñoz	Formación Personal Investigador	82.400,00 €	01/05/2017-30/04/2021
22	Sanjeev Nara	Formación Personal Investigador	82.400,00 €	01/05/2017-30/04/2021
23	Teresa Esteban	Formación Personal Investigador	82.400,00 €	01/05/2017-30/04/2021
24	Usman Ayub Sheikh	Formación Personal Investigador	82.400,00 €	01/05/2017-30/04/2021
25	Eri Takahashi	Personal Técnico de Apoyo	36.000,00 €	15/12/2011-14/12/2014
26	Larraitz Lopez	Personal Técnico de Apoyo	36.000,00 €	15/12/2011-14/12/2014
27	Oihana Vadillo	Personal Técnico de Apoyo	36.000,00 €	15/12/2011-14/12/2014
28	Mamen González	Personal Técnico de Apoyo	36.000,00 €	01/11/2014-31/10/2017
29	Elena Aguirrebengoa	Personal Técnico de Apoyo	36.000,00 €	01/11/2014-31/10/2017
30	Itziar Basterra	Personal Técnico de Apoyo	36.000,00 €	01/11/2014-31/10/2017

EUROPEAN COMMISSION

	PI	Grant	Amount	Period
1	Stephanie Massol	Marie Skłodowska-Curie	168.896,00 €	01/02/2013-31/01/2015
2	Cesar Caballero	Marie Skłodowska-Curie	173.370,00 €	01/06/2013-31/05/2015
3	Eugenia Marín	Marie Skłodowska-Curie	158.121,00 €	01/09/2015-31/08/2017
5	Rocio Adriana López Zunini	Marie Skłodowska-Curie	170.121,00 €	01/06/2016-31/05/2018
6	Fred Roux	Marie Skłodowska-Curie	166.336,00 €	01/03/2014-28/02/2016
7	Juan Eugenio Iglesias	Marie Skłodowska-Curie	170.121,00 €	01/06/2015-31/05/2017
8	Blair Armstrong	Marie Skłodowska-Curie	166.336,00 €	01/05/2014-30/04/2016
9	Marcel Giezen	Marie Skłodowska-Curie	170.121,00 €	01/07/2015-30/06/2017
10	Lisa Wilson	Marie Skłodowska-Curie	170.121,00 €	14/03/2016-13/03/2018
11	Loretxu Bergouignan	Marie Skłodowska-Curie	166.366,00 €	01/03/2014-28/02/2016
12	Marie Pourquie	Marie Skłodowska-Curie	222.917,00 €	01/11/2012-31/10/2015
13	Angela De Bruin	Marie Skłodowska-Curie	158.121,00 €	01/09/2017-31/08/2019

BASQUE GOVERNMENT

	PI	Grant	Amount	Period
1	Ainhoa Bastarrika	Predoctoral grant	72.740,00 €	01/01/2014-31/12/2016
2	Myriam Oliver	Predoctoral grant	72.740,00 €	01/01/2014-31/12/2016
3	Eneko Antón	Predoctoral grant	72.740,00 €	01/01/2014-31/12/2016
4	Alejandro Martínez	Predoctoral grant	72.740,00 €	13/01/2014-12/01/2017
5	Sophie Schlöffel	Predoctoral grant	72.740,00 €	01/01/2015-31/12/2018
6	Jovana Pejovic	Predoctoral grant	72.740,00 €	01/01/2015-31/12/2018
7	Alexia Antzaka	Predoctoral grant	72.740,00 €	01/01/2015-31/12/2018
8	Jaione Arnaez	Predoctoral grant	72.740,00 €	25/01/2016-24/01/2019
9	Bojana Ristic	Predoctoral grant	72.740,00 €	25/01/2016-24/01/2019
10	Borja Blanco	Predoctoral grant	72.740,00 €	25/01/2016-24/01/2019

GIPUZKOA GOVERNMENT

	PI	Grant	Amount	Period
1	Simona Mancini	Gipuzkoa Fellows Postdoc grant	117.810,00 €	01/01/2015-31/12/2017
2	Mathieu Bourguignon	Gipuzkoa Fellows Postdoc grant	44.506,00 €	01/01/2016-31/12/2016
3	Juan Eugenio Iglesias	Gipuzkoa Fellows Postdoc grant	39.270,00 €	01/04/2014-31/03/2015
4	Mireia Hernández	Gipuzkoa Fellows Postdoc grant	77.231,00 €	01/04/2017-31/03/2018

CAIXA FOUNDATION

	PI	Grant	Amount	Period
1	María Borragan	Predoctoral grant	108.000,00 €	01/11/2016-31/10/2019
2	Dana Scarinci	Predoctoral grant	108.000,00 €	01/10/2016-30/09/2019
3	Mikel Ostiz	Predoctoral grant	108.000,00 €	01/05/2015-01/04/2018
4	José Armando Manzano	INPhINIT Predoctoral grant	122.592,00 €	23/10/2017-30/09/2020
5	Kshipra Gurunandan	INPhINIT Predoctoral grant	122.592,00 €	01/10/2017-30/09/2020
6	Liu Yihuan Liu	INPhINIT Predoctoral grant	122.592,00 €	01/10/2017-30/09/2020
7	María Borragan	INPhINIT Predoctoral grant	108.000,00 €	01/11/2016-31/10/2019
8	Piermatteo Morucci	INPhINIT Predoctoral grant	122.592,00 €	16/10/2017-15/10/2020
9	Stefano Moia	INPhINIT Predoctoral grant	122.592,00 €	01/12/2017-30/09/2020

EXTERNALLY FUNDED

	PI	Grant		Period
1	David Soto	Research Professor	Ikerbasque Foundation	01/02/2016-permanent
2	Nicola Molinaro	Research Fellow	Ikerbasque Foundation	01/01/2014-31/12/2018
3	Mikhail Ordin	Research Fellow	Ikerbasque Foundation	15/11/2015-14/11/2019
4	Clara Martin	Research Fellow	Ikerbasque Foundation	04/06/2012-permanent
5	Arthur Samuel	Research Professor	Ikerbasque Foundation	01/01/2015-permanent
6	Manuel Carreiras	Research Professor	Ikerbasque Foundation	01/01/2009-permanent
7	Elger Abrahamse	Research Fellow	Ikerbasque Foundation	01/01/2018-31/12/2022
8	Joyse Medeyros	Predoctoral grant	Capes Brazil	01/09/2013-31/08/2017
9	Patricia Diaz Alves	Predoctoral grant	CNPq Brazil	01/06/2014-31/05/2018
10	Camila Zugarramurdi	Predoctoral grant	Fundación Carolina Uruguay	01/09/2017-31/08/2017
11	Natalia Kartushina	Postdoctoral grant	Swiss Science Foundation	01/03/2016-31/08/2017
12	Martijn Baart	Postdoctoral grant	NWO Netherlands	01/04/2012-30/03/2014

6.7 Annex VII: Full list of invited talks 2014-2017

1. Michael Ramscar, Tübingen University, Germany. January 23, 2014
2. Jesus M. Cortés, BioCruces Health Research Institute, Spain. February 6, 2014.
3. Gerry Altmann, University of York, UK. February 18, 2014
4. Esther Torrego, University of Basque Country (UPV-EHU), Spain. February 20, 2014
5. Guillaume Thierry, Bangor University, UK. February 26, 2014
6. Ricardo Insausti, Universidad de Castilla La-Mancha, Spain. February 27, 2014
7. Guillaume Thierry, Bangor University, UK. February 28, 2014
8. Roi Cohen Kados, University of Oxford, UK. March 12, 2014
9. Mark Gibson, Universidad de Navarra, Spain. March 27, 2014
10. Miguel Valencia, Universidad de Navarra, Spain. April 9, 2014
11. Christian Fiebach, Goethe Universität Frankfurt, Germany. May 7, 2014 (noon)
12. Christian Fiebach, Goethe Universität Frankfurt, Germany. May 7, 2014 (PM)
13. Sarah Laszlo, Binghamton University, the State University of New York, USA. May 15, 2014
14. Pietro Guccione, Politecnico di Bari, Italy. May 27, 2014
15. Ignacio Arganda, Massachusetts Institute of Technology, USA. May 30, 2014
16. Jean Vroomen, Tilburg University, The Netherlands. July 3, 2014
17. Sebastián J. Lipina, Unidad de Neurobiología Aplicada (UNA, CEMIC-CONICET), Argentina. July 25, 2014
18. Alan J. Power, University of Cambridge, UK. September 25, 2014
19. Fumiko Hoeft, Haskins Laboratories, USA. September 29, 2014
20. Manuel Perea, Universitat de València, Spain. October 9, 2014
21. Natalia Kartushina, University of Geneva, Switzerland. October 16, 2014
22. Heather Bortfeld, University of Connecticut, USA. October 30, 2014
23. David Soto, Imperial College London, UK. October 31, 2014
24. Iñigo Gabilondo, Biomedical Research Institute, Spain. November 3, 2014
25. Rodrigo Quian Quiroga, University of Leicester, UK. November 18, 2014
26. Lluís Fuentemilla, University of Barcelona, Spain. November 20, 2014
27. Silvia De Santis, Cardiff University, UK. January 22, 2015
28. Sidarta Ribeiro, Federal University of Rio Grande do Norte, Brazil. January 26, 2015
29. Simon Hanslmayr, University of Birmingham, UK. February 26, 2015
30. Alexander Leemans, Utrecht University, The Netherlands. April 16, 2015
31. Ole Jensen, Donders Institute for Brain, Cognition and Behaviour, The Netherlands. April 28, 2015
32. Juan Manuel Toro, ICREA, Universitat Pompeu Fabra, Spain. May 14, 2015
33. Mohamed L. Seghier, University College London (UCL), UK. May 21, 2015
34. Nadja Tschentscher, MRC Cognition and Brain Sciences Unit, UK. June 4, 2015
35. Niels Janssen, Universidad de La Laguna, Spain. June 9, 2015
36. Morten H. Christiansen, Cornell University, University of Southern Denmark, USA & Denmark. June 30, 2015
37. Anastasia Yendiki, Martinos Centre for Biomedical Imaging, USA. July 10, 2015
38. Javier Gonzalez-Castillo, National Institute of Mental Health (NIMH), USA. July 16, 2015
39. Sonja Rossi, Medical University of Innsbruck, Austria. July 23, 2015
40. Lucie Ménard, Université du Québec à Montréal, Canada. September 17, 2015
41. Ken R. Paap, San Francisco State University, USA. October 20, 2015
42. Ken R. Paap, San Francisco State University, USA. October 29, 2015
43. Moshe Bar, Bar-Ilan University Ramat- Gan, Israel. November 19, 2015
44. Miguel Merchan, Universidad de Salamanca, Spain. November 27, 2015
45. Ruth de Diego-Balaguer, Universitat de Barcelona, Spain. December 10, 2015
46. Alfonso Nieto-Castañon, Boston University, USA. January 12, 2016
47. Francisco Clascá, Universidad Autónoma de Madrid, Spain. January 14, 2016
48. Sung-Joo Lim, University of Lübeck, Germany. January 21, 2016
49. Bencie Woll, University College London (UCL), UK. February 4, 2016
50. Arturo E. Hernandez, University of Houston, USA. February 11, 2016
51. Aviv Mezer, Edmond and Lily Safra Hebrew University of Jerusalem, Israel. April 21, 2016
52. Douglas Mewhort, Queen's University, Canada. May 3, 2016
53. Manon Jones, Bangor University, UK. May 4, 2016
54. Ignacio Saez, University of California, USA. June 13, 2016
55. Linda Polka, McGill Montreal, Canada. June 14, 2016
56. Jason D. Yeatman, University of Washington's Institute for Learning & Brain Sciences (I-LABS), USA. June 23, 2016
57. Sergi Grau, Fundación CIM, Spain. June 29, 2016
58. Tim Vogels, University of Oxford, UK. September 22, 2016.
59. Anne Christophe, Ecole normale supérieure / PSL Research University / CNRS / EHESS, France. October 20, 2016
60. Leonides Canuet Delis, Universidad Autonoma de Madrid, Spain. October 28, 2016
61. Joao Correia, Maastricht University, the Netherlands. November 3, 2016
62. Kate Watkins, University of Oxford, UK. November 17, 2016
63. Joachim Gross, University of Glasgow, UK. December 2, 2016
64. Elger Abrahamse, Ghent University, Belgium. February 9, 2017
65. Gabriella Vigliocco, University College London, UK. February 16, 2017
66. Juan Manuel Encinas, Basque Centre for Neuroscience, Spain. February 23, 2017
67. Maite Termenon, Université Joseph Fourier, France. March 9, 2017
68. Peter beim Graben, Bernstein Centre for Computational Neuroscience, Germany. May 4, 2017
69. Serafim Rodrigues, BCAM, Spain. May 4, 2017
70. Elin Thordardottir, McGill University, Canada and Reykjavíkur Akademían, Iceland. May 16, 2017
71. Joaquín Goñi, Purdue University, US. May 17, 2017
72. Hyojin Park, University of Glasgow, Scotland. May 18, 2017
73. Dr. Michal Ben-Shachar, Bar Ilan University, Israel. May 31, 2017

6.8 Annex VIII. Full list of visiting researchers 2014-2017

VISITOR	PROVENANCE	HOST	YEAR	DURATION OF STAY
Mikel Ostiz Blanco	Universidad de Navarra	Manuel Carreiras	2015	28 months
Natalia Kartushina, PhD	University of Geneva	Manuel Carreiras	2016	19 months
Francesco Gianelli, PhD student	University of Milano-Bicocca	Nicola Molinaro	2014	1 year
Camila Zugarramurdi, PhD student	Universidad de la República	Manuel Carreiras	2015	9 months
Iria de Dios Flores, PhD student	Universidad de Santiago de Compostela	Manuel Carreiras	2017	9 months
Eowyn Van de Putte, PhD student	Ghent University	Manuel Carreiras	2016	7 months
Ahmed Mohammed, master and PhD student	Hamad Medical Coporation	Manuel Carreiras	2017	7 months
Lucie Menard, PhD	Universite du Quebec	Manuel Carreiras	2015	5 months
Lena Naumer, master student	RWTH Aachen University	Manuel Carreiras	2016	5 months
Nicoletta Biondo, PhD	University of Trento	Simona Mancini	2017	5 months
Jyrki Tuomainen, PhD	University College London	Arthur Samuel	2014	3 months
Alma Lindborg, master student	Technical University of Denmark	Martijn Baart	2015	3 months
Ann-Kristin Meyer, master student	Freie Universität Berlin	Pedro M. Paz-Alonso	2015	3 months
Carlos Romero Rivas, PhD student	Universidad Pompeu Fabra	Alejandro Pérez	2016	3 months
Camila Zugarramurdi, PhD student	Universidad de la República	Manuel Carreiras	2017	3 months
Judit Castellà Mate, PhD	Universitat Autònoma de Barcelona	Pedro M. Paz-Alonso	2017	3 months
Nicoletta Biondo, PhD student	University of Trento	Simona Mancini	2015	2.5 months
Graciela Alatorre Cruz, PhD student	Universidad Nacional Autónoma de México	Nicola Molinaro	2017	2.5 months
Sophie Slaats, Master student	Utrecht University	Nicola Molinaro	2017	2.5 months
Elisabet Service, PhD	McMaster University	Manuel Carreiras	2014	2 months
John Connolly, PhD	McMaster University	Manuel Carreiras	2014	2 months
Edith Brignoni-Perez, PhD student	Universidad de Georgetown	Pedro M. Paz-Alonso	2015	2 months
Judit Castellà Mate, PhD	Universitat Autònoma de Barcelona	Pedro M. Paz-Alonso	2015	2 months
Ahmed Mohammed, master student	Hamad Medical Coporation	Manuel Carreiras	2016	2 months
Jessi G. Jacobsen, master student	Carleton College	Jon Andoni Duñabeitia	2016	2 months
Arman Motamed Haeri, master student	University of Pisa	Clara Martin	2017	2 months
Javier Gonzalez Castillo, PhD	National Institute of Mental Health	Cesar Caballero	2017	2 months
Mar Martin Signes	Universidad de Granada	Pedro M. Paz-Alonso	2017	2 months
Alistair John Knot, PhD	University of Otago	Manuel Carreiras	2014	1,5 months
Mele Taumoepeau, PhD	University of Otago	Manuel Carreiras	2014	1,5 months
Juan Andrés Hernández Cabrera, PhD	Universidad de la Laguna	Manuel Carreiras	2014	1 month
Lisa B. Wilson, PhD	University of Colorado	Arthur Samuel	2014	1 month
Narcisa Pérez Naranjo, PhD student	Universidad Complutense de Madrid	Manuel Carreiras	2014	1 month
Javier Gonzalez Castillo, PhD	National Institute of Mental Health	Cesar Caballero	2015	1 month
Kenneth Paap, PhD	San Francisco State University	Manuel Carreiras	2015	1 month
Juan Andrés Hernández Cabrera, PhD	Universidad de la Laguna	Manuel Carreiras	2016	1 month
Yijin Lin, PhD student	University of Nottingham Ningbo	Jon Andoni Duñabeitia	2016	1 month
Elin Thordardottir, PhD	McGill University	Manuel Carreiras	2017	1 month
Lauren Fromont, PhD student	University of Montreal	Nicola Molinaro	2017	1 month
Paulo Barraza, PhD student	Universidad de Chile	Alejandro Pérez	2015	3 weeks
Emma Jenks, PhD student	Queen's University	Jon Andoni Duñabeitia	2016	3 weeks
Francesca Postiglione, PhD	Fondazione Marica De Vincenzi ONLUS	Nicola Molinaro	2014	2 weeks
Ram Frost, PhD	Hebrew University of Jerusalem	Manuel Carreiras	2014	2 weeks
Janneke Van Roij, master student	Tilburg University	Martijn Baart	2015	2 weeks
Manuel Perea Lara, PhD	Universidad de Valencia	Manuel Carreiras	2015	2 weeks
Ram Frost, PhD	Hebrew University of Jerusalem	Manuel Carreiras	2015	2 weeks
Ram Frost, PhD	Hebrew University of Jerusalem	Manuel Carreiras	2016	2 weeks
Sergi Grau Carrión, PhD	Universitat de Vic – Universidad Central de Catalunya	Manuel Carreiras	2016	2 weeks
Ram Frost, PhD	Hebrew University of Jerusalem	Manuel Carreiras	2017	2 weeks
Sergi Grau Carrión, PhD	Universitat de Vic – Universidad Central de Catalunya	Manuel Carreiras	2017	2 weeks
Josef Vroomen, PhD	Tilburg University	Martijn Baart	2014	1 week
Katherine White, PhD	University of Waterloo	Eiling Yee	2014	1 week
Inga Griskova-Bulanova	Vilnius University	Elena Salillas	2015	1 week
Yamila A. Sevilla, PhD	Universidad de Buenos Aires, CONICET	Jon Andoni Duñabeitia	2017	1 week

6.9 Annex IX. Full list of invoices related to renting for the last economic year 2016

Parke EUSKADIKO PARKE TEKNOLOGIKOA GIPUZKOA

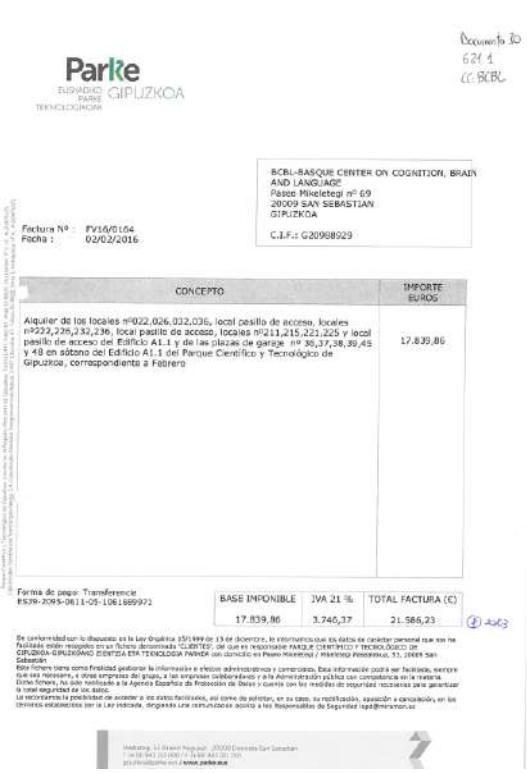
BCBL-BASQUE CENTER ON COGNITION, BRAIN AND LANGUAGE
Paseo Mikeletegi nº 69
20009 SAN SEBASTIAN
GIPUZKOA
C.I.F.: G20988929

Factura Nº : FV16/0019
Fecha : 04/01/2016

CONCEPTO	IMPORTE EUROS
Alquiler de los locales nº022,026,032,036, local pasillo de acceso, locales nº222,226,232,236, local pasillo de acceso, locales nº211,215,221,225 y local pasillo de acceso del Edificio A1.1 y de las plazas de garaje nº 36,37,38,39,45 y 48 en sótano del Edificio A1.1 del Parque Científico y Tecnológico de Gipuzkoa, correspondiente a <MES%>	17.839,86

Forma de pago: Transferencia
ES39-2095-0611-05-1061689971

BASE IMPONIBLE	IVA 21 %	TOTAL FACTURA (€)
17.839,86	3.746,37	21.586,23



Parke EUSKADIKO PARKE TEKNOLOGIKOA GIPUZKOA

BCBL-BASQUE CENTER ON COGNITION, BRAIN AND LANGUAGE
Paseo Mikeletegi nº 69
20009 SAN SEBASTIAN
GIPUZKOA
C.I.F.: G20988929

Factura Nº : FV16/0164
Fecha : 02/02/2016

CONCEPTO	IMPORTE EUROS
Alquiler de los locales nº022,026,032,036, local pasillo de acceso, locales nº222,226,232,236, local pasillo de acceso, locales nº211,215,221,225 y local pasillo de acceso del Edificio A1.1 y de las plazas de garaje nº 36,37,38,39,45 y 48 en sótano del Edificio A1.1 del Parque Científico y Tecnológico de Gipuzkoa, correspondiente a Febrero	17.839,86

Forma de pago: Transferencia
ES39-2095-0611-05-1061689971

BASE IMPONIBLE	IVA 21 %	TOTAL FACTURA (€)
17.839,86	3.746,37	21.586,23

Parke EUSKADIKO PARKE TEKNOLOGIKOA GIPUZKOA

BCBL-BASQUE CENTER ON COGNITION, BRAIN AND LANGUAGE
Paseo Mikeletegi nº 69
20009 SAN SEBASTIAN
GIPUZKOA
C.I.F.: G20988929

Factura Nº : FV16/0313
Fecha : 01/03/2016

CONCEPTO	IMPORTE EUROS
Alquiler de los locales nº022,026,032,036, local pasillo de acceso, locales nº222,226,232,236, local pasillo de acceso, locales nº211,215,221,225 y local pasillo de acceso del Edificio A1.1 y de las plazas de garaje nº 36,37,38,39,45 y 48 en sótano del Edificio A1.1 del Parque Científico y Tecnológico de Gipuzkoa, correspondiente a Marzo	17.839,86

Forma de pago: Transferencia
ES39-2095-0611-05-1061689971

BASE IMPONIBLE	IVA 21 %	TOTAL FACTURA (€)
17.839,86	3.746,37	21.586,23

Parke EUSKADIKO PARKE TEKNOLOGIKOA GIPUZKOA

BCBL-BASQUE CENTER ON COGNITION, BRAIN AND LANGUAGE
Paseo Mikeletegi nº 69
20009 SAN SEBASTIAN
GIPUZKOA
C.I.F.: G20988929

Factura Nº : FV16/0476
Fecha : 01/04/2016

CONCEPTO	IMPORTE EUROS
Alquiler de los locales nº022,026,032,036, local pasillo de acceso, locales nº222,226,232,236, local pasillo de acceso, locales nº211,215,221,225 y local pasillo de acceso del Edificio A1.1 y de las plazas de garaje nº 36,37,38,39,45 y 48 en sótano del Edificio A1.1 del Parque Científico y Tecnológico de Gipuzkoa, correspondiente a Abril	17.839,86

Forma de pago: Transferencia
ES39-2095-0611-05-1061689971

BASE IMPONIBLE	IVA 21 %	TOTAL FACTURA (€)
17.839,86	3.746,37	21.586,23

Parke EUSKADIKO PARKE TEKNOLOGIKOAK GIPUZKOA

BCBL-BASQUE CENTER ON COGNITION, BRAIN AND LANGUAGE
Paseo Mikeletegi nº 69
20009 SAN SEBASTIAN
GIPUZKOA
C.I.F.: G20988929

Factura Nº : FV16/0623
Fecha : 02/05/2016

CONCEPTO	IMPORTE EUROS
Alquiler de los locales nº022,026,032,036, local pasillo de acceso, locales nº222,226,232,236, local pasillo de acceso, locales nº211,215,221,225 y local pasillo de acceso del Edificio A1.1 y de las plazas de garaje nº 36,37,38,39,45 y 48 en sótano del Edificio A1.1 del Parque Científico y Tecnológico de Gipuzkoa, correspondiente a Mayo	17.839,86

Forma de pago: Transferencia
ES39-2095-0611-05-1061689971

BASE IMPONIBLE	IVA 21 %	TOTAL FACTURA (€)
17.839,86	3.746,37	21.586,23

Parke EUSKADIKO PARKE TEKNOLOGIKOAK GIPUZKOA

BCBL-BASQUE CENTER ON COGNITION, BRAIN AND LANGUAGE
Paseo Mikeletegi nº 69
20009 SAN SEBASTIAN
GIPUZKOA
C.I.F.: G20988929

Factura Nº : FV16/0818
Fecha : 08/06/2016

CONCEPTO	IMPORTE EUROS
Alquiler de los locales nº022,026,032,036, local pasillo de acceso, locales nº222,226,232,236, local pasillo de acceso, locales nº211,215,221,225 y local pasillo de acceso del Edificio A1.1 y de las plazas de garaje nº 36,37,38,39,45 y 48 en sótano del Edificio A1.1 del Parque Científico y Tecnológico de Gipuzkoa, correspondiente a Junio	17.839,86

Forma de pago: Transferencia
ES39-2095-0611-05-1061689971

BASE IMPONIBLE	IVA 21 %	TOTAL FACTURA (€)
17.839,86	3.746,37	21.586,23

Parke EUSKADIKO PARKE TEKNOLOGIKOAK GIPUZKOA

Firmado por: PARQUE CIENTIFICO Y TECNOLOGICO DE GIPUZKOA - GIPI
Fecha: 2016.07.04 12:56:16 +02:00
Motivo: Firma Factura Electrónica

BCBL-BASQUE CENTER ON COGNITION, BRAIN AND LANGUAGE
Paseo Mikeletegi nº 69
20009 SAN SEBASTIAN
GIPUZKOA
C.I.F.: G20988929

Factura Nº : FV16/0974
Fecha : 04/07/2016

CONCEPTO	IMPORTE EUROS
Alquiler de los locales nº022,026,032,036, local pasillo de acceso, locales nº222,226,232,236, local pasillo de acceso, locales nº211,215,221,225 y local pasillo de acceso del Edificio A1.1 y de las plazas de garaje nº 36,37,38,39,45 y 48 en sótano del Edificio A1.1 del Parque Científico y Tecnológico de Gipuzkoa, correspondiente a Julio	17.839,86

Forma de pago: Transferencia
ES39-2095-0611-05-1061689971

BASE IMPONIBLE	IVA 21 %	TOTAL FACTURA (€)
17.839,86	3.746,37	21.586,23

Parke EUSKADIKO PARKE TEKNOLOGIKOAK GIPUZKOA

Firmado por: PARQUE CIENTIFICO Y TECNOLOGICO DE GIPUZKOA - GIPI
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Motivo: Firma Factura Electrónica

BCBL-BASQUE CENTER ON COGNITION, BRAIN AND LANGUAGE
Paseo Mikeletegi nº 69
20009 SAN SEBASTIAN
GIPUZKOA
C.I.F.: G20988929

Factura Nº : FV16/1138
Fecha : 01/08/2016

CONCEPTO	IMPORTE EUROS
Alquiler de los locales nº022,026,032,036, local pasillo de acceso, locales nº222,226,232,236, local pasillo de acceso, locales nº211,215,221,225 y local pasillo de acceso del Edificio A1.1 y de las plazas de garaje nº 36,37,38,39,45 y 48 en sótano del Edificio A1.1 del Parque Científico y Tecnológico de Gipuzkoa, correspondiente a Agosto	17.839,86

Forma de pago: Transferencia
ES39-2095-0611-05-1061689971

BASE IMPONIBLE	IVA 21 %	TOTAL FACTURA (€)
17.839,86	3.746,37	21.586,23

Parke EUSKADIKO PARKE TEKNOLOGIKOAK GIPUZKOA

Firmado por: PARQUE CIENTIFICO Y TECNOLOGICO DE GIPUZKOA - GIPU
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Documento 681
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BCBL-BASQUE CENTER ON COGNITION, BRAIN AND LANGUAGE
Paseo Mikeletegi nº 69
20009 SAN SEBASTIAN
GIPUZKOA
C.I.F.: G20988929

Factura Nº : FV16/1283
Fecha : 02/09/2016

CONCEPTO	IMPORTE EUROS
Alquiler de los locales nº022,026,032,036, local pasillo de acceso, locales nº222,226,232,236, local pasillo de acceso, locales nº211,215,221,225 y local pasillo de acceso del Edificio A1.1 y de las plazas de garaje nº 36,37,38,39,45 y 48 en sótano del Edificio A1.1 del Parque Científico y Tecnológico de Gipuzkoa, correspondiente a Septiembre	17.839,86

Forma de pago: Transferencia
ES39-2095-0611-05-1061689971

BASE IMPONIBLE	IVA 21 %	TOTAL FACTURA (€)
17.839,86	3.746,37	21.586,23

Parke EUSKADIKO PARKE TEKNOLOGIKOAK GIPUZKOA

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Motivo: Firma Factura Electrónica

Documento 710
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CC: BCBL

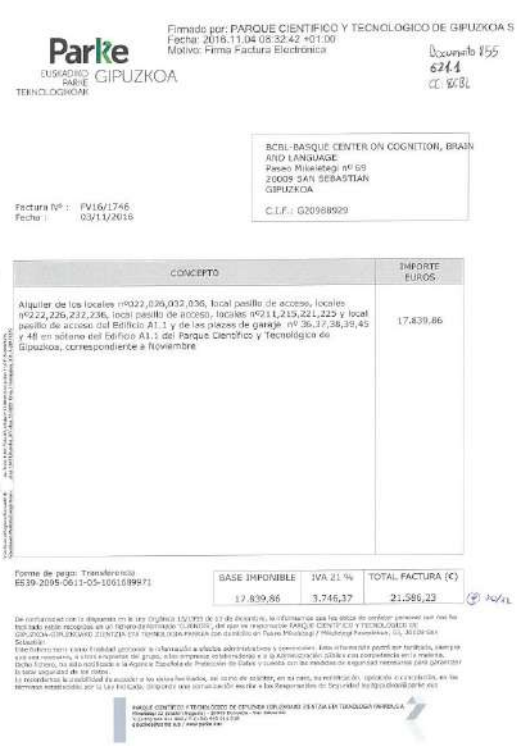
BCBL-BASQUE CENTER ON COGNITION, BRAIN AND LANGUAGE
Paseo Mikeletegi nº 69
20009 SAN SEBASTIAN
GIPUZKOA
C.I.F.: G20988929

Factura Nº : FV16/1504
Fecha : 03/10/2016

CONCEPTO	IMPORTE EUROS
Alquiler de los locales nº022,026,032,036, local pasillo de acceso, locales nº222,226,232,236, local pasillo de acceso, locales nº211,215,221,225 y local pasillo de acceso del Edificio A1.1 y de las plazas de garaje nº 36,37,38,39,45 y 48 en sótano del Edificio A1.1 del Parque Científico y Tecnológico de Gipuzkoa, correspondiente a Octubre	17.839,86

Forma de pago: Transferencia
ES39-2095-0611-05-1061689971

BASE IMPONIBLE	IVA 21 %	TOTAL FACTURA (€)
17.839,86	3.746,37	21.586,23



Parke EUSKADIKO PARKE TEKNOLOGIKOAK GIPUZKOA

Firmado por: PARQUE CIENTIFICO Y TECNOLOGICO DE GIPUZKOA S
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Documento 855
624.1
CC: BCBL

BCBL-BASQUE CENTER ON COGNITION, BRAIN AND LANGUAGE
Paseo Mikeletegi nº 69
20009 SAN SEBASTIAN
GIPUZKOA
C.I.F.: G20988929

Factura Nº : FV16/1746
Fecha : 03/11/2016

CONCEPTO	IMPORTE EUROS
Alquiler de los locales nº022,026,032,036, local pasillo de acceso, locales nº222,226,232,236, local pasillo de acceso, locales nº211,215,221,225 y local pasillo de acceso del Edificio A1.1 y de las plazas de garaje nº 36,37,38,39,45 y 48 en sótano del Edificio A1.1 del Parque Científico y Tecnológico de Gipuzkoa, correspondiente a Noviembre	17.839,86

Forma de pago: Transferencia
ES39-2095-0611-05-1061689971

BASE IMPONIBLE	IVA 21 %	TOTAL FACTURA (€)
17.839,86	3.746,37	21.586,23

Parke EUSKADIKO PARKE TEKNOLOGIKOAK GIPUZKOA

Firmado por: PARQUE CIENTIFICO Y TECNOLOGICO DE GIPUZKOA
Fecha: 2016.12.05 15:47:24 +01:00
Motivo: Firma Factura Electrónica

Documento 935
624.1
CC: BCBL

BCBL-BASQUE CENTER ON COGNITION, BRAIN AND LANGUAGE
Paseo Mikeletegi nº 69
20009 SAN SEBASTIAN
GIPUZKOA
C.I.F.: G20988929

Factura Nº : FV16/1986
Fecha : 05/12/2016

CONCEPTO	IMPORTE EUROS
Alquiler de los locales nº022,026,032,036, local pasillo de acceso, locales nº222,226,232,236, local pasillo de acceso, locales nº211,215,221,225 y local pasillo de acceso del Edificio A1.1 y de las plazas de garaje nº 36,37,38,39,45 y 48 en sótano del Edificio A1.1 del Parque Científico y Tecnológico de Gipuzkoa, correspondiente a Diciembre	17.839,86

Forma de pago: Transferencia
ES39-2095-0611-05-1061689971

BASE IMPONIBLE	IVA 21 %	TOTAL FACTURA (€)
17.839,86	3.746,37	21.586,23

Universidad del País Vasco Euskal Herriko Unibertsitatea

Jose Mari Korta I+G+B Zentroa
Centro de I+D+I Jose Mari Korta

Unibertsitatearen jabetza publikoa erabiltzeari dagokion TASAREN KITAPENA

(UPV/EHUko 2012ko aurrekontuetako 15. art.)

2016ko urtarrilaren 13a

Kitapenaren zk.: 1/2016

Datuak:
BASQUE CENTER ON COGNITION, BRAIN AND LANGUAGE (BCBL) elkartea
IFK: G20988929
Mikeletegi pasealekua, 69 – 20009, Donostia.

Epea:
2016ko LEHENENGO HIRUHILEKOA

Kontzeptua:
Unibertsitatearen jabetza publikoa erabiltzea (UPV/EHUko Gipuzkoako Campuseko **Joxe Mari Korta Zentroko beheko solairuko 0A6 eta 0A7 GELAK**).

Zenbatekoa:
1.705,05 €

Epea:
Hamar egun, kitapenaren jakinarazpena jasotzen denetik.

Sarrera non egin:
Kontu korronte zk.: 2095 0292 92 3239000001
(Adierazi kitapenaren zenbakia)

Ohartu:
Ordaintzen atzeratuz gero, interesak ere kobratuko zaizkizue, kalte ordain gisa, tasa ordaindu beharko zenuketen egunetik zorra kitatzen duzuen arte. Ordaindu ezean, kendu egingo zaizue lokalak erabiltzeko baimena, arautegietan jasotzen diren bestelako ondorioak pairatzeaz gain, zehatzki UPV/EHUko Gerentearen 2012ko irailaren 28ko Erabakian, zeinaren bidez baimena eman zitzaizuen lokalok erabiltzeko adierazitakoak.

LIQUIDACIÓN POR TASA por ocupación del dominio público universitario

(Art. 15 de los Presupuestos de la UPV/EHU 2012)

13 de enero de 2016

Liquidación nº 1/2016

Identificación:
ASOCIACIÓN BCBL BASQUE CENTER ON COGNITION, BRAIN AND LANGUAJE
C.I.F. G20988929
Paseo Mikeletegi, 69 – 20009 –San Sebastián

Ejercicio:
1ºTRIMESTRE 2016

Concepto:
Ocupación de dominio público universitario **SALAS Nº 0A6 y 0A7 de la planta baja del Centro Joxe Mari Korta** en el Campus de Gipuzkoa de la UPV/EHU.

Importe:
1.705,05 €

Plazo:
10 días desde la recepción de la liquidación.

Ingreso:
Cuenta corriente nº 2095 0292 92 3239000001
(Identificando el número de liquidación)

Advertencia:
En el supuesto de que demore el pago de la tasa, vendrá obligado a satisfacer, en concepto de indemnización moratoria, el interés legal del dinero sobre la cantidad debida desde la fecha en que aquél se devengó hasta el día en que se hiciera efectivo, siendo motivo de extinción de la autorización de ocupación la falta de pago, junto con las demás consecuencias recogidas en la normativa aplicable y, en concreto, en la Resolución del Gerente de la UPV/EHU, de 28 de septiembre de 2012, por la que se autoriza la ocupación de los locales citados.

Ana San Martín Azofra
UPV/EHUko Gipuzkoako Campuseko gerenteordea
Vicegerenta del Campus de Gipuzkoa de la UPV/EHU

Universidad del País Vasco Euskal Herriko Unibertsitatea

Jose Mari Korta I+G+B Zentroa
Centro de I+D+I Jose Mari Korta

Unibertsitatearen jabetza publikoa erabiltzeari dagokion TASAREN KITAPENA

(UPV/EHUko 2012ko aurrekontuetako 15. art.)

2016ko apirilaren 7a

Kitapenaren zk.: 2/2016

Datuak:
BASQUE CENTER ON COGNITION, BRAIN AND LANGUAGE (BCBL) elkartea
IFK: G20988929
Mikeletegi pasealekua, 69 – 20009, Donostia.

Epea:
2016ko BIGARREN HIRUHILEKOA

Kontzeptua:
Unibertsitatearen jabetza publikoa erabiltzea (UPV/EHUko Gipuzkoako Campuseko **Joxe Mari Korta Zentroko beheko solairuko 0A6 eta 0A7 GELAK**).

Zenbatekoa:
1.705,05 €

Epea:
Hamar egun, kitapenaren jakinarazpena jasotzen denetik.

Sarrera non egin:
Kontu korronte zk.: 2095 0292 92 3239000001
(Adierazi kitapenaren zenbakia)

Ohartu:
Ordaintzen atzeratuz gero, interesak ere kobratuko zaizkizue, kalte ordain gisa, tasa ordaindu beharko zenuketen egunetik zorra kitatzen duzuen arte. Ordaindu ezean, kendu egingo zaizue lokalak erabiltzeko baimena, arautegietan jasotzen diren bestelako ondorioak pairatzeaz gain, zehatzki UPV/EHUko Gerentearen 2012ko irailaren 28ko Erabakian, zeinaren bidez baimena eman zitzaizuen lokalok erabiltzeko adierazitakoak.

LIQUIDACIÓN POR TASA por ocupación del dominio público universitario

(Art. 15 de los Presupuestos de la UPV/EHU 2012)

7 de abril de 2016

Liquidación nº 2/2016

Identificación:
ASOCIACIÓN BCBL BASQUE CENTER ON COGNITION, BRAIN AND LANGUAJE
C.I.F. G20988929
Paseo Mikeletegi, 69 – 20009 –San Sebastián

Ejercicio:
2º TRIMESTRE 2016

Concepto:
Ocupación de dominio público universitario **SALAS Nº 0A6 y 0A7 de la planta baja del Centro Joxe Mari Korta** en el Campus de Gipuzkoa de la UPV/EHU.

Importe:
1.705,05 €

Plazo:
10 días desde la recepción de la liquidación.

Ingreso:
Cuenta corriente nº 2095 0292 92 3239000001
(Identificando el número de liquidación)

Advertencia:
En el supuesto de que demore el pago de la tasa, vendrá obligado a satisfacer, en concepto de indemnización moratoria, el interés legal del dinero sobre la cantidad debida desde la fecha en que aquél se devengó hasta el día en que se hiciera efectivo, siendo motivo de extinción de la autorización de ocupación la falta de pago, junto con las demás consecuencias recogidas en la normativa aplicable y, en concreto, en la Resolución del Gerente de la UPV/EHU, de 28 de septiembre de 2012, por la que se autoriza la ocupación de los locales citados.

Ana San Martín Azofra
UPV/EHUko Gipuzkoako Campuseko gerenteordea
Vicegerenta del Campus de Gipuzkoa de la UPV/EHU

Universidad del País Vasco Euskal Herriko Unibertsitatea

Jose Mari Korta I+G+B Zentroa
Centro de I+D+I Jose Mari Korta

Unibertsitatearen jabetza publikoa erabiltzeari dagokion TASAREN KITAPENA

(UPV/EHUko 2012ko aurrekontuetako 15. art.)

2016ko urtarrilaren 15a

Kitapenaren zk.: 3/2016

Datuak:
BASQUE CENTER ON COGNITION, BRAIN AND LANGUAGE (BCBL) elkartea
IFK: G20988929
Mikeletegi pasealekua, 69 – 20009, Donostia.

Epea:
2016ko HIRUGARREN HIRUHILEKOA

Kontzeptua:
Unibertsitatearen jabetza publikoa erabiltzea (UPV/EHUko Gipuzkoako Campuseko **Joxe Mari Korta Zentroko beheko solairuko 0A6 eta 0A7 GELAK**).

Zenbatekoa:
1.705,05 €

Epea:
Hamar egun, kitapenaren jakinarazpena jasotzen denetik.

Sarrera non egin:
Kontu korronte zk.: 2095 0292 92 3239000001
(Adierazi kitapenaren zenbakia)

Ohartu:
Ordaintzen atzeratuz gero, interesak ere kobratuko zaizkizue, kalte ordain gisa, tasa ordaindu beharko zenuketen egunetik zorra kitatzen duzuen arte. Ordaindu ezean, kendu egingo zaizue lokalak erabiltzeko baimena, arautegietan jasotzen diren bestelako ondorioak pairatzeaz gain, zehatzki UPV/EHUko Gerentearen 2012ko irailaren 28ko Erabakian, zeinaren bidez baimena eman zitzaizuen lokalok erabiltzeko adierazitakoak.

LIQUIDACIÓN POR TASA por ocupación del dominio público universitario

(Art. 15 de los Presupuestos de la UPV/EHU 2012)

15 de julio de 2016

Liquidación nº 3/2016

Identificación:
ASOCIACIÓN BCBL BASQUE CENTER ON COGNITION, BRAIN AND LANGUAJE
C.I.F. G20988929
Paseo Mikeletegi, 69 – 20009 –San Sebastián

Ejercicio:
3ºTRIMESTRE 2016

Concepto:
Ocupación de dominio público universitario **SALAS Nº 0A6 y 0A7 de la planta baja del Centro Joxe Mari Korta** en el Campus de Gipuzkoa de la UPV/EHU.

Importe:
1.705,05 €

Plazo:
10 días desde la recepción de la liquidación.

Ingreso:
Cuenta corriente nº 2095 0292 92 3239000001
(Identificando el número de liquidación)

Advertencia:
En el supuesto de que demore el pago de la tasa, vendrá obligado a satisfacer, en concepto de indemnización moratoria, el interés legal del dinero sobre la cantidad debida desde la fecha en que aquél se devengó hasta el día en que se hiciera efectivo, siendo motivo de extinción de la autorización de ocupación la falta de pago, junto con las demás consecuencias recogidas en la normativa aplicable y, en concreto, en la Resolución del Gerente de la UPV/EHU, de 28 de septiembre de 2012, por la que se autoriza la ocupación de los locales citados.

Ana San Martín Azofra
UPV/EHUko Gipuzkoako Campuseko gerenteordea
Vicegerenta del Campus de Gipuzkoa de la UPV/EHU

Universidad del País Vasco Euskal Herriko Unibertsitatea

Jose Mari Korta I+G+B Zentroa
Centro de I+D+I Jose Mari Korta

Unibertsitatearen jabetza publikoa erabiltzeari dagokion TASAREN KITAPENA

(UPV/EHUko 2012ko aurrekontuetako 15. art.)

2016ko azaroaren 7a

Kitapenaren zk.: 4/2016

Datuak:
BASQUE CENTER ON COGNITION, BRAIN AND LANGUAGE (BCBL) elkartea
IFK: G20988929
Mikeletegi pasealekua, 69 – 20009, Donostia.

Epea:
2016ko LAUGARREN HIRUHILEKOA

Kontzeptua:
Unibertsitatearen jabetza publikoa erabiltzea (UPV/EHUko Gipuzkoako Campuseko **Joxe Mari Korta Zentroko beheko solairuko 0A6 eta 0A7 GELAK**).

Zenbatekoa:
1.705,05 €

Epea:
Hamar egun, kitapenaren jakinarazpena jasotzen denetik.

Sarrera non egin:
Kontu korronte zk.: 2095 0292 92 3239000001
(Adierazi kitapenaren zenbakia)

Ohartu:
Ordaintzen atzeratuz gero, interesak ere kobratuko zaizkizue, kalte ordain gisa, tasa ordaindu beharko zenuketen egunetik zorra kitatzen duzuen arte. Ordaindu ezean, kendu egingo zaizue lokalak erabiltzeko baimena, arautegietan jasotzen diren bestelako ondorioak pairatzeaz gain, zehatzki UPV/EHUko Gerentearen 2012ko irailaren 28ko Erabakian, zeinaren bidez baimena eman zitzaizuen lokalok erabiltzeko adierazitakoak.

LIQUIDACIÓN POR TASA por ocupación del dominio público universitario

(Art. 15 de los Presupuestos de la UPV/EHU 2012)

7 de noviembre de 2016

Liquidación nº 4/2016

Identificación:
ASOCIACIÓN BCBL BASQUE CENTER ON COGNITION, BRAIN AND LANGUAJE
C.I.F. G20988929
Paseo Mikeletegi, 69 – 20009 –San Sebastián

Ejercicio:
4º TRIMESTRE 2016

Concepto:
Ocupación de dominio público universitario **SALAS Nº 0A6 y 0A7 de la planta baja del Centro Joxe Mari Korta** en el Campus de Gipuzkoa de la UPV/EHU.

Importe:
1.705,05 €

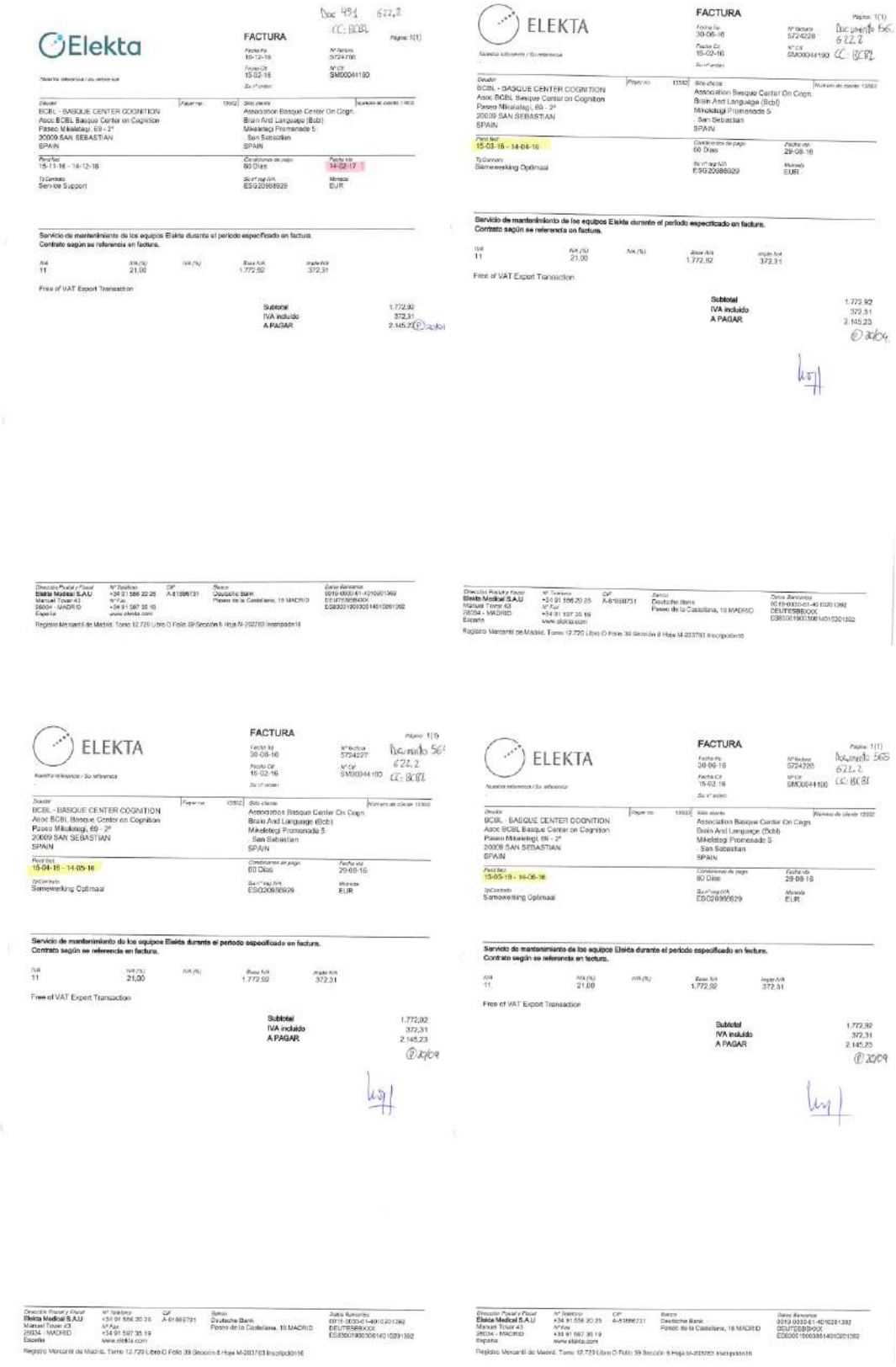
Plazo:
10 días desde la recepción de la liquidación.

Ingreso:
Cuenta corriente nº 2095 0292 92 3239000001
(Identificando el número de liquidación)

Advertencia:
En el supuesto de que demore el pago de la tasa, vendrá obligado a satisfacer, en concepto de indemnización moratoria, el interés legal del dinero sobre la cantidad debida desde la fecha en que aquél se devengó hasta el día en que se hiciera efectivo, siendo motivo de extinción de la autorización de ocupación la falta de pago, junto con las demás consecuencias recogidas en la normativa aplicable y, en concreto, en la Resolución del Gerente de la UPV/EHU, de 28 de septiembre de 2012, por la que se autoriza la ocupación de los locales citados.

Ana Jesús Arrieta Ayestarán
UPV/EHUko Gipuzkoako Campuseko arduradun
Vicerrectora del Campus de Gipuzkoa de la UPV/EHU

6.10 Annex X. Full list of lab expenses invoices for the last economic year 2016



ELEKTA

FACTURA

Página: 1(1)

Fecha fra: 30-06-16
Nº factura: 0724236
Fecha Of: 15-02-16
Nº Of: SM00044180

Deudor: BCBL - BASQUE CENTER COGNITION
Asoc BCBL Basque Center on Cognition
Paseo Mikeletegi, 69 - 2º
20009 SAN SEBASTIAN
SPAIN

Sitio cliente: Association Basque Center On Cogn.
Brain And Language (Bcbl)
Mikeletegi Promenade 5
. San Sebastian
SPAIN

Periodo fact.: 15-02-16 - 14-03-16
TpContrato: Samelwerking Optimaal
Condiciones de pago: 60 Días
Fecha vto: 29-05-16
Su nº reg IVA: ESQ2098929
Moneda: EUR

Servicio de mantenimiento de los equipos Elekta durante el periodo especificado en factura.
Contrato según su referencia en factura.

IVA	IVA (%)	IVA (%)	Base IVA	Importe IVA
11	21,00		1.772,92	372,31

Free of VAT Export Transaction

Subtotal	1.772,92
IVA incluido	372,31
A PAGAR	2.145,23

Elekta Medical S.A.U
Manuel Tovar 43
28034 - MADRID
España
Nº Teléfono: +34 91 556 20 25
Nº Fax: +34 91 597 35 19
www.elekta.com
CIF: A-81886731
Banco: Deutsche Bank
Paseo de la Castellana, 18 MADRID
Datos Bancarios: 0019-0030-61-4010201392
DEUTESBBXXX
ES8600190030614010201392

Registro Mercantil de Madrid. Tomo 12.720 Libro 0 Folio 39 Sección 8 Hoja M-203783 Inscripción16

Elekta

REPRINT
FACTURA

Página: 1(1)

Fecha fra: 30-09-16
Nº factura: 5724494
Fecha Of: 15-02-16
Nº Of: SM00044198

Deudor: BCBL - BASQUE CENTER COGNITION
Asoc BCBL Basque Center on Cognition
Paseo Mikeletegi, 69 - 2º
20009 SAN SEBASTIAN
SPAIN

Sitio cliente: Association Basque Center On Cogn.
Brain And Language (Bcbl)
Mikeletegi Promenade 5
. San Sebastian
SPAIN

Periodo fact.: 15-08-16 - 14-09-16
TpContrato: Service Support
Condiciones de pago: 60 Días
Fecha vto: 29-11-16
Su nº reg IVA: ESQ2098929
Moneda: EUR

Servicio de mantenimiento de los equipos Elekta durante el periodo especificado en factura.
Contrato según su referencia en factura.

IVA	IVA (%)	IVA (%)	Base IVA	Importe IVA
11	21,00		1.772,92	372,31

Free of VAT Export Transaction

Subtotal	1.772,92
IVA incluido	372,31
A PAGAR	2.145,23

Elekta Medical S.A.U
Manuel Tovar 43
28034 - MADRID
España
Nº Teléfono: +34 91 556 20 25
Nº Fax: +34 91 597 35 19
www.elekta.com
CIF: A-81886731
Banco: Deutsche Bank
Paseo de la Castellana, 18 MADRID
Datos Bancarios: 0019-0030-61-4010201392
DEUTESBBXXX
ES8600190030614010201392

Registro Mercantil de Madrid. Tomo 12.720 Libro 0 Folio 39 Sección 8 Hoja M-203783 Inscripción16

Elekta

REPRINT
FACTURA

Página: 1(1)

Fecha fra: 30-11-16
Nº factura: 5734705
Fecha Of: 15-02-16
Nº Of: SM00044100

Deudor: BCBL - BASQUE CENTER COGNITION
Asoc BCBL Basque Center on Cognition
Paseo Mikeletegi, 69 - 2º
20009 SAN SEBASTIAN
SPAIN

Sitio cliente: Association Basque Center On Cogn.
Brain And Language (Bcbl)
Mikeletegi Promenade 5
. San Sebastian
SPAIN

Periodo fact.: 15-10-16 - 14-11-16
TpContrato: Service Support
Condiciones de pago: 60 Días
Fecha vto: 30-01-17
Su nº reg IVA: ESQ2098929
Moneda: EUR

Servicio de mantenimiento de los equipos Elekta durante el periodo especificado en factura.
Contrato según su referencia en factura.

IVA	IVA (%)	IVA (%)	Base IVA	Importe IVA
11	21,00		1.772,92	372,31

Free of VAT Export Transaction

Subtotal	1.772,92
IVA incluido	372,31
A PAGAR	2.145,23

Elekta Medical S.A.U
Manuel Tovar 43
28034 - MADRID
España
Nº Teléfono: +34 91 556 20 25
Nº Fax: +34 91 597 35 19
www.elekta.com
CIF: A-81886731
Banco: Deutsche Bank
Paseo de la Castellana, 18 MADRID
Datos Bancarios: 0019-0030-61-4010201392
DEUTESBBXXX
ES8600190030614010201392

Registro Mercantil de Madrid. Tomo 12.720 Libro 0 Folio 39 Sección 8 Hoja M-203783 Inscripción16

Elekta

REPRINT
FACTURA

Página: 1(1)

Fecha fra: 31-01-16
Nº factura: 5722779
Fecha Of: 15-02-16
Nº Of: SM00022955

Deudor: BCBL - BASQUE CENTER COGNITION
Asoc BCBL Basque Center on Cognition
Paseo Mikeletegi, 69 - 2º
20009 SAN SEBASTIAN
SPAIN

Sitio cliente: Association Basque Center On Cogn.
Brain And Language (Bcbl)
Mikeletegi Promenade 5
. San Sebastian
SPAIN

Periodo fact.: 15-12-15 - 14-01-16
TpContrato: Samelwerking Optimaal
Condiciones de pago: 60 Días
Fecha vto: 31-03-16
Su nº reg IVA: ESQ2098929
Moneda: EUR

Servicio de mantenimiento de los equipos Elekta durante el periodo especificado en factura.
Contrato según su referencia en factura.

IVA	IVA (%)	IVA (%)	Base IVA	Importe IVA
12	21,00		1.500,00	315,00

Free of VAT Export Transaction

Subtotal	1.500,00
IVA incluido	315,00
A PAGAR	1.815,00

Elekta Medical S.A.U
Manuel Tovar 43
28034 - MADRID
España
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Nº Fax: +34 91 597 35 19
www.elekta.com
CIF: A-81886731
Banco: Deutsche Bank
Paseo de la Castellana, 18 MADRID
Datos Bancarios: 0019-0030-61-4010201392
DEUTESBBXXX
ES8600190030614010201392

Registro Mercantil de Madrid. Tomo 12.720 Libro 0 Folio 39 Sección 8 Hoja M-203783 Inscripción16

ELEKTA

FACTURA

Página 1(1)

Fecha fra: 31-07-16 — Nº factura: 5724220 — Documento 631 / 622.2 / CC BCBL

Fecha Ct: 15-02-16 — Nº Ct: SM00044190

Su nº orden

Nuestra referencia / Su referencia

Deudor	Pagador nº 12002	Dirc cliente	Número de cliente 12002
BCBL - BASQUE CENTER COGNITION Asoc BCBL Basque Center on Cognition Paseo Mikeletegi, 69 - 2º 20009 SAN SEBASTIAN SPAIN		Association Basque Center On Cogn. Brain And Language (Bcbl) Mikeletegi Promenade 5 . San Sebastian SPAIN	

Perid fact: 15-06-16 - 14-07-16 — Condiciones de pago: 60 Dias — Fecha vto: 29-09-16

Tp/Contrato: Samenwerking Optimaal — Su nº reg IVA: ESG20068929 — Moneda: EUR

Servicio de mantenimiento de los equipos Elekta durante el periodo especificado en factura. Contrato según se referencia en factura.

IVA	IVA (%)	IVA (%)	Base IVA	Impte IVA
11	21,00		1.772,92	372,31

Free of VAT Export Transaction

Subtotal	1.772,92
IVA incluido	372,31
A PAGAR	2.145,23

Dirección Postal y Fiscal: **Elekta Medical S.A.U**, Manuel Tovar 43, 28034 - MADRID, España — Nº Teléfono: +34 91 556 20 25 — Nº Fax: +34 91 597 35 16 — www.elekta.com — CIF: A-81886701 — Banco: Deutsche Bank, Paseo de la Castellana, 18 MADRID — Datos Bancarios: 0019 0030 61 4010201392, DEUTESBBXXX, ES8300190030814010201392

Registro Mercantil de Madrid. Tomo 12.720 Libro 0 Folio 39 Sección 8 Hoja M-203783 Inscripción16

ELEKTA

FACTURA

Página 1(1)

Fecha fra: 31-07-16 — Nº factura: 5720305 — Documento 632 / 622.2 / CC BCBL

Fecha Ct: 15-02-15 — Nº Ct: SM00033235

Su nº orden

Nuestra referencia / Su referencia

Deudor	Pagador nº 12002	Dirc cliente	Número de cliente 12002
BCBL - BASQUE CENTER COGNITION Asoc BCBL Basque Center on Cognition Paseo Mikeletegi, 69 - 2º 20009 SAN SEBASTIAN SPAIN		Association Basque Center On Cogn. Brain And Language (Bcbl) Mikeletegi Promenade 5 . San Sebastian SPAIN	

Perid fact: 15-01-16 - 14-02-16 — Condiciones de pago: 60 Dias — Fecha vto: 29-09-16

Tp/Contrato: Samenwerking Optimaal — Su nº reg IVA: ESG20068929 — Moneda: EUR

Servicio de mantenimiento de los equipos Elekta durante el periodo especificado en factura. Contrato según se referencia en factura.

IVA	IVA (%)	IVA (%)	Base IVA	Impte IVA
11	21,00		1.500,00	315,00

Free of VAT Export Transaction

Subtotal	1.500,00
IVA incluido	315,00
A PAGAR	1.815,00

Dirección Postal y Fiscal: **Elekta Medical S.A.U**, Manuel Tovar 43, 28034 - MADRID, España — Nº Teléfono: +34 91 556 20 25 — Nº Fax: +34 91 597 35 16 — www.elekta.com — CIF: A-81886701 — Banco: Deutsche Bank, Paseo de la Castellana, 18 MADRID — Datos Bancarios: 0019 0030 61 4010201392, DEUTESBBXXX, ES8300190030814010201392

Registro Mercantil de Madrid. Tomo 12.720 Libro 0 Folio 39 Sección 8 Hoja M-203783 Inscripción16

Elekta

REPRINT FACTURA

Página 1(1)

Fecha fra: 31-10-16 — Nº factura: 5728827 — Documento 680 / 622.2 / CC BCBL

Fecha Ct: 15-02-16 — Nº Ct: SM00044190

Su nº orden

Nuestra referencia / Su referencia

Deudor	Pagador nº 12002	Dirc cliente	Número de cliente 12002
BCBL - BASQUE CENTER COGNITION Asoc BCBL Basque Center on Cognition Paseo Mikeletegi, 69 - 2º 20009 SAN SEBASTIAN SPAIN		Association Basque Center On Cogn. Brain And Language (Bcbl) Mikeletegi Promenade 5 . San Sebastian SPAIN	

Perid fact: 15-09-16 - 14-10-16 — Condiciones de pago: 60 Dias — Fecha vto: 30-12-16

Tp/Contrato: Service Support — Su nº reg IVA: ESG20068929 — Moneda: EUR

Servicio de mantenimiento de los equipos Elekta durante el periodo especificado en factura. Contrato según se referencia en factura.

IVA	IVA (%)	IVA (%)	Base IVA	Impte IVA
11	21,00		1.772,92	372,31

Free of VAT Export Transaction

Subtotal	1.772,92
IVA incluido	372,31
A PAGAR	2.145,23

Dirección Postal y Fiscal: **Elekta Medical S.A.U**, Manuel Tovar 43, 28034 - MADRID, España — Nº Teléfono: +34 91 556 20 25 — Nº Fax: +34 91 597 35 16 — www.elekta.com — CIF: A-81886701 — Banco: Deutsche Bank, Paseo de la Castellana, 18 MADRID — Datos Bancarios: 0019 0030 61 4010201392, DEUTESBBXXX, ES8300190030814010201392

Registro Mercantil de Madrid. Tomo 12.720 Libro 0 Folio 39 Sección 8 Hoja M-203783 Inscripción16

ELEKTA

FACTURA

Página 1(1)

Fecha fra: 31-08-16 — Nº factura: 5724370 — Documento 70 / 622.2 / CC BCBL

Fecha Ct: 15-02-16 — Nº Ct: SM00044190

Su nº orden

Nuestra referencia / Su referencia

Deudor	Pagador nº 12002	Dirc cliente	Número de cliente 12002
BCBL - BASQUE CENTER COGNITION Asoc BCBL Basque Center on Cognition Paseo Mikeletegi, 69 - 2º 20009 SAN SEBASTIAN SPAIN		Association Basque Center On Cogn. Brain And Language (Bcbl) Mikeletegi Promenade 5 . San Sebastian SPAIN	

Perid fact: 15-07-16 - 14-08-16 — Condiciones de pago: 60 Dias — Fecha vto: 31-10-16

Tp/Contrato: Service Support — Su nº reg IVA: ESG20068929 — Moneda: EUR

Servicio de mantenimiento de los equipos Elekta durante el periodo especificado en factura. Contrato según se referencia en factura.

IVA	IVA (%)	IVA (%)	Base IVA	Impte IVA
11	21,00		1.772,92	372,31

Free of VAT Export Transaction

Subtotal	1.772,92
IVA incluido	372,31
A PAGAR	2.145,23

Dirección Postal y Fiscal: **Elekta Medical S.A.U**, Manuel Tovar 43, 28034 - MADRID, España — Nº Teléfono: +34 91 556 20 25 — Nº Fax: +34 91 597 35 16 — www.elekta.com — CIF: A-81886701 — Banco: Deutsche Bank, Paseo de la Castellana, 18 MADRID — Datos Bancarios: 0019 0030 61 4010201392, DEUTESBBXXX, ES8300190030814010201392

Registro Mercantil de Madrid. Tomo 12.720 Libro 0 Folio 39 Sección 8 Hoja M-203783 Inscripción16

LOT QuantumDesign

LOT-QuantumDesign GmbH

BCBL MEG Lab (MRT Lab)
Mr. Miguel A. Arocena
Paseo Mikeletegi 69
20009 San Sebastian - Donostia
Spanien

Our Tax No. : 007 225 81010
Your Order Date : 09.05.16
Your Order No. : Signed quotation no. 972411
VAT-/UST-ID : ESG2098829
Customer No. : 607895
Invoice No. : 62557
Our Order No. : 153207
Official in charge : Alexander Isanin/SD
Date : 25.05.16

Invoice No. 62557/47375

Item	Part no	Description	Quantity	Unit	Unit price/EUR	Discount	Total/EUR
10		**QDS-4321R010** Sumitomo Coldhead without contact Flange for ATL 160 (only) refurbished - requires the return of the customer's old coldhead **S/N: A4010020** country of origin: USA	1	pc.	8.022,00		8.022,00
20		**QDS-Adsorber-SHI-FR** Adsorber for Sumitomo F-50 and CAN-61D3 Compressor **S/N: 8160038A** country of origin: Japan	1	pc	2.751,00		2.751,00
30		**SERVICE-QD** Daily allowance for the service visit of our technician country of origin: Germany Harmonized Tariff:	1,5	days	1.650,00		2.475,00
40		**SERVICE-QDRE** Travelling Allowance (including flight, overnight stay, taxi, train and bus costs, parking) country of origin: Germany Harmonized Tariff:	1	x	600,00		600,00
50		**QDS-DTV** Freight costs Darmstadt - San Sebastian and back country of origin: Germany Harmonized Tariff:	1	x	200,00		200,00

LOT QuantumDesign

LOT-QuantumDesign GmbH

BCBL MEG Lab (MRT Lab)
Mr. Miguel A. Arocena
Paseo Mikeletegi 69
20009 San Sebastian - Donostia
Spanien

Our Tax No. : 007 225 81010
Your Order Date : 09.05.16
Your Order No. : Signed quotation no. 972411
VAT-/UST-ID : ESG2098829
Customer No. : 607895
Invoice No. : 62557
Our Order No. : 153207
Official in charge : Alexander Isanin/SD
Date : 25.05.16

Invoice No. 62557/47375

Net value	EUR	14.048,00
Discount	EUR	
Subtotal	EUR	14.048,00
Freight	EUR	
	EUR	
Total net value	EUR	14.048,00
VAT	EUR	
Total amount	EUR	14.048,00

Date of packing list: 17.05.2016 Packing List No.: 373011
Shipped by: DHL Express
Terms of delivery: DAP San Sebastian Incoterms 2010
Terms of payment: 30 days net
Payable without deduction EUR 14.048,00 latest at 24.06.2016

This is an intra-community shipment.

LOT-QuantumDesign GmbH Page: 1

LOT-QuantumDesign GmbH Page: 2

LOT QuantumDesign

LOT-QuantumDesign GmbH

BCBL MEG Lab (MRT Lab)
Mr. Miguel A. Arocena
Paseo Mikeletegi 69
20009 San Sebastian - Donostia
Spanien

Our Tax No. : 007 225 81010
Your Order Date : 09.05.16
Your Order No. : Signed quotation no. 972411
VAT-/UST-ID : ESG2098829
Customer No. : 607895
Invoice No. : 62557
Our Order No. : 153207
Official in charge : Alexander Isanin/SD
Date : 25.05.16

Invoice No. 62557/47375

In case of technical questions pls. contact Alexander Isanin
phone: 0049-6151-8806 31; fax: 0049-6151-8806 931; email: isanin@lot-qd.de

For commercial questions please contact Mr. Steffen Dingeldein
Phone: +49-(0)6151-8806-972, Fax: +49-(0)6151-8806920, Email: dingeldein@lot-qd.de

WEEE/ROHS: According to the German Electricity Act (ElektroG) §2 (2)9., WEEE 2012/19/EU 2.(4) and RoHS Directive 2011/65/EU article (4) 1, the above mentioned electronic products are listed as: "Equipment specifically designed solely for the purposes of research and development and only made available on a business-to-business basis". As such they are exempt from certain restrictions.
Pursuant to §19.1 of the act, you hereby agree that any costs for the disposal of the products are not included in the price and that the sole responsibility for the disposal lies with you as the buyer. Should you not be able to take care of the disposal yourself, we will be happy to dispose of them on your behalf or provide you with addresses of qualified disposal companies. LOT-QuantumDesign is registered as a trademark with the German foundation for old electric products (EAR Stiftung) under registration no. DE 76652923.

LOT-QuantumDesign GmbH Page: 3

PRAXAIR *Making our planet more productive*

PRAXAIR ESPAÑA, S.L.U.

Documento 496
627.2
CC: BCBL

Nº FACTURA	HOJA	Nº CLIENTE	FECHA
16 /087138	1	20.16.1020	15.06.2016

PARA CUALQUIER INFORMACIÓN SOBRE ESTA FACTURA: GRUPO PRAXAIR, ORENSE 11, 28020 MADRID

ASOCIACION BCBL
Pº MIKELETEGI Nº69 - 2º
20009 DONOSTIA
GUIPUZCOA
N.I.F. G20988929

CONDICIONES DE PAGO: GIRO A 30 DIAS VTO 20.07.2016

FECHA	NOTA	CODIGO	CONCEPTO	CANTIDAD	UM	PRECIO UNITARIO	IMPORTE	I.V.A.
.06.2016	420700	[illegible]	HELIO LIQ RESONANCIAS RECIP CRIOG PEQ	100,00	LT	13,10	1.310,00	21,00
01.06.2016	420619	[illegible]	HELIO EXTRAPURO 3X BOT SOL	72,80	M3			
14.06.2016	421081	[illegible]	HELIO EXTRAPURO 3X BOT SOL	72,80	M3			
			TOTAL HELIO EXTRAPURO 3X BOT SOL	145,60	M3	13,57	1.975,79	21,00
01.06.2016	420619	[illegible]	SERVICIO ALMACEN BOT	8,00	UN			
14.06.2016	421081	[illegible]	SERVICIO ALMACEN BOT	8,00	UN			
			TOTAL SERVICIO ALMACEN BOT	16,00	UN	12,92	206,72	21,00
02.06.2016	420700	[illegible]	SERVICIO ALMACEN RECIP CRIOG PEQ	1,00	UN	22,72	22,72	21,00
01.06.2016	420619	[illegible]	CARGO POR SUMINISTRO DE HELIO	72,80	UN			
02.06.2016	420700	[illegible]	CARGO POR SUMINISTRO DE HELIO	100,00	UN			
14.06.2016	421081	[illegible]	CARGO POR SUMINISTRO DE HELIO	72,80	UN			
			TOTAL CARGO POR SUMINISTRO DE HELIO	245,60	UN			21,00
01.06.2016	420619	[illegible]	RECARGO TIPO CAMBIO	72,80	UN			
02.06.2016	420700	[illegible]	RECARGO TIPO CAMBIO	100,00	UN			
14.06.2016	421081	[illegible]	RECARGO TIPO CAMBIO	72,80	UN			
			TOTAL RECARGO TIPO CAMBIO	245,60	UN			21,00
.06.2016	384221	[illegible]	EMISIÓN Y ENVÍO DE FACTURA	1,00	UN			21,00
		[illegible]	TOTAL MEDIO AMBIENTE Y REGLAMENTACION	19,00	UN	0,83	15,77	21,00
15.06.2016	385510	[illegible]	PREPARACION DE ENVASES BOT	19,00	UN	0,97	17,23	21,00

BASE IMPONIBLE	TIPO I.V.A.	IMP. I.V.A.

TOTAL........
I.V.A.........
TOTAL FACTURA

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Nº FACTURA	HOJA	Nº CLIENTE	FECHA
16 /131720	1	20.56.1020	15.11.2016

PARA CUALQUIER INFORMACIÓN SOBRE ESTA FACTURA: GRUPO PRAXAIR, ORENSE 11, 28020 MADRID

ASOCIACION BCBL
Pº MIKELETEGI Nº69 - 2º
20009 DONOSTIA
GUIPUZCOA
N.I.F. G20988929

CONDICIONES DE PAGO: GIRO A 30 DIAS VTO 31.12.2016

FECHA	NOTA	CODIGO	CONCEPTO	CANTIDAD	UM	PRECIO UNITARIO	IMPORTE	I.V.A.
.11.2016	425334	[illegible]	HELIO LIQ RESONANCIAS RECIP CRIOG PEQ	100,00	LT	13,10	1.310,00	21,00
08.11.2016	425424	[illegible]	HELIO EXTRAPURO 3X BOT SOL	36,40	M3	13,57	493,95	21,00
08.11.2016	426430	[illegible]	SERVICIO ALMACEN BOT	4,00	UN	12,92	51,68	21,00
04.11.2016	425334	[illegible]	SERVICIO ALMACEN RECIP CRIOG PEQ	1,00	UN	22,72	22,72	21,00
04.11.2016	425334	[illegible]	CARGO POR SUMINISTRO DE HELIO	100,00	UN			
08.11.2016	426430	[illegible]	CARGO POR SUMINISTRO DE HELIO	36,40	UN			
			TOTAL CARGO POR SUMINISTRO DE HELIO	136,40	UN			21,00
04.11.2016	425334	[illegible]	RECARGO TIPO CAMBIO	100,00	UN			
08.11.2016	426430	[illegible]	RECARGO TIPO CAMBIO	36,40	UN			
			TOTAL RECARGO TIPO CAMBIO	136,40	UN			21,00
15.11.2016	170414	[illegible]	EMISIÓN Y ENVÍO DE FACTURA	1,00	UN			21,00
		[illegible]	TOTAL MEDIO AMBIENTE Y REGLAMENTACION	7,00	UN	0,83	5,81	21,00
		[illegible]	SERVICIO [illegible]	1,00	UN	0,98	5,88	21,00

BASE IMPONIBLE	TIPO I.V.A.	IMP. I.V.A.
1.891,82	21,00	397,11

TOTAL........ 1.891,82 EUROS
I.V.A......... 397,11 EUROS
TOTAL FACTURA 2.288,93 EUROS

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Nº FACTURA	HOJA	Nº CLIENTE	FECHA
16 /094672	1	20.56.1020	31.07.2016

PARA CUALQUIER INFORMACIÓN SOBRE ESTA FACTURA: GRUPO PRAXAIR, ORENSE 11, 28020 MADRID

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CONDICIONES DE PAGO: GIRO A 30 DIAS VTO 29.09.2016

FECHA	NOTA	CODIGO	CONCEPTO	CANTIDAD	UM	PRECIO UNITARIO	IMPORTE	I.V.A.
.07.2016	471147	[illegible]	HELIO GAS USO MEDICINAL RECARGA	3,00	M3	13,10	39,30	21,00
22.07.2016	471147	[illegible]	HELIO LIQUIDO USO MEDICINAL RECARGA	461,17	LT	13,10	6.041,33	21,00
22.07.2016	471147	[illegible]	CARGO POR SUMINISTRO DE HELIO	464,17	UN			21,00
22.07.2016	471147	[illegible]	RECARGO TIPO CAMBIO	464,17	UN			21,00
31.07.2016	[illegible]	[illegible]	EMISIÓN Y ENVÍO DE FACTURA	1,00	UN			21,00
31.07.2016	[illegible]	[illegible]	PREPARACION DE ENVASES BOT	80,00	UN	0,97	77,60	21,00

BASE IMPONIBLE	TIPO I.V.A.	IMP. I.V.A.
6.198,23	21,00	1.203,23

TOTAL........ 6.198,23 EUROS
I.V.A......... 1.203,23 EUROS
TOTAL FACTURA 7.401,46 EUROS

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Nº FACTURA	HOJA	Nº CLIENTE	FECHA
16 /098817	1	20.56.1020	31.08.2016

PARA CUALQUIER INFORMACIÓN SOBRE ESTA FACTURA: GRUPO PRAXAIR, ORENSE 11, 28020 MADRID

ASOCIACION BCBL
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CONDICIONES DE PAGO: GIRO A 30 DIAS VTO 30.10.2016

FECHA	NOTA	CODIGO	CONCEPTO	CANTIDAD	UM	PRECIO UNITARIO	IMPORTE	I.V.A.
.2016	423922	[illegible]	HELIO LIQ RESONANCIAS RECIP CRIOG PEQ	100,00	LT	13,10	1.310,00	21,00
17.08.2016	422560	[illegible]	HELIO EXTRAPURO 3X BOT SOL	36,40	M3			
29.08.2016	423162	[illegible]	HELIO EXTRAPURO 3X BOT SOL	36,40	M3			
			TOTAL HELIO EXTRAPURO 3X BOT SOL	72,80	M3	13,57	987,90	21,00
17.08.2016	422560	[illegible]	SERVICIO ALMACEN BOT	4,00	UN			
29.08.2016	423162	[illegible]	SERVICIO ALMACEN BOT	4,00	UN			
			TOTAL SERVICIO ALMACEN BOT	8,00	UN	12,92	103,36	21,00
19.08.2016	423022	[illegible]	SERVICIO ALMACEN RECIP CRIOG PEQ	1,00	UN	22,72	22,72	21,00
17.08.2016	422560	[illegible]	CARGO POR SUMINISTRO DE HELIO	36,40	UN			
19.08.2016	423022	[illegible]	CARGO POR SUMINISTRO DE HELIO	100,00	UN			
29.08.2016	423162	[illegible]	CARGO POR SUMINISTRO DE HELIO	36,40	UN			
			TOTAL CARGO POR SUMINISTRO DE HELIO	172,80	UN			21,00
17.08.2016	422560	[illegible]	RECARGO TIPO CAMBIO	36,40	UN			
19.08.2016	423022	[illegible]	RECARGO TIPO CAMBIO	100,00	UN			
29.08.2016	423162	[illegible]	RECARGO TIPO CAMBIO	36,40	UN			
			TOTAL RECARGO TIPO CAMBIO	172,80	UN			21,00
.08.2016	414540	[illegible]	EMISIÓN Y ENVÍO DE FACTURA	1,00	UN			21,00
		[illegible]	TOTAL MEDIO AMBIENTE Y REGLAMENTACION	11,00	UN	0,83	9,13	21,00
31.08.2016	553110	[illegible]	PREPARACION DE ENVASES BOT	3,00	UN	0,97	2,91	21,00

BASE IMPONIBLE	TIPO I.V.A.	IMP. I.V.A.

TOTAL........
I.V.A.........
TOTAL FACTURA

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Nº FACTURA	HOJA	NºCLIENTE	FECHA
16/122320	1	20.56.1020	31.10.2016

PARA CUALQUIER INFORMACIÓN SOBRE ESTA FACTURA: GRUPO PRAXAIR, CORESSE, 11, 28020 MADRID

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CONDICIONES DE PAGO: GIRO A 30 DIAS VTO. 20.12.2016

FECHA	NOTA	CODIGO	CONCEPTO	CANTIDAD	UM	PRECIO UNITARIO	IMPORTE	I.V.A.
[illegible].2016	404847	[illegible]	HELIO GAS USO MEDICINAL RECARGA	3,00	M3	13,10	39,30	21,00
27.10.2016	404847	[illegible]	HELIO LIQUIDO USO MEDICINAL RECARGA	395,29	LT	13,10	5.178,30	21,00
19.10.2016	424833	[illegible]	HELIO EXTRAPURO 3X BOT 50L	36,40	M3	12,57	457,55	21,00
19.10.2016	424833	[illegible]	SERVICIO ALMACEN BOT	4,00	UN	12,92	51,68	21,00
19.10.2016	424833	[illegible]	CARGO POR SUMINISTRO DE HELIO	36,40	UN			
27.10.2016	404847	[illegible]	CARGO POR SUMINISTRO DE HELIO	398,29	UN			
			TOTAL CARGO POR SUMINISTRO DE HELIO	434,69	UN			21,00
19.10.2016	424833	[illegible]	RECARGO TIPO CAMBIO	36,40	UN			
27.10.2016	404847	[illegible]	RECARGO TIPO CAMBIO	398,29	UN			
			TOTAL RECARGO TIPO CAMBIO	434,69	UN			21,00
31.10.2016	749694	[illegible]	EMISIÓN Y ENVÍO DE FACTURA	1,00	UN			21,00
		[illegible]	TOTAL MEDIO AMBIENTE Y REGLAMENTACION	4,00	UN	0,83	3,32	21,00
		[illegible]	SERVICIO SEGURIDAD	4,00	UN	0,98	3,92	21,00

BASE IMPONIBLE	TIPO I.V.A.	IMP. I.V.A.
5.770,47	21,00	1.211,80

TOTAL.......... 5.770,47 EUROS
I.V.A.......... 1.211,80 EUROS
TOTAL FACTURA 6.982,27 EUROS

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Nº FACTURA	HOJA	NºCLIENTE	FECHA
16/148409	1	20.56.1020	31.12.2016

PARA CUALQUIER INFORMACIÓN SOBRE ESTA FACTURA: GRUPO PRAXAIR, CORESSE, 11, 28020 MADRID

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CONDICIONES DE PAGO: GIRO A 30 DIAS VTO. 20.02.2017

FECHA	NOTA	CODIGO	CONCEPTO	CANTIDAD	UM	PRECIO UNITARIO	IMPORTE	I.V.A.
[illegible].12.2016	427029	[illegible]	HELIO LIQ RESONANCIAS RECIP CRIOG PEQ	100,00	LT	13,10	1.310,00	21,00
21.12.2016	426945	[illegible]	HELIO EXTRAPURO 3X BOT 50L	36,40	M3	12,57	457,55	21,00
21.12.2016	426945	[illegible]	SERVICIO ALMACEN BOT	4,00	UN	12,92	51,68	21,00
21.12.2016	427029	[illegible]	SERVICIO ALMACEN RECIP CRIOG PEQ	1,00	UN	22,72	22,72	21,00
21.12.2016	426945	[illegible]	CARGO POR SUMINISTRO DE HELIO	36,40	UN			
22.12.2016	427029	[illegible]	CARGO POR SUMINISTRO DE HELIO	100,00	UN			
			TOTAL CARGO POR SUMINISTRO DE HELIO	136,40	UN			21,00
21.12.2016	426945	[illegible]	RECARGO TIPO CAMBIO	36,40	UN			
22.12.2016	427029	[illegible]	RECARGO TIPO CAMBIO	100,00	UN			
			TOTAL RECARGO TIPO CAMBIO	136,40	UN			21,00
31.12.2016	924128	[illegible]	EMISIÓN Y ENVÍO DE FACTURA	1,00	UN			21,00
		[illegible]	TOTAL MEDIO AMBIENTE Y REGLAMENTACION	7,00	UN	0,83	5,81	21,00
		[illegible]	SERVICIO SEGURIDAD	7,00	UN	0,98	6,86	21,00

BASE IMPONIBLE	TIPO I.V.A.	IMP. I.V.A.
1.891,02	21,00	397,11

TOTAL.......... 1.891,02 EUROS
I.V.A.......... 397,11 EUROS
TOTAL FACTURA 2.288,13 EUROS

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Nº FACTURA	HOJA	NºCLIENTE	FECHA
16/000933	1	20.56.1020	15.01.2016

PARA CUALQUIER INFORMACIÓN SOBRE ESTA FACTURA: GRUPO PRAXAIR, CORESSE, 11, 28020 MADRID

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CONDICIONES DE PAGO: GIRO A 30 DIAS VTO. 20.02.2016

FECHA	NOTA	CODIGO	CONCEPTO	CANTIDAD	UM	PRECIO UNITARIO	IMPORTE	I.V.A.
15.[illegible].2016	415896	[illegible]	HELIO LIQ RESONANCIAS RECIP CRIOG PEQ	100,00	LT	12,00	1.200,00	21,00
15.01.2016	415896	[illegible]	SERVICIO ALMACEN RECIP CRIOG PEQ	1,00	UN	20,15	20,15	21,00
15.01.2016	415896	[illegible]	CARGO POR SUMINISTRO DE HELIO	100,00	UN	1,00	100,00	21,00
15.01.2016	415896	[illegible]	RECARGO TIPO CAMBIO	100,00	UN	2,94	294,00	21,00
15.01.2016	[illegible]	[illegible]	EMISIÓN Y ENVÍO DE FACTURA	1,00	UN			21,00
		[illegible]	TOTAL MEDIO AMBIENTE Y REGLAMENTACION	1,00	UN			21,00
15.01.2016	[illegible]	[illegible]	PRESTACION DE ENVASES BOT	71,00	UN	0,97	68,87	21,00
		[illegible]	SERVICIO SEGURIDAD	3,00	UN	0,98	2,94	21,00

BASE IMPONIBLE	TIPO I.V.A.	IMP. I.V.A.
1.693,96	21,00	355,73

TOTAL.......... 1.693,96 EUROS
I.V.A.......... 355,73 EUROS
TOTAL FACTURA 2.049,69 EUROS

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Nº FACTURA	HOJA	NºCLIENTE	FECHA
16/[illegible]	1	20.56.1020	15.04.2016

PARA CUALQUIER INFORMACIÓN SOBRE ESTA FACTURA: GRUPO PRAXAIR, CORESSE, 11, 28020 MADRID

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CONDICIONES DE PAGO: GIRO A 30 DIAS VTO. 20.05.2016

FECHA	NOTA	CODIGO	CONCEPTO	CANTIDAD	UM	PRECIO UNITARIO	IMPORTE	I.V.A.
08.04.2016	418709	[illegible]	HELIO LIQ RESONANCIAS RECIP CRIOG PEQ	100,00	LT	13,10	1.310,00	21,00
13.04.2016	418866	[illegible]	HELIO EXTRAPURO 3X BOT 50L	36,40	M3	12,57	457,55	21,00
13.04.2016	418866	[illegible]	SERVICIO ALMACEN BOT	4,00	UN	12,92	51,68	21,00
08.04.2016	418709	[illegible]	SERVICIO ALMACEN RECIP CRIOG PEQ	1,00	UN	22,72	22,72	21,00
08.04.2016	418709	[illegible]	CARGO POR SUMINISTRO DE HELIO	100,00	UN			
13.04.2016	418866	[illegible]	CARGO POR SUMINISTRO DE HELIO	36,40	UN			
			TOTAL CARGO POR SUMINISTRO DE HELIO	136,40	UN			21,00
08.04.2016	418709	[illegible]	RECARGO TIPO CAMBIO	100,00	UN			
13.04.2016	418866	[illegible]	RECARGO TIPO CAMBIO	36,40	UN			
			TOTAL RECARGO TIPO CAMBIO	136,40	UN			21,00
15.04.2016	[illegible]	[illegible]	EMISIÓN Y ENVÍO DE FACTURA	1,00	UN			21,00
		[illegible]	TOTAL MEDIO AMBIENTE Y REGLAMENTACION	7,00	UN	0,83	5,81	21,00
15.04.2016	[illegible]	[illegible]	PRESTACION DE ENVASES BOT	10,00	UN	0,97	9,70	21,00
		[illegible]	SERVICIO SEGURIDAD	7,00	UN	0,98	6,86	21,00

BASE IMPONIBLE	TIPO I.V.A.	IMP. I.V.A.
1.900,72	21,00	399,15

TOTAL.......... 1.900,72 EUROS
I.V.A.......... 399,15 EUROS
TOTAL FACTURA 2.299,87 EUROS

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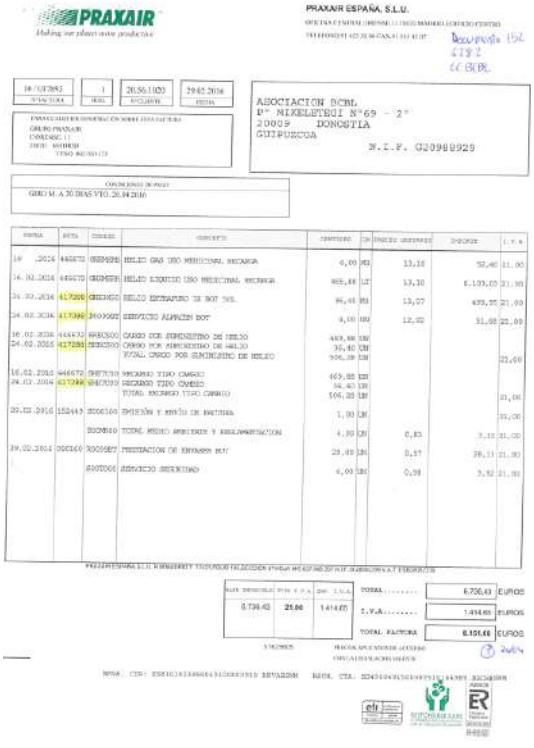

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SIEMENS

Factura

BASQUE CENTER ON COGNITION, BRAIN AND LANGUAGE
PS MIKELETEGUI, 69 2.

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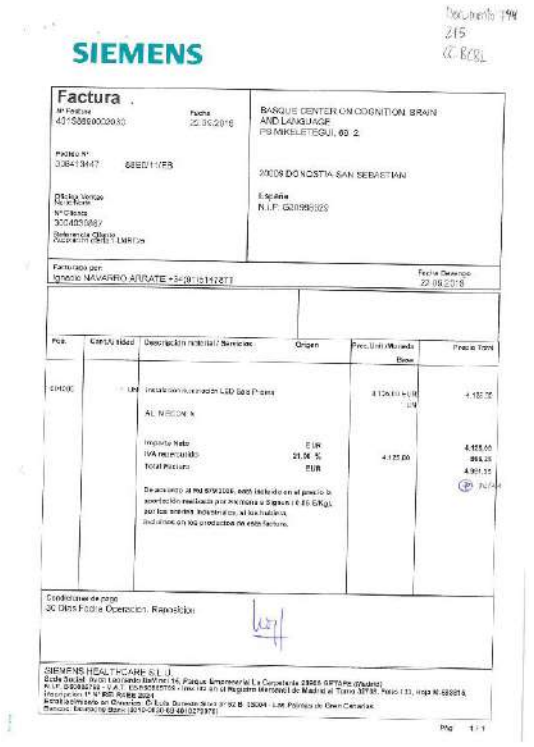

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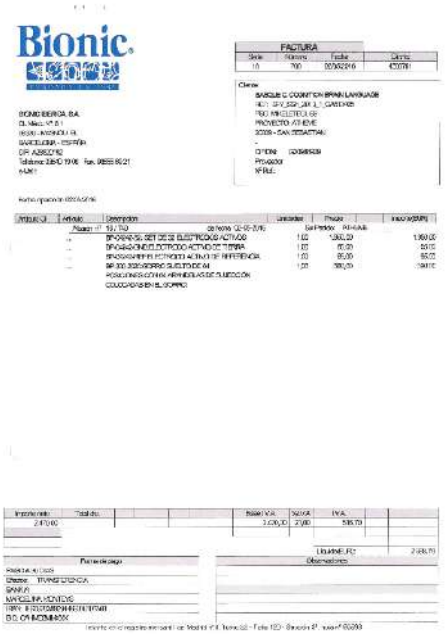
A 2 ALQUILER AUDIOVISUAL



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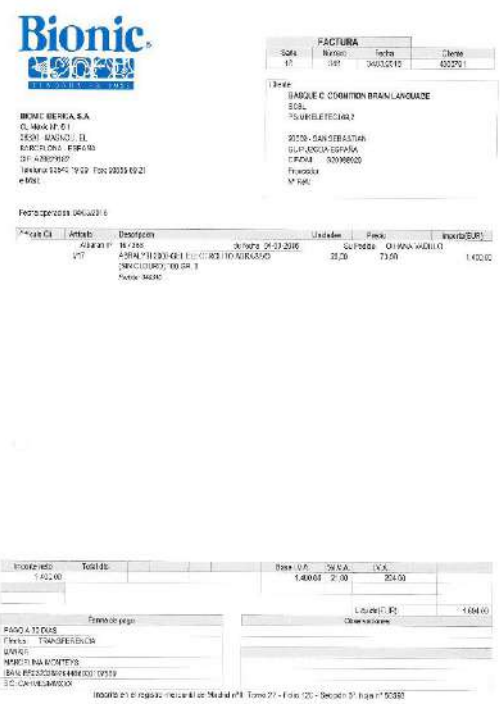

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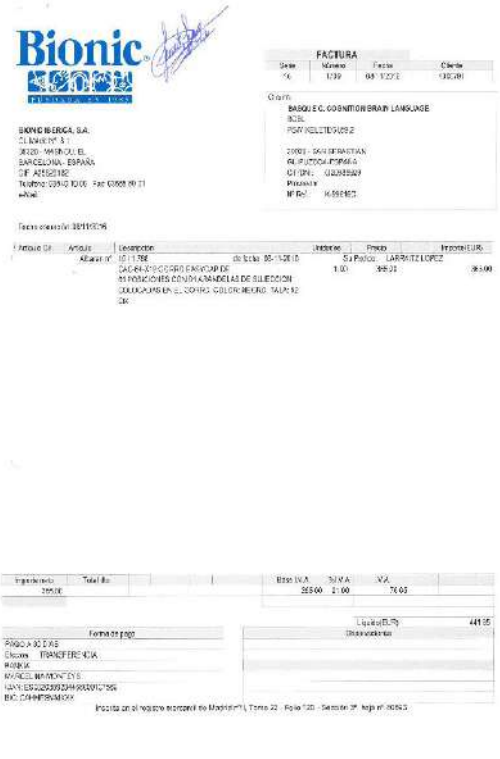

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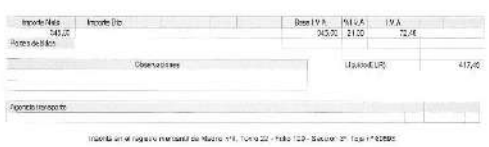

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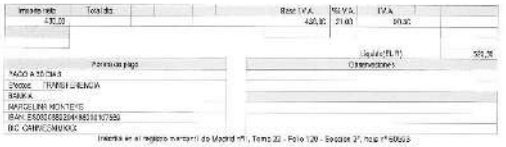
BASQUE C. COGNITION BRAIN LANGUAGE

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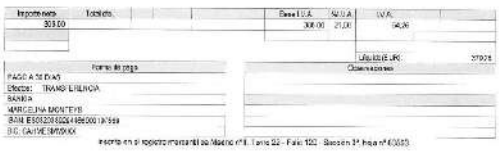


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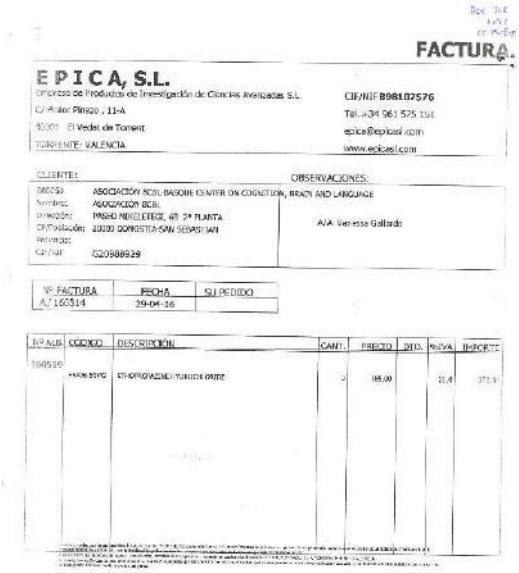
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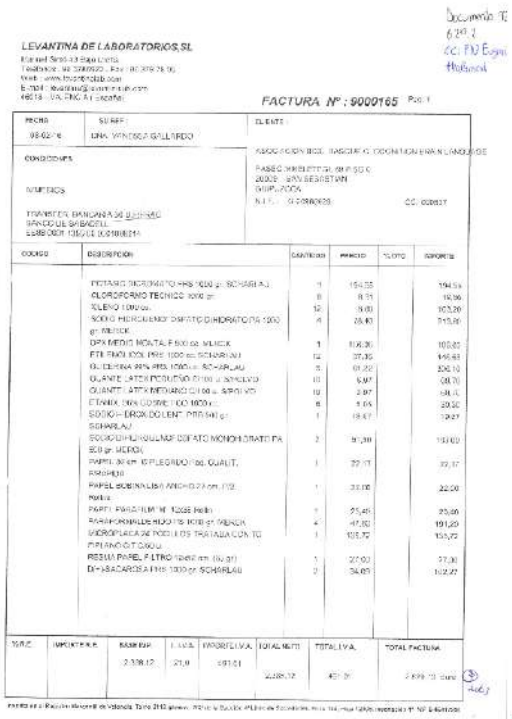
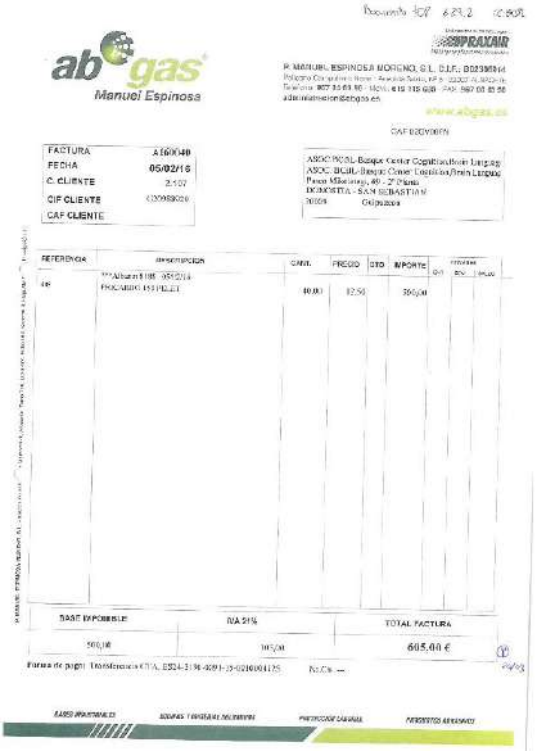
EPICA, S.L.


EPICA, S.L.



LEVANTINA DE LABORATORIOS,SL

FACTURA Nº : 9000165



ab gas Manuel Espinosa

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