

Carles Escera

Curriculum vitae

June 2025

Personal background & contact information

Carles Escera

Born in Barcelona, 03/FEB/1963

Department of Clinical Psychology and Psychobiology
Faculty of Psychology
University of Barcelona
P. Vall d'Hebron 171
08035 – Barcelona
Catalonia-Spain

Tel.: (+34) 93 312 5048
Fax: (+34) 93 402 1584
email: cescera@ub.edu
web page: <http://www.ub.edu/brainlab>
Research ID: A-8658-2010
ORCID: 0000-0001-8203-2951

Education

1993 Ph.D. in Psychology, University of Barcelona

1987 Degree in Psychology, University of Barcelona

Current positions

2021-2025 ICREA Acadèmia Distinguished Professor, *Institució Catalana de Recerca i Estudis Avançats* and University of Barcelona

2010 to present Full Professor [*Catedràtic d'Universitat*], University of Barcelona

2005 to present Director – *EEG and Evoked Potentials Laboratory*, Faculty of Psychology, University of Barcelona

2003 to present Principal Investigator – *Brainlab-Cognitive Neuroscience Research Group*, Excellence Research Group of the Generalitat de Catalunya, with funding (SGR2005-953, SGR2009-11, SGR2014-177, SGR2017-974).

Past positions

2016-2017 Director – *Institute of Neurosciences*, University of Barcelona

2016-2020 ICREA Academia Distinguished Professor, *Institució Catalana de Recerca i Estudis Avançats* and University of Barcelona

2015-2016 Promoter – *Institut de Recerca Sant Joan de Déu, Esplugues de Llobregat*

2015-2015 Promoter – *Institute of Neuroscience*, University of Barcelona

2011-2015 ICREA Academia Distinguished Professor, *Institució Catalana de Recerca i Estudis Avançats* and University of Barcelona

2009-2015 Director – *Institute for Brain, Cognition and Behavior (IR3C)*, University of Barcelona

2009-2011 Coordinator – *Spanish Network on Cognitive Neuroscience* of the Spanish Ministry of Science and Innovation (PSI2008-00968-E).

1997-2010 Associate Professor [*Professor Titular d'Universitat*], University of Barcelona

1993-1997 Adjunct Associate Professor [*Professor Titular Interí*], University of Barcelona

1988-1993 Assistant Professor [*Professor Associat*], University of Barcelona

2000-2006 Treasurer – *Federation of European Psychophysiology Societies (FEPS)*

2001-2004 President – *Sociedad Española de Psicofisiología (SEPF)*

1999-2001 President-Elect – *Sociedad Española de Psicofisiología (SEPF)*

Visiting positions

2022-2024 Visiting Professor – *University of Jyväskylä* (Finland), 2 months

2004-2005 Fellow, *Hanse Institute for Advance Study* (Delmenhorst, Germany), 6 months

2004-2005	Visiting Professor, <i>Department of Neuropsychology and Behavioral Neurology</i> , Bremen University (Germany), 6 months
1999-1999	Senior researcher (Marie-Solodowska Curie Fellow), <i>Cognitive Brain Research Unit (CBRU)</i> , Department of Psychology, University of Helsinki (Finland), 6 months

Academic committees

2016 to present	Board member, <i>Institute of Neurosciences</i> , University of Barcelona
2016 to present	Board member, Department of Clinical Psychology and Psychobiology
2015-2023	Board member, Executive Committee, <i>Institut de Recerca Sant Joan de Déu</i> , Esplugues de Llobregat (Barcelona)
2015-2021	Board member, Research Committee, <i>Institut de Recerca Sant Joan de Déu</i> , Esplugues de Llobregat (Barcelona)
2012-2025	Board member, Faculty of Psychology, University of Barcelona
2009-2015	Board member, <i>Institute for Brain, Cognition and Behavior (IR3C)</i> of the University of Barcelona
2006-2014	Board member, Senate of University of Barcelona
2005 to present	Board member, Research Committee, Faculty of Psychology, University of Barcelona
2005-2005	Board member, R+D National Plan, Spanish Ministry of Education and Science
2004-2011	Board member, PhD Board, Faculty of Psychology, University of Barcelona
2004-2008	Board member, Faculty of Psychology, University of Barcelona
1996-1998	Board member, Health Sciences Division, General Library, University of Barcelona
1992-2015	Board member, Department of Psychiatry and Clinical Psychobiology
1991-1993	Board member, Faculty of Psychology, University of Barcelona

Other academic affiliations

Elected member of the Academia Europaea:

Class A2 (Social and Related Sciences), Section The Human Brain and its Complexity; since 2015.

Affiliated section: Class C (Life Sciences), Section Physiology and Neuroscience, since 2023.

Sociedad Española de Neurociencia (SENC), since 2013

Society for Neuroscience (SfN), since 2001

International Organization of Psychophysiology (IOP), since 2001

Cognitive Neuroscience Society (CNS), since 1995

Society for Psychophysiological Research (SPR), since 1994

Founding member of *Sociedad Española de Psicofisiología (SEPF)*, 1994

Editorial service

2024	Guest Editor, <i>Special issue on the Mismatch Negativity</i> , European Journal of Neuroscience
2022-	International Advisory Board, <i>Psychiatry and Clinical Neuroscience Reports (Japan)</i>
2011-2015	Honorary Editorial Board, <i>Neuroscience and Neuroeconomics</i>
2011-2013	Associate Editor, <i>International Journal of Psychophysiology</i>
2009-	Guest Associate Editor, <i>Frontiers in Human Neuroscience</i>
2007	Guest Editor, <i>Special issue on the Mismatch Negativity</i> , Journal of Psychophysiology
2006-	Editorial Board, <i>Neuropsychological Trends</i>
2002-2011	Associate Editor, <i>Journal of Psychophysiology</i>
2000-2011	Editorial Board, <i>Journal of Psychophysiology</i>
2025	Guest Editor, <i>Special issue on the Mismatch Negativity</i> , European Journal of Neuroscience

Journal review:

Annals of Neurology ▪ *Audiology and Neuro-Otology* ▪ *Behavior Research Methods* ▪ *Behavioral Brain Research* ▪ *Biomedical Engineering Online* ▪ *Biological Psychiatry* ▪ *Biological Psychology* ▪ *Brain* ▪ *Brain Research* ▪ *Brain Research Reviews* ▪ *Brain Structure and Function* ▪ *Cerebral Cortex* ▪ *Child Development* ▪ *Clinical Neurophysiology* ▪ *Cognitive, Affective and Behavioral Neuroscience* ▪ *Cognitive Brain Research* ▪ *Cortex* ▪ *Current Biology* ▪ *Developmental Neuropsychology* ▪ *Developmental Cognitive Neuroscience* ▪ *Electroencephalography and Clinical Neurophysiology* ▪ *European Journal of Neuroscience* ▪ *Frontiers in Neuroscience* ▪ *Hearing Research* ▪ *International Journal of Psychology* ▪ *International Journal of Psychophysiology* ▪ *iScience* ▪ *Journal of Cognitive Neuroscience* ▪ *Journal of Neurophysiology* ▪ *Journal of*

Neuroscience ▪ *Journal of Physiology-London* ▪ *Journal of Psychiatry and Neuroscience* ▪ *Journal of Psychophysiology* ▪ *Molecular Autism* ▪ *Neural Networks* ▪ *Neurobiology of Aging* ▪ *Neurobiology of Learning and Memory* ▪ *Neuroimage* ▪ *Neuropsychologia* ▪ *NeuroReport* ▪ *Neuroscience and Biobehavioral Reviews* ▪ *Neuroscience Letters* ▪ *Perceptual and Motor Skills* ▪ *PLoS Biology* ▪ *PLoS Computational Biology* ▪ *PLoS ONE* ▪ *Proceeding of the Royal Society, London: Series B* ▪ *Progress in Neurobiology* ▪ *Psychological Reports* ▪ *Psychophysiology* ▪ *Scandinavian Journal of Psychology* ▪ *Science Advances* ▪ *Science Asia* ▪ *Scientific Reports* ▪ *Spanish Journal of Psychology*.

Project/career peer review

2024	European Research Council (ERC). Panel Member in the ERC Advanced Grant evaluation panel, call ERC-Adv 2024, panel LS5-Neurosciences
2024	St. John's University (Queens, NY, USA), ad-hoc evaluator promotion to Associate Professor
2024	Cyprus University (Cyprus), panel member for the promotion of a Lecturer with tenure
2024	Branco Weiss Fellowship - Society in Science, ETH Zurich (Switzerland)
2024	National Science Foundation (USA) call 2024, ad hoc reviewer.
2024	IKER Basque permanent positions, call 2023
2023	IKER Basque junior researchers, call 2022
2022	European Research Council (ERC). Panel Member in the ERC Advanced Grant evaluation panel, call ERC-Adv 2022, panel LS5-Neurosciences
2022	Northwestern University (USA), ad-hoc evaluator promotion to Professor with tenure
2021	University of Memphis (USA), ad-hoc evaluator promotion to Professor with tenure
2021	European Research Council (ERC). Starting Grants external reviewer
2021	US-Israel Bilateral Science Foundation, ad-hoc evaluator research grants
2020	European Research Council (ERC). Panel Member in the ERC Advanced Grant evaluation panel, call ERC-Adv 2020, panel LS5-Neurosciences
2020	University of Pittsburgh (USA), ad-hoc evaluator promotion to Professor with tenure
2020	IKER Basque research career promotion, ad-hoc evaluator
2020	Spanish State Research Agency (<i>Agencia Estatal de Investigación</i>), Ramón y Cajal program call 2019, panel member
2020	Hebrew University of Jerusalem (Israel), external reviewer PhD thesis
2019	Foundation for Science and Technology (Portugal), Stimulus of Scientific Employment, Individual Support - call 2018, panel member
2019	IKER Basque junior researchers, call 2018
2019	European Science Foundation on behalf of Research Foundation – Flandres (Belgium). FWO Call for Junior and Senior postdoctoral fellowships
2018	European Research Council (ERC). Panel Member in the ERC Advanced Grant evaluation panel, call ERC-Adv 2018, panel LS5-Neurosciences
2018	Foundation for Science and Technology (Portugal), Stimulus of Scientific Employment, Individual Support - call 2017, panel member
2017	University of Helsinki (Finland); Opponent on a PhD defence
2017	ETH Zurich Research Commission (Switzerland)
2017	Netherlands Organisation for Scientific Research (NWO) (The Netherlands)
2017	IKER Basque Research Fellows 2017
2017	United States-Israel Binational Science Foundation (Israel)
2016	European Science Foundation College of Expert Reviewers (member)
2015	University of Leipzig (Germany); review of Habilitation thesis
2015	Italian Ministry of Health (Italy). Call for grant applications 2015
2015	IKER Basque Research Professors 2015
2015	German Academic Exchange Service (DAAD), review of applications program PRIME
2015	University of Helsinki (Finland); docentship assessment
2015	Swiss National Science Foundation (Switzerland)
2014	European Research Council (ERC). Starting Grants; Consolidator Grants external reviewer
2014	The Netherlands Organisation for Scientific Research (NWO)(The Netherlands)
2014	The Wellcome Trust-DBT India Alliance (India)
2013	Israel Science Foundation
2013	European Commission, progress review of a FP7 ICT project (Luxemburg)
2013	National Science Foundation (USA)
2013	Medical Research Council (MRC) (United Kingdom)
2012	European Commission: ERANET-NEURON Programme; Call JTC2012.
2012	Academy of Finland. "Human Mind" Program (Finland)

2012	German Research Foundation (Germany)
2011	Assessment of research activities in Romanian universities. Romanian National University Research Council (CNCSIS; Romania).
2011	Shota Rustaveli National Science Foundation (SRNSF) (Georgia)
2010	European Commission, progress review of a FP7 ICT project (Brussels, Belgium)
2009	Medical Research Council (Cambridge, UK)
2009 to present	AGAUR – Agència de Gestió d'Ajuts Universitaris i de Recerca, Generalitat de Catalunya
2008 to present	AQU – Agència per a la Qualitat del Sistema Universitari de Catalunya
2007	Children's Research Center of Michigan (CRCM) (Michigan, USA).
2006	<i>The ANT Young Scientist Award</i> (Enschede, The Netherlands)
2006	Biotechnology and Biological Sciences Research Council (United Kingdom)
2005-2015	European Science Foundation (Strasbourg, France)
2002	Community Fund, London (United Kingdom)
2002	European Commission: V Framework Programme: Accompanying Measures
2001	European Commission: V Framework Programme: Quality of Life: Neurosciences
2001	European Commission: V Framework Programme: Accompanying Measures
1996 to present	Agencia Nacional de Evaluación (ANEP), Spanish Ministry of Science and Education

Research grants

as PI or otherwise stated

University of Jyväskylä (Finland). Visiting Professorship. 1-30/ABR/2024. 5500€.

Catalan Government (AGAUR): Grups de Recerca Consolidats (2021SGR00356). *Brainlab-Cognitive Neuroscience Research Group*, 2022-2024. 60000 €.

Spanish Ministry of Science, Universities and Innovation: Maria de Maeztu Unit of Excellence Accreditation (CEX2021-001159-M). *Institute of Neurosciences of the University of Barcelona* (role: Trustee), 2022-2026. 2,000,000 € (Principal Investigator: Jordi Alberch).

Spanish Ministry of Science and Innovation: Excellence Projects (PID2021-122255NB-I00). *Predictive value of the neonatal frequency-following response (FFR) for neurocognitive development at the age of two years: genetic and environmental determinants*, 2023-2025. 197,714 € (+PhD position).

University of Jyväskylä (Finland). Visiting Professorship. 1-30/NOV/2022. 5500€.

Alicia Koplowitz Foundation (Madrid, Spain): Research funding on Childhood and Adolescence Psychiatry. *Fetal alcohol spectrum disorder (FASD): Early detection and risk biomarkers for neurocognitive alterations through the frequency-following response (FFR)*, 2020-2022. 45000 €.

Hospital Sant Joan de Déu (Barcelona). Carmen de Torres Research Grants 2020. *Frequency-following response (FFR) as biomarker for neurocognitive development in neonates with prenatal exposure to alcohol* (role: Co-PI), 2020-2022. 81000 €.

Spanish Ministry of Science, Innovation and Universities: Excellence Projects (PGC2018-094765-B-I00). *The Frequency-Following Response (FFR) in newborns and its role as a potential biomarker for neurocognitive development*, 2019-2021. 169,400 € (+PhD position).

Fundación Pero Salesa Cabo (Barcelona): Donation. *Aspectos del neurodesarrollo de la codificación de los sonidos del habla en recién nacidos e infantes mediante el registro de la respuesta de seguimiento de frecuencia (RSF)*, 2019. 4000 €.

European Research Council (ERC): Advanced Grant (grant agreement 787842). *ARTSOUNDSCAPES - The sound of special places: exploring rock art soundscapes and the sacred* (role: Principal Investigator of Psychophysics (RL2) and Cognitive Neuroscience (RL3) work packages), 2018-2023. ~ 316,000€ (total budget: 2,239,375 €).

Spanish Ministry of Science, Universities and Innovation: Maria de Maeztu Unit of Excellence Accreditation (MDM-2017-0729). *Institute of Neurosciences of the University of Barcelona* (role: Trustee), 2018-2022. 2,000,000 € (Principal Investigator: Jordi Alberch).

Catalan Government (AGAUR): Grups de Recerca Consolidats (SGR2017-974). *Brainlab-Cognitive Neuroscience Research Group*, 2017-2019. 35400 €.

Spanish Ministry of Economy and Knowledge: Excellence Projects (PSI2015-63664-P). *Subcortical contribution to auditory cognition*, 2016-2018. 112167 € (+PhD position).

Spanish Ministry of Economy and Knowledge: Europa Investigación (EUI2015-62659). *Subcortical contributions to auditory cognition*, 2015-2016. 4000 €.

Spanish Ministry of Economy and Knowledge: Adquisición de Equipamiento Científico (UNBA13-4E-2230). *Amplificador de EEG*, 2015-2016. 44000 €.

Spanish Ministry of Economy and Knowledge: Proyectos EXPLORA (PSI2013-49348EXP). *Subcortical Cognition*, 2015-2016. 36300 €.

Catalan Government (AGAUR): Grups de Recerca Consolidats (SGR2014-177). *Brainlab-Cognitive Neuroscience Research Group*, 2014-2016. 33600 €.

University of Barcelona: Funds to foster the participation in international research projects in the H2020 framework programme. *ICA – Improving Cognitive Audition*, 2014-2015. 3000 €.

European Commission: VII Framework Programme, Marie Curie Actions— International Outgoing Fellowships (IOF) (FP7-PEOPLE-2012-IOF). (PIOF-GA-2012-331251). *PredictiveCodingTime— Interactions between predictive coding and predictive timing in audition: characterizing the role of rhythm in repetition suppression through entrained brain oscillations* (role: Coordinator), 2013-2016. 254,926 €.

Spanish Ministry of Economy and Knowledge: Plan Nacional de I+D+i 2008-2011 (PSI2012-37174). *Regularity encoding and deviance detection on a distributed auditory subcortico-cortical network*, 2013-2015. 111,115 € (+PhD position).

Fundação Bial (Portugal): Research in Psychophysiology and Parapsychology call 10th (agreement 30/12). *Regularity encoding and deviance detection in the human auditory brainstem*, 2013-2014. 47500 €.

Alicia Koplowitz Foundation (Madrid, Spain): Research funding on Childhood and Adolescence Psychiatry. *Cortico-subcortical neurophysiologic mechanisms underlying language disorders in Autism spectrum disorders*, 2013-2014. 50000 €.

Catalan Government (AGAUR): Actuacions en l'Àmbit de la Divulgació Científica (ACAD2012-0068). *Neuroconcerts*, 2012. 5.000 €.

Spanish Foundation for Science and Technology (FECYT-Fundación Española para la Ciencia y la Tecnología): Programa de Promoción de la Cultura Científica y la Divulgación (FCT-12-5088). *neuroUB. Neurociencia, música y arte*, 2012-2013. 14000 €.

Fundação Bial (Portugal): Research in Psychophysiology and Parapsychology call 9th (agreement 37/10). *Psychophysiological mechanisms of hierarchical novelty detection in the human auditory brain*, 2011-2012. 43000 €.

European Commission: VII Framework Programm, Coordination Action, ERA-NET NEURON (NEURON-75-045). *Probing the Auditory Novelty System* (role: Coordinator), 2010-2012. Total budget: 600,000 €; University of Barcelona budget: 239,000 €.

Spanish Ministry of Science and Innovation: Plan Nacional de I+D+i 2008-2011 (PSI2009-08063). *Ultrafast auditory novelty detection in the human brain*, 2010-2012. 138,000 € (+PhD position).

Catalan Government (AGAUR): Grups de Recerca Consolidats (SGR2009-11). *Grup de Recerca en Neurociència Cognitiva*, 2009-2013. 46800 €.

Spanish Ministry of Science and Innovation: Programa de Acciones Complementarias (PSI2008-00968-E/PSIC). *Red de Neurociencia Cognitiva*, 2009-2011. 350,000 €.

Spanish Ministry of Science and Innovation: Acciones Integradas con Alemania (HA2008-0010). *The role of predictive models in auditory perception and attention*, with Leipzig Universität, 2009-2010. 11500 €.

Spanish Ministry of Science and Education: Programa Consolider-Ingenio 2010 (CDS2007-00012). *Bilingualism and Cognitive Neuroscience* (role: Leader of the Group “*Cognitive Neuroscience of Attention and Auditory Perception*”), 2007-2012. ~ 850,000 €.

Catalan Government (AGAUR): Grups de Recerca Consolidats (SGR2005-953). *Grup de Recerca en Neurociència Cognitiva*, 2005-2008. 50600 €.

Spanish Ministry of Science and Technology: Plan Nacional de I+D 2004-2007 (SEJ2006-000496/PSIC). *Cognitive set effects on brain responses to novelty: an integrated ERP and fMRI investigation*, 2007-2009. 85910 €.

Spanish Ministry of Education and Science: Acciones Integradas con Alemania (HA2005-0024). *The cognitive neuroscience of involuntary attention: A combined ERP and fMRI investigation*, with Bremen Universität, 2006-2007. 10040 €.

Spanish Ministry of Science and Technology: Plan Nacional de I+D 2000-2003 (BSO2003-002440). *Cerebral mechanisms of the exogenous control of attention*, 2003-2006. 114,800 € (+PhD position).

Catalan Government (DURSI): Thematic Network (XT2003-00084). *Cognitive event-related brain potentials in clinical neurophysiology*, 2003-2005

Catalan Government (DURSI): Thematic Network (XT2001-00036). *Cognitive event-related brain potentials in clinical neurophysiology*, 2001-2003. 5500 €.

Spanish Ministry of Education and Science: Acciones Integradas con Alemania (HA2000-0022). *Cerebral mechanisms of involuntary orienting of attention*, with Leipzig Universität, 2001-2002

Catalan Government (DGR): Accions Especials (2000ACES-0074). *Toward the understanding of human auditory function*, 2001

Spanish Ministry of Science and Technology: Acciones Especiales (AE00-0358). *Toward the understanding of human auditory function*, 2001

Spanish Ministry of Education and Science: Plan Nacional de I+D (PM99-0167). *Attention-deficit hyperactivity disorder: neuroelectric characterization of attentional dysfunctions*, 2000-2002. 25780 € (+PhD position).

European Commission, V Framework Programme: Human Potential Programme: High-Level Scientific Conferences (HPCF-CT1999-00187). *II International Congress on Mismatch Negativity and its Clinical Applications* (role: Coordinator), 2000. 19000 €.

European Commission, IV Framework Programme: Training and Mobility of Researchers (Marie Curie) (BMH4-98-5118). *Cerebral networks of involuntary attention revealed by combined ERP/MEG and fMRI brain imaging*, 1999. 21720 €.

Spanish Ministry of Education and Science: Research Projects (UE96-0038). *Electrophysiological assessment of normal and pathological cognitive brain function*, 1997-1998.

Catalan Government (DGR): Accions Especials (ACES98-65/8). *PROBRAIN: a non-invasive test of cognitive brain dysfunction*, 1999.

Spanish Ministry of Education and Science: Acciones Especiales (SAF98-1822-E). *PROBRAIN: a non-invasive test of cognitive brain dysfunction*, 1999.

European Commission: IV Framework Programme, BIOMED-2 (BMH4-CT96-0819). *Objective evaluation of brain function and dysfunction (COBRAIN)*, 1996-1998.

Spanish Ministry of Education and Science: Plan Nacional I+D (PB93-0802). *Sensory memory and attention: Neuroelectric localisation of related cerebral mechanisms*, 1994-1996.

Innovation and technology transfer contracts and grants

Catalan Government (AGAUR): Knowledge and Industry 2023 (Modality B. PRODUCTE) (2023PROD00099). *Dispositiu predictiu del neurodesenvolupament a dos anys basat en intel·ligència artificial aplicada a registres neonatals d'EEG*, February 2024-July 2025. 150000 €.

Fundació Bosch i Gimpera of the University of Barcelona: Program F2I – Mentor-in-Residence call 2023 (F2I-MiR-2023-001). *Device for predicting neurodevelopment outcomes at age two based on AI applied to neonatal EEG recordings to speech*, January-June 2024, 6000€.

Spanish Ministry of Science and Innovation: Proof of Concept call (PDC2022-133044-I00). *Predicting neurodevelopment delay in newborns born low weight with artificial intelligence applied to speech sound-related EEG (CLEVER-CHID)*, 2023-2024. 97750 €.

Fundació Bosch i Gimpera of the University of Barcelona: Program F2I – Proof of Concept call 2022 (F2I-PdCI-2022-001). *Eina predictiva del grau de neurodesenvolupament en nadons nascuts amb baix pes mitjançant intel·ligència artificial aplicada a registres d'EEG (CLEVER-CHILD)*, January-December 2023, 25000€.

Catalan Government (AGAUR): Knowledge and Industry 2021 (Modality A. LLAVOR) (2021LLAV00079). *Eina predictiva del neurodesenvolupament a dos anys en nadons nascuts amb baix pes mitjançant intel·ligència artificial aplicada a registres d'EEG*, October 2022-June 2023. 20000 €.

Innovation and Technology Transfer agreement with Soundev, SA (Hong Kong): *Scientific advice and public dissemination of Forbrain® empirical results*, April-July 2019. 7059 €.

Innovation and Technology Transfer agreement with Soundev, SA (Luxemburg): *Publication of Forbrain® empirical results – Forbrain-PUB*, November 2016-April 2018. 25500 €.

Innovation and Technology Transfer agreement with Soundev, SA (Luxemburg): *Phasic boosting of attentional capabilities with Forbrain®*, November 2015-June 2016. 50000 €.

Innovation and Technology Transfer agreement with Soundev, SA (Luxemburg): *A single-case study of phasic boosting of auditory processing and attentional strengthening with Forbrain®*, February-May 2015. 16960 €.

Innovation and Technology Transfer agreement with Soundev, SA (Luxemburg): *Scientific evaluation of Forbrain® principles of action*, April-June 2014. 7059 €.

Innovation agreement with Tomatis, SA (Luxemburg): *Scientific validation of the Tomatis effect: EEG recordings of sound encoding from brainstem to cerebral cortex - PILOT PHASE*, March-August 2014. 32947 €.

Awards

ICREA Acadèmia Distinguished Professorship. Institució Catalana de Recerca i Estudis Avançats (ICREA), Call 2020; 2021-2025

ICREA Acadèmia Distinguished Professorship. Institució Catalana de Recerca i Estudis Avançats (ICREA), Call 2015; 2016-2020

ICREA Acadèmia Distinguished Professorship. Institució Catalana de Recerca i Estudis Avançats (ICREA), Call 2010; 2011-2015

University of Barcelona and Spanish Ministry of Education and Science, Programa I3, Award for Intensification of Research Activities (Ayuda para la Intensificación de la Actividad Investigadora), 2010-2011

Spanish Ministry of Education and Science, Programa I3, Award for Intensification of Research Activities (Ayuda para la Intensificación de la Actividad Investigadora), 2008-2010

Premio a la investigación en el ámbito de la infancia, Fundació Agrupació Mútua (Barcelona), 2000

Ph.D. thesis

Ultradian rhythms in human brain function during wakefulness: event-related brain potentials and behaviour, University of Barcelona (supervisor: Dr. Carles Grau), 1988-1993

Post-doctoral training

Fellow and visiting researcher at the *Cognitive Brain Research Unit* (CBRU), Department of Psychology, University of Helsinki. Training in the cognitive electrophysiology and the cognitive neuroscience of involuntary attention, (supervision: Prof. Risto Näätänen and Prof. Kimmo Alho; 19 months altogether between 1993 and 1999)

Post-doc supervision

Dr. Natàlia Gorina-Careta. Postdoctoral contract under Spanish MICINN project (PID2021-122255NB-I00); period 01-07-2023 – 31/08/2025.

Dr. Amineh Koravand, PhD, Assistant Professor. Visiting scientist from School of Rehabilitation Sciences, Faculty of Health Sciences, University of Ottawa (Canada); period 01-09-2019-31-01-2020.

Dr. Marta Ortega-Llebaria, PhD, Assistant Professor. Visiting scientist from Department of Linguistics, University of Pittsburgh (PA, USA); period 01-01-2017 – 31-12-2017.

Dr. Tetsuya Shiga, MD. Visiting scientist from Fukushima Medical University (Japan); period: 01-04-2014 – 31-03-2015.

Dr. Piia Astikainen. Visiting scientist from Jyväskylä University (Finland); period: 01-09-2013 – 30-11-2013.

Dr. Jordi Costa-Faidella. International Outgoing Fellow of the Marie Skłodowska-Curie Actions (PIOF-GA-2012-331251); period: 01-10-2013 – 30-09-2016.

Dr. Raffaele Cacciaglia. Brainglot Consolider-Ingenio 2010 project (CSD2007-00012); period: 01-05-2012 – 31-12-2014.

Dr. Sumie Leung. ERANET-NEURON Project PANS (EUI2009-04086); period: 17-12-2010 – 16-06-2013.

Dr. Lavinia Slabu. Brainglot Consolider-Ingenio 2010 project (CSD2007-00012); period: 15-05-2008 – 14-01-2012.

Dr. Sabine Grimm. Brainglot Consolider-Ingenio 2010 project (CSD2007-00012); period: 15-05-2008 – 30-11-2009. Juan de la Cierva post-doc contract from the Spanish Ministry of Economy and Knowledge (MINECO); period: 1-12-2009 – 30-11-2012.

Ph.D. supervision

1. Marta Puertollano Rodríguez. *Early developmental trajectories in the encoding of speech sound features: the influence of sex and bilingualism*. University of Barcelona (International Doctorate Diploma). 2020-2024
2. Raquel Aparicio-Tarrés. *Neural correlates of the altered states of consciousness induced by acoustic stimulation*. University of Barcelona (International Doctorate Diploma). 2021-2024
3. Samantha López-Mochales. *Rock art soundscapes: Perception and emotions evoked by singular acoustic spaces*. University of Barcelona (International Doctorate Diploma). 2021-2024
4. Sonia Arenillas-Alcón. *Neural encoding of speech in newborns: voice pitch, formant structure and the effects of prenatal acoustic environment*. University of Barcelona (International Doctorate Diploma). 2019-2024
5. Teresa Ribas-Prats. *Detection of abnormal neural encoding of speech sounds at birth using the frequency-following response*. University of Barcelona (International Doctorate Diploma). 2018-2021
6. Vittoria Spinoso. *Motor-auditory interaction: a window towards associative and predictive processing*. University of Barcelona (International Doctorate Diploma). 2016-2019
7. Francisco López-Caballero. *Evoked and induced activity in the auditory nervous system: deviance detection and brainwave entrainment*. University of Barcelona (International Doctorate Diploma). 2016-2019
8. Natàlia Gorina-Careta. *Contribution of the subcortical auditory pathway to the perception and processing of sounds*. University of Barcelona (International Doctorate Diploma). 2015-2018
9. Lenka Selinger. *Genetic and emotional influences on auditory processing*. University of Barcelona (International Doctorate Diploma). 2013-2016
10. Sónia do Vale Fernandes. *Effects of Dehydroepiandrosterone on cognition: an electrophysiological approach*. Faculty of Medicine, University of Lisbon (Portugal). 2012-2016
11. Miriam Cornella. *Auditory regularity encoding in the human brain: cortical and subcortical mechanisms*. University of Barcelona (International Doctorate Diploma). 2012-2015
12. Marc Recasens. *Source localization of deviance detection and regularity encoding in the auditory brain*. University of Barcelona (International Doctorate Diploma). 2011-2014
13. Heike Althen. *The role of the human auditory Middle Latency Response in auditory novelty detection*. University of Barcelona (European Doctorate Diploma). 2010-2014
14. Mareike Finke. *Brain mechanisms of executive control: Event-related potentials and oscillations in schizophrenic patients and healthy controls during task-switching*. University of Barcelona (European Doctorate Diploma). 2009-2012
15. Jordi Costa-Faidella. *Regularity encoding in the auditory brain as revealed by human evoked potentials*. University of Barcelona (European Doctorate Diploma). 2008-2011
16. Manuel Garcia-Garcia. *The role of COMT, DAT and DRD2 polymorphisms on brain mechanisms of involuntary attention and cognitive control*. University of Barcelona (European Doctorate Diploma). 2006-2009
17. Iria San Miguel. *Working memory influences on auditory novelty processing in the human brain*. University of Barcelona (European Doctorate Diploma). 2005-2008
18. Judith Domínguez. *Gating of auditory novelty processing by emotional context*. University of Barcelona (European Doctorate Diploma). 2004-2008
19. Maria José Corral. *Electrophysiological indexes of the detection and processing of auditory distractors*. University of Barcelona (European Doctorate Diploma). 2001-2008

20. Vanessa Carral. *Electrophysiology of abstract auditory processing in human adults and newborns*. University of Barcelona (European Doctorate Diploma). 2002-2007
21. Sílvia Corbera. *A neurophysiological investigation of high-order auditory processing in developmental stuttering and dyslexia*. University of Barcelona. 2002-2006
22. Elena Yago Soto. *Cerebral networks of involuntary attention: a behavioural and electrophysiological study*. University of Barcelona. 1997-2002
23. Rosa Díaz Hurtado. *Psychophysiological markers in children at high risk for alcoholism*. University of Barcelona. 1993-2000
24. Ma. Dolores Polo Guillén. *Attention mechanisms and auditory sensory memory in chronic alcoholics: Mismatch Negativity (MMN) and P300*. University of Barcelona. 1993-1999

Most relevant invited lectures and keynote speeches

Keynote speech: *¿Cómo saber lo que realmente escucha el paciente audiológico? Insights mediante la respuesta de seguimiento de frecuencia (RSF)*
II Jornadas de Audiología, Sociedad Española de Graduados en Audiología, Madrid, Noviembre 2024

Invited lecture: *Neonatal frequency-following responses*
The Frequency-Following Response (FFR) Workshop 2024, Chicago (USA), June 2024

Invited lecture: *Neonatal and infant frequency following-responses (FFR)*
University of Jyväskylä (Finland), April 2024

Invited lecture: *Neural mechanisms for early speech sound neural encoding: insights from the frequency-following responses*
Auditory Development Workshop (Paris, France), November 2023

Invited lecture: *Insights into the neural encoding of speech sounds in neonates and infants from the frequency-following response*
Pompeu Fabra University (Barcelona, Spain), February 2023

Invited lecture: *Neural encoding of speech sounds in neonates and infants: developmental trajectory and modulating factors*
University of Aix-Marseille (France), January 2023

Invited lecture: *Maturational changes in the frequency-following response (FFR) during early language acquisition*.
Behavioral and Brain Science Seminar 2022, Jyväskylä (Finland), November 2022

Invited lecture: *Neural encoding of speech sounds in neonates and infants as revealed with frequency-following responses*
University of Helsinki (Finland), November 2022

Invited lecture: *Event-related brain potentials as biomarkers in neuropsychiatric and neurodevelopmental disorders*
Fukushima Medical University (Fukushima, Japan), September 2022

Keynote speech: *Neural encoding of speech sounds at birth and during early development*
The 9th Mismatch Negativity Conference (MMN2022) (Fukushima, Japan), September 2022

Keynote speech: *Neonatal frequency-following responses: challenges, promises and applications*
II CINEA - International Congress of Electrophysiology for Audiology (Brazil; online event), November 2021

Invited lecture: *Neural mechanisms of auditory cognition: basic research and clinical applications*
Sant Joan de Déu Barcelona Children's Hospital (Spain; online event), October 2021

Invited lecture: *Neural mechanisms of auditory cognition*
Universidad Autónoma Nacional de México (Mexico; online event), September 2021

Invited lecture: *Neural mechanisms of subcortical auditory cognition: insights from the human frequency-following response*
Northwestern University (Evanston, IL, USA), October 2019

Invited lecture: *Neural mechanisms of speech encoding in the auditory brain: insights from human auditory evoked potentials*
The Graduate Center, City University of New York (New York City, USA), October 2019

Invited lecture: *Auditory evoked potentials to investigate the neural mechanisms of auditory cognition*
Federal University of Rio Grande do Norte (Natal/RN, Brazil), July 2019

Invited lecture: *Subcortical auditory cognition: repetition suppression versus prediction error, and the role of the frequency-following response (FFR)*
University of Tours (France), June 2019

Invited lecture: *The frequency-following response (FFR) as a predictor for neurocognitive development*
XVI Congreso Nacional de la Asociación Española de Audiología (AEDA), Madrid (Spain), May 2019

Invited lecture: *Cerebral mechanisms of auditory encoding: new assessment tools with evoked potentials retrieved from the EEG*
CREDA-Centre de Recursos Educatius per a Deficients Auditius. Departament of Education, Generalitat de Catalunya (Spain), April 2019

Invited lecture: *Neurosciences meets Archeology: Brain activity patterns associated to mental states*
Department of History and Archeology, University of Barcelona (Spain), November 2018

Invited lecture: *Neurocognitive mechanisms in audition as revealed with the Frequency-Following Response*
University of Toronto (Canada), October 2018

Invited lecture: *Marcadors electrofisiològics cerebrals de funció cognitiva en neonatologia i neuropediatria*
Institut de Recerca Sant Joan de Déu, Barcelona (Spain), February 2018

Invited lecture: *Neurocognitive mechanisms along the auditory hierarchy*
Lyon Neuroscience Research Centre, INSERM (France), September 2016

Keynote speech: *Phasic boosting of attentional capabilities with Forbrain®*
Tomatis Convention (Paris, France), May 2016

Invited lecture: *Neurocognitive mechanisms along the auditory hierarchy*
University of Helsinki (Finland), April 2016

Invited lecture: *Learning complex acoustic contingencies in the subcortical auditory pathway*
University of Jyväskylä (Finland), January 2016

Invited lecture: *The role of auditory brainstem in regularity encoding and deviance detection*
University Pompeu Fabra (Barcelona, Spain), October 2015

Keynote speech: *Mecanismos cerebrales de codificación de la información auditiva y sus alteraciones*
XII Congreso Nacional de la Asociación Española de Audiología (Madrid, Spain), June 2015

Invited lecture: *The contribution of cognitive neuroscience to neurology and psychiatry*
Fukushima Medical University (Fukushima, Japan), October 2014

Invited lecture: *Regularity encoding and deviance detection as a basic auditory function: contributions from psychophysiology*
Fukushima Medical University (Fukushima, Japan), September 2014

Keynote speech: *Tagging the acoustic world: regularity encoding from brainstem to cerebral cortex*
17th World Congress of Psychophysiology – IOP2014 (Hiroshima, Japan), September 2014

Keynote speech: *Neural mechanisms of auditory perception: regularity encoding and deviance detection from brainstem to cortex*
Neuronus 2014 – IBRO & IRUN Neuroscience Forum (Krakow, Poland), April 2014

Invited lecture: *Deviance detection along the auditory hierarchy: converging evidence from various human methodological approaches.*
University of Leipzig (Germany), December 2013

Opening lecture academic year 2012-2013: *The concept of neural representation in Cognitive Neuroscience*
University of Barcelona (Spain), October 2012

Invited lecture: *Subcortico-cortical mechanisms of auditory deviance detection*
University of Geneva (Switzerland), May 2012

Keynote speech: *Fast subcortico-cortical networks subserving auditory novelty detection*

XI ICON- International Conference on Cognitive Neuroscience (Palma de Mallorca, Spain), September 2011

Invited lecture: *Early cerebral mechanisms of auditory perception*
Fukushima Medical University (Fukushima, Japan), 2010

Invited lecture: *The auditory novelty system*
National University of Singapore (Singapore), 2010

Invited lecture: *The auditory novelty system [mecanismos cerebrales del control exógeno de la atención]*
Universitat de València (Spain), 2009

Invited lecture: *Perfiles biomagnéticos de la atención*
Hospital Universitario Ramón y Cajal, Madrid (Spain), 2009

Invited lecture: *El cervell: La màquina de pensar i sentir*
Citilab Cornellà, Cornellà de Llobregat (Barcelona, Spain) – L’Herència de Darwin, 2009

Invited lecture: *The Catalan Connection*
University of Helsinki (Finland) – Risto Näätänen’s portrait unveiling ceremony, 2008

Invited lecture: *Contextual modulation of involuntary attention: behavioral, electrophysiological and haemodynamic evidence*
Department of Psychology, Universität München (Germany), 2007

Invited lecture: *Distraction and the brain*
Center for Cognitive Neuroscience, University of Bangor (Wales, UK), 2006

Invited lecture: *Bases neurobiológicas de la dislexia verbal*
Universidade de A Coruña (Spain), 2006

Invited lecture: *Top-down modulation of auditory stimulus-driven involuntary attention*
Institut für Psychologie I, Universität Leipzig (Germany), 2005

Invited lecture: *Functional neuroimaging of working memory/involuntary attention interactions*
Center for Advanced Imaging, Universität Bremen (Germany), 2005

Invited lecture: *An event-related brain potential investigation of top-down/bottom-up interactions in involuntary attention*
School of Psychology, University of Plymouth (UK), 2005.

Invited lecture: *Pay attention to me and ignore the background sound, if you are able to...*
Universität Oldenburg (Germany), 2005

Invited lecture: *Attention please, or the speaker’s fight against listener’s distraction*
Hanse Institute for Advanced Study, Delmenhorst (Germany), 2004

Invited lecture: *Attention, sounds, and distracters... and the brain in between*
Institut für Experimentelle Psychologie, Universität Regensburg (Germany), 2004

Invited lecture: *Evaluación de la función cognitiva mediante potenciales evocados*
Magister en Neuropsicología, Universidad Complutense de Madrid (Spain), 2004

Invited lecture: *Organización funcional del sistema auditivo: La detección de la novedad como principio fundamental*
Departamento de Psicología, Universitat de les Illes Balears (Spain), 2004

Invited lecture: *Funciones cognitivas del sistema auditivo: estudio en humanos con potenciales evocados*
Instituto de Neurociencias de Castilla y León (INCyL), Universidad de Salamanca (Spain), 2003

Invited lecture: *Electrophysiological investigation of neurocognitive deficits in chronic alcoholism*
Department of Neuropsychiatry, University of Hirosaki (Japan), 2001

Invited lecture: *Behavioral and electromagnetic studies of involuntary attention*
Cognitive Brain Research Unit, Department of Psychology, University of Helsinki (Finland), 1999

Conference organization

President of Organizing/Scientific Committee

IV Frequency-Following Response (FFR) Workshop, Barcelona (Spain), 2022
Neuroscience and Law Workshop, Faculty of Law, University of Barcelona (Spain), November 2017

VIII Congreso Español de Psicofisiología, Barcelona (Spain), 2012
IV Congreso Español de Psicofisiología, Sevilla (Spain), 2004
III Congreso Español de Psicofisiología, Santiago de Compostela (Spain), 2002
II International Congress on Mismatch Negativity and its Clinical Applications, Barcelona (Spain), 2000
I International Workshop on Mismatch Negativity and its Clinical Applications, Helsinki (Finland), 1998

Member of Scientific/Program Committee

V Frequency-Following Response (FFR) Workshop, Chicago (USA), 2024
10th Mismatch Negativity conference, Salamanca (Spain) 2024
9th Mismatch Negativity conference, Fukushima (Japan) 2022
8th Mismatch Negativity conference “MMN from basic science to clinical applications”, Helsinki (Finland) 2018
Error Signals from the Brain: 7th Mismatch Negativity Conference, Leipzig (Germany) 2015
Doctoral Consortium of Affective and Computing Intelligent Interaction (ACII 2013). Geneva (Switzerland) 2013
Sixth Conference on Mismatch Negativity (MMN) and its Clinical and Scientific Applications, New York (USA) 2012
International Conference on Cognitive Neuroscience (ICON XI), Palma de Mallorca (Spain), 2011
Fifth Conference on Mismatch Negativity (MMN) and its Clinical and Scientific Applications, Budapest (Hungary), 2009
14th World Congress of Psychophysiology (IOP), Saint Petersburg (Russia), 2008
13th World Congress of Psychophysiology (IOP), Istanbul (Turkey), 2006
VI Congress of the Federation of European Psychophysiology Societies (FEPS6), Budapest (Hungary), 2006
4th international Conference on MMN and its Clinical and Scientific Applications, Cambridge (UK), 2006
12th World Congress of Psychophysiology (IOP), Thessaloniki (Greece), 2004
EPIC XIV: Evoked Potential International Conference, Leipzig (Germany), 2004
V Congress of the Federation of European Psychophysiology Societies (FEPS5), Bordeaux (France), 2003
III International Workshop on MMN and Auditory Function and Dysfunction (MMN03), Lyon (France), 2003
11th World Congress of Psychophysiology (IOP), Montreal (Canada), 2002
II International Congress on Mismatch Negativity and its Clinical Applications, Barcelona (Spain), 2000
39 Annual Meeting of the Society for Psychophysiological Research (SPR), Granada (Spain), 1999
I International Workshop on Mismatch Negativity and its Clinical Applications (MMN98), Helsinki (Finland), 1998

Publications

Peer-reviewed journals

1. Grau, C., Escera, C. & Segarra, M.D. (1988). Ultradian rhythms in human mobility. *Medical Science Research*, 16, 1155-1156.
2. Escera, C., Cilveti, R. & Grau, C. (1992). Ultradian rhythms in cognitive operations: Evidence from the P3 component of the ERPs. *Medical Science Research*, 20, 137-138.
3. Cilveti, R., Escera, C., Polo, M.D. & Grau, C. (1993). Persistence of ultradian rhythms in 5 out of 15 minutes of unrestrained mobility. *Medical Science Research*, 21, 53-54.
4. Escera, C. & Grau, C. (1994). Ultradian rhythms in selective auditory attention performance. *International Journal of Neuroscience*, 79, 143-155.
5. Grau, C., Escera, C., Cilveti, R., García, M., Fernández, JR., Mojón, A. & Hermida, R. (1995). Ultradian rhythms in gross motor activity of adult humans. *Physiology and Behaviour*, 57, 411-419.
6. Escera, C. & Grau, C. (1996). Short-term replicability of the mismatch negativity. *Electroencephalography and Clinical Neurophysiology*, 100, 549-554.
7. Serra, J.M., Escera, C., Sánchez-Turet, M., Sánchez-Sastre, J. & Grau, C. (1996). The H₁-receptor antagonist chlorpheniramine decreases the ending phase of the mismatch negativity of the human auditory event-related potentials. *Neuroscience Letters*, 203, 77-80.
8. Jääskeläinen, I., Alho, K., Escera, C., Winkler, I., Sillanauke, P. & Näätänen, R. (1996). Effects of ethanol and auditory distraction on forced choice reaction time. *Alcohol*, 13, 153-156.
9. Escera, C. (1997). Nuevas aplicaciones clínicas de los potenciales evocados: *Mismatch Negativity*. *Medicina Clínica*, 108, 701-708.
10. Alho, K., Escera, C., Díaz, R., Yago, E. & Serra, J.M. (1997). Effects of involuntary auditory attention on visual task performance and brain activity. *Neuroreport*, 8, 3233-3237.
11. Escera, C., Alho, K., Winkler, I. & Näätänen, R. (1998). Neural mechanisms of involuntary attention to acoustic novelty and change. *Journal of Cognitive Neuroscience*, 10, 590-604.
12. Grau, C., Escera, C., Yago, E. & Polo, M.D. (1998). Mismatch Negativity and auditory sensory memory evaluation: A new faster paradigm. *Neuroreport*, 9, 2451-2456.
13. Alho, K., Winkler, I., Escera, C., Huotilainen, M., Virtanen, J., Jääskeläinen, I., Pekkonen, E. & Ilmoniemi, R. (1998). Processing of novel sounds and frequency changes in the human auditory cortex: Magnetoencephalographic recordings. *Psychophysiology*, 35, 211-224.
14. Huotilainen, M., Winkler, I., Alho, K., Escera, C., Virtanen, J., Jääskeläinen, I., Pekkonen, E., Ilmoniemi, R. & Näätänen, R. (1998). Combined mapping of human auditory EEG and MEG responses. *Electroencephalography and Clinical Neurophysiology*, 108, 370-379.
15. Kaipio, M.L., Alho, K., Winkler, I., Escera, C., Surma-aho, O. & Näätänen, R. (1999). Event-related potentials reveal covert distractibility in closed head injuries. *Neuroreport*, 10, 2125-2129.
16. Polo, M.D., Escera, C., Gual, C. & Grau, C. (1999). Mismatch negativity and auditory sensory memory in chronic alcoholics. *Alcoholism: Clinical and Experimental Research*, 23, 1744-1750.
17. Escera, C., Yago, E., Polo, M.D. & Grau, C. (2000). The individual replicability of mismatch negativity at short and long inter-stimulus intervals. *Clinical Neurophysiology*, 111, 546-551.
18. Escera, C., Alho, K., Schröger, E. & Winkler, I. (2000). Involuntary attention and distractibility as evaluated with event-related brain potentials. *Audiology & Neuro-Otology*, 5, 151-166.
19. Näätänen, R. & Escera, C. (2000). Mismatch negativity (MMN): Clinical and other applications. *Audiology & Neuro-Otology*, 5, 105-110.
20. Amenedo, E. & Escera, C. (2000). The accuracy of sound duration representation in the human brain determines the accuracy of behavioural perception. *European Journal of Neuroscience*, 12, 2570-2574.
21. Ahveninen, J., Escera, C., Polo, M.D., Grau, C. & Jääskeläinen, I. (2000). Acute and chronic effects of alcohol on pre-attentive auditory processing. *Audiology & Neuro-Otology*, 5, 303-311.
22. Grau, C., Polo, M.D., Yago, E., Gual, A. & Escera, C. (2001). Shorter duration of auditory sensory memory in chronic alcoholics. *Clinical Neurophysiology*, 112, 728-731.
23. Novitski, N., Alho, K., Korzyukov, O., Carlson, S., Martinkauppi, S., Escera, C., Rinne, T., Aronen, H.J., Näätänen, R. (2001). Effects of acoustic noise of functional magnetic resonance imaging on the processing of auditory stimuli and change as reflected by event-related brain potentials. *Neuroimage*, 14, 244-251.

24. Yago, E., Escera, C., Alho, K. & Giard, M.H. (2001). Cerebral mechanisms underlying orienting of attention towards auditory frequency changes. *Neuroreport*, 12, 2583-2587.
25. Escera, C., Yago, E. & Alho, K. (2001). Electrical responses reveal the temporal dynamics of brain events during involuntary attention switching. *European Journal of Neuroscience*, 14, 877-883.
26. Atienza, M., Cantero, J.L. & Escera, C. (2001). Auditory information processing during human sleep as revealed by event-related brain potentials. *Clinical Neurophysiology*, 112, 2031-2045.
27. Gumenyuk, V., Korzyukov, O., Alho, K., Escera, C., Schröger, E., Ilmoniemi, R.J. & Näätänen, R. (2001). Brain activity indices of distractibility in healthy children of school age. *Neuroscience Letters*, 314, 147-150.
28. Serra, J.M., Grau, C., Escera, C. & Sánchez-Turet, M. (2001). The H1-receptor antagonist dextro-Chlorpheniramine impairs selective auditory attention in the absence of subjective awareness of this impairment. *Journal of Clinical Psychopharmacology*, 21, 599-602.
29. Yago, E., Corral, M.J. & Escera, C. (2001). Activation of the brain network of involuntary attention as a function of auditory frequency change. *Neuroreport*, 12, 4093-4097.
30. Polo, M.D., Newton, P., Rogers, D., Escera, C. & Butler, S.R. (2002). ERP and behavioural indices of long-term preattentive and attentive deficits after closed head injury. *Neuropsychologia*, 40, 2350-2359.
31. Escera, C., Corral, M.J. & Yago, E. (2002). An electrophysiological and behavioral investigation of involuntary attention towards auditory frequency, duration and intensity changes. *Cognitive Brain Research*, 14, 325-332.
32. Polo, M.D., Escera, C., Yago, E., Alho, K., Gual, A., & Grau, C. (2003). Electrophysiological evidence of abnormal activation of the cerebral network of involuntary attention in alcoholism. *Clinical Neurophysiology*, 114, 134-146.
33. Atienza, M., Cantero, J.L., Grau, C., Gómez, C., Domínguez-Marín, E. & Escera, C. (2003). Effects of temporal encoding on auditory object formation: a mismatch negativity study. *Cognitive Brain Research*, 16, 359-371.
34. Yago, E., Escera, C., Alho, K., Giard, M.H. & Serra-Grabulosa, J.M. (2003). Spatiotemporal dynamics of the auditory novelty-P3 event-related brain potential. *Cognitive Brain Research*, 16, 383-390.
35. Escera, C., Yago, E., Corral, M.J., Corbera, S. & Nuñez, M.I. (2003). Attention capture by auditory significant stimuli: semantic analysis follows attention switching. *European Journal of Neuroscience*, 18, 2408-2412.
36. Gumenyuk, V., Korzyukov, O., Alho, K., Escera, C. & Näätänen, R. (2004). Effects of auditory distraction on electrophysiological brain activity and performance in children aged 8 – 14 years. *Psychophysiology*, 41, 30-36.
37. Nuñez-Peña, M.I., Honrubia, M.L. & Escera, C. (2005). Problem size effect in additions and subtractions: An ERP study. *Neuroscience Letters*, 373, 21-25.
38. Gumenyuk, V., Korzyukov, O., Escera, C., Hämäläinen, M., Huottilainen, M., Häyriinen, T., Oksanen, H., Näätänen, R., von Wendt, L. & Alho, K. (2005). Electrophysiological evidence of enhanced distractibility in ADHD children. *Neuroscience Letters*, 374, 212-217.
39. Carral, V., Corral, M.J. & Escera, C. (2005). Auditory event-related potentials as a function of abstract change magnitude. *Neuroreport*, 16, 301-305.
40. Nuñez-Peña, M.I., Aznar, J.A., Linares, D., Corral, M.J. & Escera, C. (2005). Effects of dynamic rotation on event-related brain potentials. *Cognitive Brain Research*, 24, 307-316.
41. Carral, V., Huottilainen, M., Rusuuvirta, T., Fellman, V., Näätänen, R. & Escera, C. (2005). A kind of auditory “primitive” intelligence already present at birth. *European Journal of Neuroscience*, 21, 3201-3204.
42. Corbera, S., Corral, M.J., Escera, C. & Idiazábal, M.A. (2005). Abnormal speech sound representation in developmental stuttering. *Neurology*, 65, 1246-1252.
43. Nuñez-Peña, M.I., Cortiñas, M. & Escera, C. (2006). Problem size effect and processing strategies in mental arithmetics. *Neuroreport*, 17, 357-360.
44. Corbera, S., Escera, C. & Artigas, J. (2006). Impaired duration mismatch negativity in developmental dyslexia. *NeuroReport*, 17, 1051-1055.
45. Andrés, P., Parmentier, F.B.R. & Escera, C. (2006). The effect of age on the involuntary capture of attention by irrelevant sounds: a test of the frontal hypothesis of aging. *Neuropsychologia*, 44, 2564-2568.
46. Barceló, F., Escera, C., Corral, M.J. & Periañez, J.A. (2006). Task switching and novelty processing activate a common neural network for cognitive control. *Journal of Cognitive Neuroscience*, 18, 1734-1748.
47. Nuñez-Peña, M.I. & Escera, C. (2007). Effects of rule violation on arithmetical sequence processing. *International Journal of Psychophysiology*, 64, 165-173.
48. Marco, J., Ruffini, G., Polo, M.D., Gual, A., Escera, C. & Grau, C. (2007). Mismatch negativity impairment associated with alcohol consumption in chronic alcoholics: A scalp current density study. *International Journal of Psychophysiology*, 65, 51-57.

49. Tubau, E., Escera, C., Carral, V. & Corral, M.J. (2007). Individual differences in sequence learning: The role of auditory pattern sensitivity as revealed with evoked potentials. *European Journal of Neuroscience*, 26, 261-264.
50. Escera, C. & Corral, M.J. (2007). Role of mismatch negativity and novelty-P3 in involuntary auditory attention. *Journal of Psychophysiology*, 21, 251-264.
51. Escera, C. (2007). The mismatch negativity (MMN) thirty years later: How far have we come? *Journal of Psychophysiology*, 21, 129-132.
52. Vázquez-Marrufo, M., González-Rosa, J.J., Vaquero, E., Duque, P., Escera, C., Borges, M., Izquierdo, G., & Gómez, C.M. (2008). Abnormal ERPs and high frequency bands power in multiple sclerosis. *International Journal of Neuroscience*, 118, 27-38.
53. Parmentier, F., Elford, G., Escera, C., Andrés, P. & SanMiguel, I. (2008). The cognitive locus of auditory distraction by acoustic novelty in the cross-modal oddball task. *Cognition*, 106, 408-432.
54. Domínguez-Borràs, J., Garcia-Garcia, M. & Escera, C. (2008). Negative emotional context enhances auditory novelty processing. *Neuroreport*, 19, 503-507.
55. SanMiguel, I., Corral, M.J. & Escera, C. (2008). When loading working memory reduces distraction: Behavioral and electrophysiological evidence from an auditory-visual distraction paradigm. *Journal of Cognitive Neuroscience*, 20(7), 1131-1145.
56. Cortiñas, M., Corral, M.J., Garrido, G., Garolera, M., Pajares, M., & Escera, C.^{CA} (2008). Reduced novelty-P3 associated with increased behavioral distractibility in schizophrenia. *Biological Psychology*, 78, 253-260.
57. Corral, M.J. & Escera, C. (2008). Effects of sound location on visual task performance and electrophysiological measures of distraction. *Neuroreport*, 19, 1535-1539.
58. Garcia-Garcia, M., Domínguez-Borràs, J., SanMiguel, I., Escera, C. (2008). Electrophysiological and behavioral evidence of gender differences in the modulation of distraction by the emotional context. *Biological Psychology*, 79, 307-316.
59. Domínguez-Borràs, J., Garcia-Garcia, M., & Escera, C. (2008). Emotional context enhances auditory novelty processing: behavioural and electrophysiological evidence. *European Journal of Neuroscience*, 28, 1199-1206.
60. Díaz, B., Baus, C., Escera, C., Costa, A., & Sebastián-Gallés, N. (2008). Brain potentials reveal the origin of individual differences in learning the sounds of a second language. *Proceedings of the National Academy of Sciences*, 105, 16083-16088.
61. Domínguez-Borràs, J., Trautmann, S., Erhard, P., Fehr, T., Herrmann, M., & Escera, C. (2009). Emotional context enhances auditory novelty processing in superior temporal gyrus. *Cerebral Cortex*, 19, 1521-1529.
62. Fuentemilla, L., Marco-Pallarés, J., Gual, A., Escera, C., Polo, M.D., & Grau, C. (2009). Impaired theta phase-resetting underlying auditory N1 suppression in chronic alcoholism. *Neuroreport*, 20, 337-342.
63. Garcia-Garcia, M., Yordanova, J., Kolev, V., Domínguez-Borràs, J., & Escera, C. (2010). Tuning the brain for novelty detection under emotional threat: The role of increasing gamma phase-synchronization. *Neuroimage*, 49, 1038-1044.
64. Garcia-Garcia, M., Barceló, F., Clemente, I.C., & Escera, C. (2010). The role of the Dopamine Transporter DAT1 genotype on the neural correlates of cognitive flexibility. *European Journal of Neuroscience*, 31, 754-760.
65. Garcia-Garcia, M., Clemente, I., Domínguez-Borràs, J., & Escera, C. (2010). Dopamine transporter regulates the enhancement of novelty processing by a negative emotional context. *Neuropsychologia*, 48, 1483-1488.
66. SanMiguel, I., Morgan, H.M., Klein, C., Linden, D., & Escera, C. (2010). On the functional significance of Novelty-P3: Facilitation by unexpected novel sounds. *Biological Psychology*, 83, 143-152.
67. SanMiguel, I., Linden, D., & Escera, C. (2010). Attention capture by novel sounds: Distraction versus facilitation. *European Journal of Cognitive Psychology*, 22, 481-515.
68. Slabu, L.M., Escera, C., Grimm, S., & Costa-Faidella, J. (2010). Early change detection in humans as revealed by auditory brainstem and middle-latency evoked potentials. *European Journal of Neuroscience*, 32, 859-865.
69. Garcia-Garcia, M., Barceló, F., Clemente, I., & Escera, C. (2010). The role of DAT1 gene on the rapid detection of task novelty. *Neuropsychologia*, 48, 4136-4141.
70. Grimm, S., Escera, C., Slabu, L.M., & Costa-Faidella, J. (2011). Electrophysiological evidence for the hierarchical organization of auditory change detection in the human brain. *Psychophysiology*, 48, 377-384.
71. Costa-Faidella, J., Grimm, S., Slabu, L., Díaz-Santaella, F., & Escera, C. (2011). Multiple time scales of adaptation in the auditory system as revealed by human evoked potentials. *Psychophysiology*, 48, 774-783.
72. Garcia-Garcia, M., Barceló, F., Clemente, I., & Escera, C. (2011). COMT and ANKK1 gene-gene interaction modulates contextual updating of mental representations. *Neuroimage*, 56, 1641-1647.

73. Näätänen, R., Kujala, T., Kreegipuu, K., Carlson, S., Escera, C., Baldeweg, T. & Curtis, P. (2011). The mismatch negativity: An index of cognitive decline in neuropsychiatric and neurological diseases and in aging. *Brain*, 134, 3432-3450.
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