

Curriculum Vitae

EMMA PUIGHERMANAL PUIGVERT

Personal information

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Education

- 2008 - 2011 **PhD in Biomedicine** (*Excellent cum laude*) at Neuropharmacology Lab under the supervision of Prof. Maldonado and Dr. Ozaita. Pompeu Fabra University. Barcelona (Spain).
- 2006 - 2008 **Master in Neuroscience** at University of Barcelona (Spain), obtained with highest Honors.
- 2001 - 2006 **B.S. in Human Biology** at Pompeu Fabra University. Barcelona (Spain), obtained with Honors.

Professional experience

- 2018-present Post-doctoral fellow at Mitochondrial Neuropathology Lab (Universitat Autònoma Barcelona) under the supervision of Dr. Quintana (Spain)
- 2012 - 2017 Post-doctoral fellow at Neural Circuits and Signal Transduction Lab (Institut de Génomique Fonctionnelle) under the supervision of Dr. Valjent. Montpellier (France)
- 2017 Visiting post-doc student at Jun Ding Lab (Stanford University, California, USA) (3 months)
- 2008 - 2011 PhD student at Neuropharmacology Lab. Pompeu Fabra University (Spain)
- 2010 Graduate internship at Neurophysiology of Basal Ganglia and Regulation by Cannabinoids Lab (IDIBAPS) under the supervision of Dr. Robbe. Barcelona (Spain) (6 months)
- 2009 Graduate internship at Cellular & Systems Neurobiology Lab (CRG) under the supervision of Dr. Dierssen. Barcelona (Spain) (1 month)
- 2005 - 2006 Visiting undergraduate student at Neuropharmacology Lab (Pompeu Fabra University) under the supervision of Prof. Maldonado and Dr. Ozaita. Barcelona (Spain) (9 months)
- 2004 Visiting undergraduate student at Centre Universitaire de Santé McGill (Royal Victoria Hospital) under the supervision of Prof. Kristof. Montréal (Canada) (2 months)
- 2003 Visiting undergraduate student at Evolutionary Genomics (GRIB, Pompeu Fabra University) under the supervision of Dr. Alba. Barcelona (Spain) (2 months)
- Participation in Alternative Splicing Database Consortium at the Institut Für Biochemie (Universität Erlangen-Nürnberg) under the supervision of Prof. Stamm. Nürnberg (Germany) (1 month)

Grants and fellowships

- 2018 **Beatriu de Pinós fellowship** (co-founded between the *European Union* and the *Government of Catalonia*) (2 years)
- 2017 **Stanford Visiting Junior Scholar fellowship** (from *France-Stanford Center for Interdisciplinary Studies*) (3 months)
- 2015 **NARSAD Young Investigator Grant** (from *Brain & Behavior Research Foundation, USA*) (2 years)

PERC-IBRO Support Grant for Symposia and Conferences organization

2014 **Marie Curie Intra-European fellowship** (from *Research & Innovation, European Commission*) (2 years)

Travel grant to attend the 9th FENS Forum of Neuroscience. Milan (Italy)

MCCS-IBRO/PERC Travel grant to attend the 5th EMCCS-FENS forum meeting. Milan (Italy)

2012 **EMBO Long-Term fellowship** (2 years)

Beatriu de Pinós (BP-A) fellowship (co-founded between the *European Union* and the *Government of Catalonia*) (2 years)

2007 Formación del Profesorado Universitario (FPU) doctoral fellowship (from the *Ministry of Education and Sciences* of Spanish Government) (4 years)

Fondo de Investigación en Salud (FIS) doctoral fellowship from *Instituto de Salud Carlos III* (4 years)

Prizes and awards

2016 Soroptimist Women in Science 2016 (France)

2015 Best talk Award at the Young Neuroscience Symposium. Saint Martin de Londres (France)

2013 **Extraordinary Award** for the best thesis in Biomedicine of Pompeu Fabra University (Spain)

Best poster at the 12th International IFR83 meeting "*Cellular aspects of mRNA fate*" (France)

2011 12th **Esteve Foundation Research Prize**. Issued by Esteve Foundation (Spain)

Best publication of 2011 Award. Issued by the Spanish Society for Cannabinoid Research (Spain)

2010 **José Antonio Salvá Prize**. Issued by Catalan Society of Pharmacology (Spain)

2009 Best poster prize in the Summer School "*Stress, drug addiction and eating disorders*" of Programme of European Neuroscience Schools (Croatia)

2006 Best oral communication at the 7th Annual meeting of the Spanish Society for Cannabinoid Research (Spain)

Patent

Inventors: A. Ozaita, [E. Puighermanal](#), A. Busquets, R. Maldonado. (Number of application: EP11175435.4)

Title: Temsirolimus for use in the prevention and/or treatment of a delta 9-tetrahydrocannabinol-induced anxiety disorder

Scientific output

Publications: 17 (10 first-author, 3 last-author, 4 corresponding author).

Conference participations: 14 talks + 38 poster presentations

Invited presentations: -5th EMCCS-FENS forum meeting. Milan, Italy (2014)

-Les journées de l'Albatros (3ème édition). Paris, France (2009)

-Addictive Disorders Network (RTA). Tarragona, Spain (2009)

Mentoring activities: Supervision/co-supervision of 1 technician and 10 undergraduate/master students (during my PhD) and 1 technician, 4 undergraduate/master students and 3 PhD students (during my postdoc)

Publications (reverse chronological order)

- [Puighermanal E](#) and Valjent E. *Neuronal mRNA Translation in Addiction*. In (Ed), The **Oxford Handbook** of Neuronal Protein Synthesis: Oxford University Press, Nov 07, 2018. Oxford Handbooks Online. DOI:10.1093/oxfordhb/9780190686307.013.1

- [Puighermanal E^{*‡}](#), Bieber A^{*‡}, Pascoli V, Melser S, Pratlong M, Cutando L, Rialle S, Severac D, Boubaker-Vitre J, Meyuhas O, Marsicano G, Lüscher C and Valjent E[‡]. *Ribosomal protein S6 phosphorylation is involved in novelty-induced locomotion, synaptic plasticity and mRNA translation*. **Front. Mol. Neurosci.** 10, 419 (2017) (*Equal contribution)([‡]Corresponding authors)
- Ceolin L, Bouquier N, Boubaker-Vitre J, Rialle S, Severac D, Valjent E, Perroy J[‡] and [Puighermanal E[‡]](#). *Cell type-specific mRNA dysregulation in hippocampal CA1 pyramidal neurons of the Fragile X syndrome mouse model*. **Front. Mol. Neurosci.** 10, 340 (2017)([‡]Corresponding authors)
- Busquets-García A*, Gomis-González M*, Salgado-Mendialdúa V, Galera-López L, [Puighermanal E](#), Martín-García E, Maldonado R and Ozaita A. *Hippocampal protein kinase C signaling mediates short-term memory impairment induced by delta9-tetrahydrocannabinol*. **Neuropsychopharmacology** (2017) (*Equal contribution)
- Bieber A, Boubaker-Vitre J, Cutando L, Gracia-Rubio E, Costa-Mattioli M, [Puighermanal E[‡]](#) and Valjent E[‡]. *Repeated exposure to d-amphetamine decreases global protein synthesis and regulates the translation of a subset of mRNAs in the striatum*. **Front. Mol. Neurosci.** 9, 165 (2017)([‡]Co-senior authorship)
- [Puighermanal E](#), Cutando L, Boubaker-Vitre J, Honoré E, Longueville S, Hervé D and Valjent E. *Anatomical and molecular characterization of dopamine D1 receptor-expressing neurons of the mouse CA1 dorsal hippocampus*. **Brain Struct. Funct.** 222, 1897-1911 (2017)
- [Puighermanal E^{*‡}](#), Bieber A^{*‡} and Valjent E. *Synaptoneurosomes Preparation from C57BL/6 Striata*. **Bio-protocol** 6(4): e1735. (2016) (*Equal contribution)([‡]Corresponding authors)
- Bieber A[‡], Valjent E and [Puighermanal E[‡]](#). *Ribosomal Protein S6 Phosphorylation in the Nervous System: From Regulation to Function*. **Front. Mol. Neurosci.** 8, 75. (2015)([‡]Corresponding authors)
- Bieber A*, [Puighermanal E*](#), Nishi A, David A, Panciatici C, Longueville S, Xirodimas D, Gangarossa G, Meyuhas O, Hervé D, Girault JA and Valjent E. *PKA-dependent phosphorylation of ribosomal protein S6 does not correlate with translation efficiency in striatonigral and striatopallidal medium-sized spiny neurons*. **J Neurosci** 35, 4113-4130 (2015) (*Equal contribution)[cover illustration]
- [Puighermanal E*](#), Bieber A*, Espallergues J, Gangarossa G, De Bundel D and Valjent E. *Drd2-Cre:RiboTag mouse line unravels the possible diversity of dopamine D2 receptor-expressing cells of the dorsal mouse hippocampus*. **Hippocampus** 25, 858-875 (2015) (*Equal contribution)[cover illustration]
- Cutando L, Busquets-García A, [Puighermanal E](#), Gomis-González M, Delgado-García LM, Gruart A, Maldonado R and Ozaita A. *Microglial activation underlies cerebellar deficits produced by repeated cannabis exposure*. **J Clin Invest** 123, 2816-2831 (2013)
- Llorente-Berzal A, [Puighermanal E](#), Burokas A, Ozaita A, Maldonado R, Marco EM and Viveros MP. *Sex-Dependent Psychoneuroendocrine Effects of THC and MDMA in an Animal Model of Adolescent Drug Consumption*. **PLoS One** 8, e78386 (2013)
- [Puighermanal E*](#), Busquets-García A*, Gomis-González M, Marsicano G, Maldonado R and Ozaita A. *Dissociation of the pharmacological effects of THC by mTOR blockade*. **Neuropsychopharmacology** 38, 1334-1343 (2013) (*Equal contribution)
- [Puighermanal E](#), Busquets-García A, Maldonado R and Ozaita A. *Cellular and Intracellular signalling cascades involved in the cognitive impairment of cannabinoids*. **Phil. Trans. R. Soc. B** 367(1607), 3254-63 (2012)
- Busquets-García A*, [Puighermanal E*](#), Pastor A, de la Torre R, Maldonado R and Ozaita A. *Differential role of anandamide and 2-arachidonoylglycerol in memory and anxiety-like responses*. **Biol Psychiatry** 70, 479-486 (2011) (*Equal contribution)
- [Puighermanal E](#), Marsicano G, Busquets-García A, Lutz B, Maldonado R and Ozaita A. *Cannabinoid modulation of hippocampal long-term memory is mediated by mTOR signaling*. **Nat Neurosci** 12, 1152-1158 (2009). [Featured in News and Views in Nat Neurosci.]
- Ozaita A, [Puighermanal E](#) and Maldonado R. *Regulation of PI3K/Akt/GSK-3 pathway by cannabinoids in the brain*. **J Neurochem** 102, 1105-1114 (2007)
- [Puighermanal E](#), Castell L, Melser S, Kaganovsky K, Esteve A, Zussy C, Boubaker-Vitre J, Gut M, Rialle S, Kellendonk C, Marsicano G,

Martin M, Rubinstein M, Girault JA, Ding JB and Valjent E. *Functional and molecular heterogeneity of D2R-expressing neurons along dorsal ventral axis in the striatum* (under revision in **Nat Commun**)

Administrative experience

- International conference organization:

Title: **Mechanisms underlying memory storage and pathological learning** (<http://mmplsymposium.wordpress.com>)

Date and venue: 19/05/2015 Montpellier

- Service to professional journals (publons.com/a/1513673/):

Ad hoc reviewer: European Neuropsychopharmacology, British Journal of Pharmacology, FEBS Letters, Bio-Protocol.

- Member of thesis defense committees:

1) *Neurobiological links between depression and drug dependence* by Irene Gracia (Research Group on Neurobiology of Behaviour. Pompeu Fabra University, Barcelona, Spain) (2016)

2) *Dual role of mTOR in Huntington's disease: contribution to striatal neuronal survival and dysfunction* by Jordi Creus (Department of Biomedicine. School of Medicine. University of Barcelona, Barcelona, Spain) (2018) (*Substitute panel member*)

Teaching activities and scientific dissemination

2018	Scientific dissemination in "Fira de Recerca – CosmoCaixa". Barcelona (Spain)
2016-2017	Lectures in Animal Behavior for the French Accreditation of animal experimentation
2010, 2014	Scientific dissemination during Brain Awareness Week.
2010	Lectures in Biology to high school students (Lycée Français de Barcelone. Spain)
2009-2011	Participation in several interviews in 7 Spanish TV channels, in national and international radio programs, and in Spanish newspapers regarding the effects of cannabis.
2008-2010	Lectures in Problem Based Learning to 3rd-year undergraduate students (Biology Degree. Pompeu Fabra University. Spain)

Technology transfer to industry

Professional service to Esteve Pharmaceutical Company testing new compounds in preclinical studies (2008):

- "Study of the effects of the sigma compounds E-56705 and E-56709 on the reinforcing properties of morphine" (2 months)
- "Study of the ability of E-56828 to precipitate a withdrawal syndrome in mice dependent to THC. Comparison with E-6817" (3 months)

Conference attendances

ORAL PRESENTATIONS:

- **E. Puighermanal**. *New insights into mRNA translation in the brain*. Young Neuroscience Symposium. Saint Martin de Londres, France (2015) *Best talk award
- **E. Puighermanal**. *Mechanistic insights into mRNA translation in the brain*. Winter Conference on Neural Plasticity. Barbados, Caribbean (2015)
- **E. Puighermanal**. *Characterization of the ribosomal protein S6 phosphorylation in the mouse brain*. Cold Spring Harbor School Summer Course "Cellular Biology of Addiction". Barcelona, Spain (2014)
- **E. Puighermanal**, A. Biever, V. Pascoli, D. Xirodimas, A. David, D. de Bundel, O. Meyuhas, C. Lüscher, E. Valjent. *Role of the ribosomal*

protein S6 phosphorylation in the mouse brain. 5th EMCCS-FENS forum meeting. Milan, Italy (2014)

- **E. Puighermanal**. *Novel insights into the methodology to study translation in vivo in the brain*. IBRO KEMALI College/Neuroscience School of Advanced Studies "RNA and the Etiology of Brain Disease". Cortona, Italy (2013)
- A. Biever, **E. Puighermanal**, G. Gangarossa, E. Valjent. *Regulation of striatal translational machinery by d-amphetamine*. Gordon Research Conferences: Dendrites: Molecules, Structure & Function. Les Diablerets, Switzerland (2013)
- L. Cutando, **E. Puighermanal**, M. Gomis-González, J.M. Delgado-García, A. Gruart, R. Maldonado, A. Ozaita. *Role of CB1 cannabinoid receptors in the control of cerebellar function through the microglial activation*. 12th Annual meeting of the Cannabinoid Research Spanish Society (SEIC). Pamplona, Spain (2011)
- **E. Puighermanal**, A. Busquets-Garcia, M. Gomis, R. Maldonado, A. Ozaita. *Role of mTOR in the pharmacological effects of THC*. 11th Annual meeting of the Cannabinoid Research Spanish Society (SEIC). Pontevedra, Spain (2010)
- **E. Puighermanal**. *Cannabinoid modulation of hippocampal long-term memory is mediated by mTOR signaling*. Addictive Disorders Network (RTA). Tarragona, Spain (2009)
- **E. Puighermanal**, A. Busquets, G. Marsicano, B. Lutz, R. Maldonado, A. Ozaita. *Cannabinoid modulation of hippocampal long-term memory is mediated by mTOR signaling*. Programme of European Neuroscience Schools. "Stress, drug addiction and eating disorders" Summer School. Dubrovnik, Croatia (2009)
- **E. Puighermanal**, A. Busquets, G. Marsicano, R. Maldonado, A. Ozaita. *Progrès récents sur les mécanismes neurobiologiques impliqués dans les effets amnésiants des cannabinoïdes*. Les journées de l'Albatros (3ème édition). Paris, France (2009)
- **E. Puighermanal**, R. Maldonado, A. Ozaita. *The postsynaptic modulation of the translational machinery by cannabinoids depends on the mTOR activity in the brain*. 9th Annual meeting of the Cannabinoid Research Spanish Society (SEIC). Córdoba, Spain (2008)
- **E. Puighermanal**, M. Montolio, R. Maldonado, A. Ozaita. *Modulation of the mTOR pathway by delta9-tetrahydrocannabinol*. 8th Annual meeting of the Cannabinoid Research Spanish Society (SEIC). Bilbao, Spain (2007)
- A. Ozaita, **E. Puighermanal**, C. Fernández, R. Maldonado. *Regulation of PI3K/Akt/GSK-3 signaling pathway by acute and chronic THC administrations in the mouse brain*. 7th Annual meeting of the Cannabinoid Research Spanish Society (SEIC). Toledo, Spain (2006)
*Best talk award

POSTER PRESENTATIONS:

- **E. Puighermanal**, L. Castell, S. Melsner, K. Kaganovsky, A. Esteve, C. Zussy, J. Boubaker-Vitre, M. Gut, S. Rialle, C. Kellendonk, G. Marsicano, M. Martin, M. Rubinstein, JA. Girault, JB. Ding and E. Valjent. *Dopamine D2 receptors from Wfs1-expressing neurons control specific motor behaviors*. BYNS. Barcelona, Spain (2018)
- D. Rial, **E. Puighermanal**, E. Valjent, S. N. Schiffmann, A. D. D'Exaerde. *Specific gene deletion in the efferent striatal pathways confer electrophysiological, neuronal morphological and behavioral characteristics of ASD in mice*. Neuroscience 2017. Washington, USA (2017)
- J. Perroy, L. Ceolin, N. Bouquier, J. Boubaker-Vitre, F. Bertaso, S. Rialle, D. Severac, E. Valjent, **E. Puighermanal**. *Cell type-specific profiling of mRNAs translated in hippocampal CA1 pyramidal neurons identifies genes potentially involved in synaptic plasticity*. NeuroFrance. Bordeaux, France (2017)
- **E. Puighermanal**, L. Castell, S. Melsner, C. Zussi, J. Boubaker-Vitre, A. Esteve, M. Gut, S. Rialle, C. Kellendonk, M. Rubinstein, G. Marsicano, M. Martin, E. Valjent. *Striatal and accumbal D2R cellular diversity unveiled by high-throughput transcriptome analysis*. NeuroFrance. Bordeaux, France (2017)
- P. Tarot, A. Fruquiere, **E. Puighermanal**, L. Cutando, L. Castell, S. Laffray, M. Belle, A. Chedotal, E. Bourinet, E. Valjent. *Characterization of dopamine D2 receptors in the mouse spinal cord*. NeuroFrance. Bordeaux, France (2017)
- L. Cutando, **E. Puighermanal**, M. Belle, A. Chedotal, E. Valjent. *Characterization of dopamine D2 receptors in the cerebellum*. NeuroFrance. Bordeaux, France (2017)
- L. Castell, P. Tarot, S. Longueville, **E. Puighermanal**, L. Cutando, D. Hervé, D. De Bundel, E. Valjent. *Molecular characterization of dopamine D1 receptors in the mouse amygdala*. NeuroFrance. Bordeaux, France (2017)
- **E. Puighermanal**, M. Martin, J. Boubaker-Vitre, A. Esteve, M. Gut, E. Valjent. *Unexpected diversity of striatal Drd2-expressing neurons*

revealed by cell-type specific mRNA profiling. Neuroscience 2016. San Diego, USA (2016)

- **E. Puighermanal**, M. Martin, S. Melsner, C. Zussi, J. Boubaker-Vitre, A. Esteve, M. Gut, C. Kellendonk, G. Marsicano, E. Valjent. *Large-scale transcriptome analysis of Drd2-expressing cells reveals a vast diversity of subpopulations within the striatum*. 15th Annual Molecular and Cellular Cognition Society. San Diego, USA (2016)
- **E. Puighermanal**, A. Bieber, V. Pascoli, A. David, O. Meyuhas, C. Lüscher, E. Valjent. *Role of the ribosomal protein S6 phosphorylation in the mouse brain*. 14th Annual Molecular and Cellular Cognition Society. Chicago, USA (2015)
- A. Bieber, **E. Puighermanal**, E. Valjent. *Regulation of the striatal translational apparatus by psychostimulants*. 14th Annual Molecular and Cellular Cognition Society. Chicago, USA (2015)
- A. Bieber, **E. Puighermanal**, V. Pascoli, O. Meyuhas, C. Lüscher, E. Valjent. *Role of the ribosomal protein S6 phosphorylation in the mouse brain*. Neuroscience 2015. Chicago, USA (2015)
- **E. Puighermanal**, A. Bieber, V. Pascoli, A. David, O. Meyuhas, C. Lüscher, E. Valjent. *Role of the ribosomal protein S6 phosphorylation in the mouse brain*. 12th Meeting of the French Neuroscience Society. Montpellier, France (2015)
- L. Ceolin, **E. Puighermanal**, S. Rialle, D. Séverac, E. Valjent, J. Perroy. *Cell type-specific profiling of mRNAs translated in hippocampal CA1 pyramidal neurons in a mouse model of fragile X syndrome*. 12th Meeting of the French Neuroscience Society. Montpellier, France (2015)
- A. Bieber, **E. Puighermanal**, E. Valjent. *Regulation of translational initiation factors by d-amphetamine in the striatum*. 12th Meeting of the French Neuroscience Society. Montpellier, France (2015)
- E. Honore, **E. Puighermanal**, A. Bieber, J. Espallergues, E. Valjent. *Anatomo-functional characterization of hippocampal GABAergic neurons expressing dopamine D2 receptor*. 12th Meeting of the French Neuroscience Society. Montpellier, France (2015)
- E. Valjent, J. Espallergues, C. Zussy, **E. Puighermanal**, A. Bieber, D. De Bundel. *Controlling fear generalization through pharmacological and pharmacogenetic manipulation of extended amygdala circuits*. 12th Meeting of the French Neuroscience Society. Montpellier, France (2015)
- **E. Puighermanal**, A. Bieber, V. Pascoli, D. Xirodimas, A. David, D. De Bundel, M. Pende, C. Lüscher, E. Valjent. *Characterization of the ribosomal protein S6 phosphorylation in the mouse brain*. Translational Control: From Basics to Cancer. Montpellier, France (2015)
- A. Bieber, **E. Puighermanal**, A. Nishi, A. David, C. Panciatici, S. Longueville, D. Xirodimas, G. Gangarossa, O. Meyuhas, D. Hervé, JA. Girault, E. Valjent. *PKA-dependent phosphorylation of ribosomal protein S6 does not correlate with translation efficiency in striatonigral and striatopallidal medium-sized spiny neurons*. Translational Control: From Basics to Cancer. Montpellier, France (2015)
- **E. Puighermanal**, A. Bieber, V. Pascoli, D. Xirodimas, A. David, D. De Bundel, O. Meyuhas, C. Lüscher, E. Valjent. *Role of the ribosomal protein S6 phosphorylation in the mouse brain*. 9th FENS forum of Neuroscience. Milan, Italy (2014)
- A. Bieber, **E. Puighermanal**, A. Nishi, A. David, C. Panciatici, S. Longueville, D. Xirodimas, G. Gangarossa, O. Meyuhas, D. Hervé, JA. Girault, E. Valjent. *Post-translational modification of a ribosomal protein gates the locomotor response to amphetamine*. 9th FENS forum of Neuroscience. Milan, Italy (2014)
- **E. Puighermanal**, A. Bieber, G. Gangarossa, E. Valjent. *Modulation of the translational machinery in the striatum by d-amphetamine*. 12th International IFR83 meeting "Cellular aspects of mRNA fate". Paris, France (2013)
- **E. Puighermanal**, A. Bieber, G. Gangarossa, E. Valjent. *Modulation of the translational machinery in the striatum by d-amphetamine*. Dopamine 2013. Alghero, Italy (2013)
- M. Gomis-González, A. Busquets-Garcia, **E. Puighermanal**, A. Blázquez-Prunera, R. Maldonado, A. Ozaita. *Protein Kinase C-Gamma plays a critical role in the memory impairment produced by delta9-tetrahydrocannabinol*. 8th FENS Forum of Neuroscience. Barcelona, Spain (2012)
- L. Cutando, **E. Puighermanal**, M. Gomis-González, J.M. Delgado-García, A. Gruart, R. Maldonado, A. Ozaita. *CB1 cannabinoid receptor knockout mice exhibit cerebellar deficits that depend on microglial activation*. 8th FENS Forum of Neuroscience. Barcelona, Spain (2012)
- M. Gomis-González, A. Busquets-Garcia, **E. Puighermanal**, A. Blázquez-Prunera, R. Maldonado, A. Ozaita. *Involvement of Protein Kinase C-gamma signaling on the amnesic-like effects of delta9-tetrahydrocannabinol*. 12th Annual meeting of the Cannabinoid Research Spanish Society (SEIC). Pamplona, Spain (2011)
- E.M. Marco, A. Llorente-Berzal, R. Llorente, **E. Puighermanal**, A. Burokas, A. Ozaita, R. Maldonado, M.P. Viveros. *Long-lasting effects of*

THC and MDMA in a rat model of adolescent drug consumption. Red de Trastornos Adictivos (RTA). Santander, Spain (2011)

- E.M. Marco, A. Llorente-Berzal, R. Llorente, **E. Puighermanal**, A. Burokas, A. Ozaita, R. Maldonado, M.P. Viveros. *Enduring behavioural and neuroendocrine effects of THC and MDMA in adolescent rats of both sexes*. XIV Annual meeting of Sociedad Española de Neurociencias (SENC). Santander, Spain (2011)
- **E. Puighermanal**, A. Busquets-Garcia, M. Gomis, R. Maldonado, A. Ozaita. *Role of mTOR in the pharmacological effects of THC*. Cannabinoid Function in the CNS (Gordon Research Conference). Les Diablerets, Switzerland (2011)
- A. Busquets-Garcia, **E. Puighermanal**, A. Pastor, R. de la Torre, R. Maldonado, A. Ozaita. *The differential modulation of endocannabinoids affects memory and anxiety-like responses through differentiated mechanisms*. Cannabinoid Function in the CNS (Gordon Research Conference). Les Diablerets, Switzerland (2011)
- A. Ozaita, **E. Puighermanal**, R. Maldonado, A. Busquets-Garcia. *Signaling mechanisms involved in the memory impairment produced by cannabinoids*. 7th FENS Forum of European Neuroscience. Amsterdam, Holland (2010)
- L. Cutando, **E. Puighermanal**, A. Busquets-Garcia, R. Maldonado, A. Ozaita. *Chronic delta9-tetrahydrocannabinol exposure results in a subtle motor coordination deficit through cerebellar microglia activation*. 20th Annual Symposium of the International Cannabinoid Research Society. Lund, Sweden (2010)
- A. Busquets-Garcia, **E. Puighermanal**, R. Maldonado, A. Ozaita. *Differential role of endocannabinoids in memory consolidation, analgesia and anxiety*. 20th Annual Symposium of the International Cannabinoid Research Society. Lund, Sweden (2010)
- L. Cutando, **E. Puighermanal**, A. Busquets-Garcia, JM. Delgado, A. Gruart, R. Maldonado, A. Ozaita. *Mechanisms underlying the cerebellar deficits produced by repeated cannabis exposure*. 11th Annual meeting of the Cannabinoid Research Spanish Society (SEIC). Pontevedra, Spain (2010)
- A. Busquets-Garcia, **E. Puighermanal**, A. Pastor, R. de la Torre, R. Maldonado, A. Ozaita. *Different role of endocannabinoids in memory consolidation and anxiety-like responses*. 11th Annual meeting of the Cannabinoid Research Spanish Society (SEIC). Pontevedra, Spain (2010)
- A. Busquets-Garcia, **E. Puighermanal**, R. Maldonado, A. Ozaita. *Differential effect of URB597 and JZL184 in recognition memory modulation*. 10th Annual meeting of the Cannabinoid Research Spanish Society (SEIC). Santander, Spain (2009)
- L. Cutando, **E. Puighermanal**, A. Busquets-Garcia, R. Maldonado, A. Ozaita. *Chronic delta9-tetrahydrocannabinol administration modulates microglial activation*. 10th Annual meeting of the Cannabinoid Research Spanish Society (SEIC). Santander, Spain (2009)
- **E. Puighermanal**, A. Busquets, G. Marsicano, R. Maldonado, A. Ozaita. *Cannabinoid modulation of hippocampal long-term memory is mediated by mTOR signaling*. IV European Workshop on Cannabinoid Research. Madrid, Spain (2009)
- L. Cutando, **E. Puighermanal**, R. Maldonado, A. Ozaita. *Chronic administration of delta9-tetrahydrocannabinol and its withdrawal modulate microglial activation in the central nervous system*. 9th Annual meeting of the Cannabinoid Research Spanish Society (SEIC). Córdoba, Spain (2008)
- **E. Puighermanal**, R. Maldonado, A. Ozaita. *Modulation of PI3K/Akt/GSK-3 and ERK signaling cascades during tolerance and withdrawal to delta9-tetrahydrocannabinol*. Neuroscience 2007 (Society's 37th annual meeting). San Diego, USA (2007)
- **E. Puighermanal**, M. Montolio, R. Maldonado, A. Ozaita. *Delta9-tetrahydrocannabinol activates the mTOR pathway both in vitro and in vivo through CB1 cannabinoid receptors*. Cannabinoid signaling in the nervous system (17th Neuropharmacology Conference). San Diego, USA (2007)
- A. Ozaita, E. Aso, **E. Puighermanal**, C. Fernández, R. Maldonado. *CB1 receptor mediated signaling in the brain*. NewMood European Consortium Annual General Meeting. Budapest, Hungary (2007)
- **E. Puighermanal**, R. Maldonado, A. Ozaita. *Modulation of PI3K/Akt/GSK-3 and ERK signaling pathways during delta9-tetrahydrocannabinol tolerance and withdrawal*. XII Conference of Neuroscience Spanish Society. Valencia, Spain (2007)

Courses attended

2015	Neuroscience School of Advanced Studies "Learning and Memory". Florence (Italy)
2014	Cold Spring Harbor School Summer Course "Cellular Biology of Addiction". Barcelona (Spain)
2013	IBRO KEMALI College/Neuroscience School of Advanced Studies "RNA and the Etiology of Brain Disease". Cortona (Italy)

Professional memberships

American Society for Neuroscience

American Molecular and Cellular Cognition Society

European Molecular and Cellular Cognition Society

French Society for Neuroscience

Spanish Society for Cannabinoid Research