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Education and academic positions

1993 – 1997, study of psychology University of Deusto (Spain); 1999-2004, Dissertation, Ph.D. at the Complutense University of Madrid at the psychopharmacology department (Dr Fernando Rodriguez de Fonseca). July 2007-2011: Post-doc position and 2011-2012: Project leader position at the Institute of Psychopharmacology, Central Institute of Mental Health (ZI), University of Heidelberg

Current position

Group leader of Behavioral Genetics (Institute of Psychopharmacology, Head Prof.Rainer Spanagel) since august 2012.

Research interests

Behavioral genetics; addiction and comorbidities such as anxiety, depression and pain; neurogenesis; trophic factors; miRNAs; glutamate, dopamine and endocannabinoid systems; synaptic plasticity; chronopharmacology.

Publications

Total number of publications: 37; h-factor 13

Publications in: *Neuron, PNAS, Neuropsychopharmacology, FASEB J, British Journal of Pharmacology, Journal of Neuroscience, American Journal of Psychiatry, Addiction Biology*

1. Rodríguez de Fonseca F, Roberts AJ, Bilbao A, Koob GF, Navarro M. (1999) Cannabinoid receptor antagonist SR141716A decreases operant ethanol self-administration in rats exposed to ethanol-vapor chambers. *Acta Pharmacologica Sinica* ;20: 1109-1114.
2. Navarro M, Gómez R, Bilbao A, Gorriti MA, Martín-Calderón JL, del Arco I, Rodríguez de Fonseca F. (2000) The neuropharmacology of the endogenous cannabinoid transmission: potential therapeutic applications. *Current Topics in Pharmacology* 5: 19-29.
3. Rodríguez de Fonseca F, Gorriti MA, Bilbao A, Escuredo L, García-Segura LM, Piomelli D, Navarro M. (2001) Role for the endogenous cannabinoid system as a modulator of dopamine transmission in the striatum: implications for Parkinson's disease and Schizophrenia. *Neurotoxicity Research* , 3: 23-35
4. Gómez R, Navarro M, Ferrer B, Trigo JM, Bilbao A, Del Arco I, Nava F, Piomelli D, Rodríguez de Fonseca F. (2002) A peripheral mechanism for CB1 cannabinoid receptor-dependent modulation of feeding.. *J Neuroscience* .; 22(21): 9612-7
5. Del Arco I, Navarro M, Bilbao A, Ferrer B, Piomelli D, Rodríguez de Fonseca F. (2002) Attenuation of spontaneous opiate withdrawal in mice by the anandamide transport inhibitor AM404 *Eur J Pharmacol.*; 454 (1): 103-104.
6. Fernandez-Gonzalez R, Moreira P, Bilbao A, Jimenez A, Perez-Crespo M, Ramirez MA, Rodríguez De Fonseca F, Pintado B, Gutierrez-Adan A. (2004) Long-term effect of in vitro culture of mouse embryos with serum on mRNA expression of imprinting genes, development, and behavior. *Proc Natl Acad Sci U S A.* Apr 20;101(16):5880-5.
7. De Fonseca FR, Del Arco I, Bermudez-Silva FJ, Bilbao A, Cippitelli A, Navarro M. (2004) The endocannabinoid system: physiology and pharmacology. *Alcohol Alcohol.* Jan-Feb;40(1):2-14. Review
8. Cippitelli A , Bilbao A*, Hansson A, Del Arco I, Sommer W, Heilig M, Massi M, Bermúdez FJ, Navarro M, Ciccocioppo R, Rodríguez de Fonseca F; The European TARGALC Consortium. (2005) Cannabinoid CB1 receptor antagonism reduces conditioned reinstatement of ethanol-seeking behavior in rats. *European Journal of Neuroscience* ;21(8):2243-51. (*equal contribution)

9. Bilbao A, Cippitelli A, Martin AB, Granado N, Ortiz O, Bezard E, Chen JF; Navarro M, Rodríguez de Fonseca F, Moratalla R. (2006) Absence of quasi-morphine withdrawal syndrome in adenosine A2A receptor knock out mice. *Psychopharmacology*, (185): 160-168
10. Pavon FJ, Bilbao A, Hernández-Folgado L, Cippitelli A, Jagerovic N, Abellán G, Rodríguez-Franco MI, Serrano A, Macias Gomez R, M, Navarro M, Goya P and Fernando Rodríguez de Fonseca F. (2006) Pharmacological evaluation of the novel in vivo cannabinoid receptor antagonist 5-(4-Chlorophenyl)-1-(2,4-dichlorophenyl)-3-hexyl-1H-1,2,4-triazole – LH 21 – on food intake: evidence for a peripheral site of action. *Neuropharmacology* ; 51(2): 358-366
11. Fernández-Gonzalez R, Ramirez MA, Bilbao A, Rodríguez De Fonseca F and Gutiérrez-Adán A. (2007) Suboptimal in vitro culture conditions: an epigenetic origin of long-term health effects. *Molecular Reproduction and Development*; 74 (9): 1149-56. Review
12. Ferrer B, Bermúdez-Silva FJ, Bilbao A, Alvarez-Jaimes L, Sanchez-Vera I, Giuffrida A, Serrano A, Baixeras E, Navarro M, Parsons LH, Piomelli D, Rodríguez De Fonseca F. (2007) Regulation of brain anandamide by acute administration of ethanol. *Biochem J*. 404 (1): 97-104
13. Ferrer B, Gottriti MA, Palomino A, Gornemann I, de Diego Y, Bermúdez-Silva FJ, Bilbao A, Fernández-Espejo E, Moratalla R, Navarro M, Rodríguez De Fonseca F. (2007) Cannabinoid CB1 receptor antagonism markedly increases dopamine receptor-mediated stereotypies. *Eur J Pharmacol*. Mar 22;559(2-3):180-3.
14. Cippitelli A*, Bilbao A*, Gorriti MA, Navarro M, Massi M, Piomelli D, Ciccocioppo R, Rodríguez De Fonseca F. (2007) The anandamide transport inhibitor AM404 reduces ethanol self-administration. *European Journal of Neuroscience* 26:476-486 (*equal contribution)
15. Suardiáz M, Estivill G, Goicoechea C, Bilbao A, Rodríguez De Fonseca F. (2007) Analgesic properties of oleylethanolamide (OEA) in visceral and inflammatory pain. *PAIN*. 133 (1-3):99-110
16. Martin AB, Fernandez-Espejo E, Ferrer B, Gorriti MA, Bilbao A , Navarro M, Rodriguez de Fonseca F, Moratalla R. (2008) Expression and Function of CB1 Receptor in the Rat Striatum: Localization and Effects on D1 and D2 Dopamine Receptor-Mediated Motor Behaviors. *Neuropsychopharmacology* 33(7):1667-79
17. Fernández-Gonzalez R, Moreira P, Pérez-Crespo M, Sánchez-Martín M, Ramirez MA, Pericuesta E, Bilbao A, Bermejo-Alvarez P, Hourcade JD, Rodríguez de Fonseca F, Gutiérrez-Adán A. (2008) Long-Term Effects of Mouse Intracytoplasmic Sperm Injection with DNA-Fragmented Sperm on Health and Behavior of Adult Offspring. *Biol Reprod*. 78 (4): 761-72
18. Asúa T, Bilbao A, Gorriti MA, Lopez JA, Del Mar Álvarez M, Navarro M, de Fonseca FR, Perez-Castillo A, Santos A. (2008) Implication of the endocannabinoid system in the locomotor hyperactivity associated with congenital hypothyroidism. *Endocrinology*. 149(5):2657-66
19. Vengeliene V, Bilbao A, Molander A, Spanagel R. (2008) Neuropharmacology of alcohol addiction. *British Journal of Pharmacology* , 154 (2): 299-315
20. Brunk I, Blex C, Sanchis-Segura C, Sternberg J, Perreau-Lenz S, Bilbao A, Hörtnagl H, Baron J, Juranek J, Laube G, Birnbaumer L, Spanagel R, Ahnert-Hilger G. (2008) Deletion of Go2{alpha} abolishes cocaine-induced behavioral sensitization by disturbing the striatal dopamine system. *FASEB J*. 10:3736-46
21. Cippitelli A, Cannella N, Braconi S, Duranti A, Tontini A, Bilbao A, De Fonseca FR, Piomelli D, Ciccocioppo R. (2008) Increase of brain endocannabinoid anandamide levels by FAAH inhibition and alcohol abuse behaviours in the rat. *Psychopharmacology* (Berl).

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22. Engblom D, * Bilbao A*, Sanchis-Segura C*, Perreau-Lenz S, Balland B, Dahan L, Lujan R, Halbout B, Mameli M, Rodriguez Parkitna J, Parlato R, Sprengel R, Lüscher C, Schütz G, Spanagel R. (2008) Glutamate Receptors on Dopaminergic Neurons influence the Persistence of cocaine-seeking behavior. *Neuron* 59(3):497-508(*equal contribution)
23. Bilbao A, Parkitna J, Engblom D, Perreau-Lenz S, Sanchis-Segura C, Schneider M, Konopka W, Westphal M, Breen G, Desrivieres S, Klugmann M, Guindalini C, Vallada H, Laranjeira R, Rodríguez De Fonseca F, Schumann G, Schütz G, Spanagel R (2008) Loss of the Ca²⁺/calmodulin-dependent protein kinase type IV in dopaminergic neurons enhances behavioral effects of cocaine. *Proc Natl Acad Sci USA* 105:17549-17554
24. Perreau-Lenz S, Zghoul T, Rodriguez de Fonseca F, Spanagel R, Bilbao A (2009) Circadian regulation of ethanol CNS sensitivity by the mPer2 gene. *Addiction Biology*, Jul;14(3):253-9
25. Von der Goltz C, Vengeliene V, Bilbao A, Perreau-Lenz S, Pawlak CR, Kiefer F, Spanagel R (2009) Cue-induced alcohol-seeking behavior is reduced by disrupting the reconsolidation of alcohol-related memories. *Psychopharmacology* Aug; 205(3):389-97. Epub 2009 May 6
26. Santín L, Bilbao A*, Pedraza C, Matas-Rico E, López-Barroso D, Castilla-Ortega E, Sánchez-López J, Riquelme R, Varela-Nieto I, de la Villa P, Suardiaz M, Chun J, Rodriguez De Fonseca F and Estivill-Torrús G (2009). Behavioral phenotype of maLPA1- null mice: increased anxiety-like behavior and spatial memory deficits. *Genes, Brain and Behavior*, Jul 21. [Epub ahead of print] (*equal contribution)
27. Mutschler J*, Bilbao A*, Von der Goltz C, Demiralay C, Jahn H, Wiedemann R, Spanagel R, Kiefer F (2010) Augmented stress-induced alcohol drinking and withdrawal in mice lacking functional natriuretic peptide A receptors. *Alcohol Alcohol*, Jan-Feb;45(1):13-6. Epub 2009 Oct 13 (*equal contribution)
28. Rodriguez Parkitna J*, Bilbao A*, Rieker C*, Engblom D, Piechota M, Nordheim A, Spanagel R and Günther Schütz G (2010) Loss of the Serum Response Factor in the Dopamine System Leads to Hyperactivity. *FASEB Journal*, Mar 11 (*equal contribution)
29. Brunk I, Sanchis-Segura C, Blex C, Perreau-Lenz S, Bilbao A, Baron J, Birnbaumer L, Spanagel R, Ahnert-Hilger G (2010). Amphetamine regulates NR2B expression in Go2α knockout mice and thereby sustains behavioral sensitization. *Journal of Neurochemistry*, Oct 115 (1)
30. Novak M, Halbout B, O'Connor E, Rodriguez Parkitna J, Su T, Chai M, Crombag HS, Bilbao A, Spanagel R, Stephens DN, Schütz G, Engblom D (2010). Incentive learning underlying cocaine relapse requires mGluR5 receptors located on dopamine D1 receptor-expressing neurons. *Journal of Neuroscience*, sep 8, 30 (36)
31. Schumann G*, Coin L*, Lourdasamy A*, Charoen P*, Berger K*, Bilbao A* et al. (2011) Genome-wide association and genetic functional studies identify autism susceptibility candidate 2 gene (AUTS2) in the regulation of alcohol consumption. *PNAS* Apr 26;108(17):7119-24. Epub 2011 Apr 6. (*equal contribution)
32. Dong L, Bilbao A*, Laucht M, Henriksson R, Yakovleva T, Ridinger M, Desrivieres S, Clarke TK, Lourdasamy A, Smolka MN, Cichon S, Blomeyer D, Treutlein J, Perreau-Lenz S, Witt S, Leonardi-Essmann F, Wodarz N, Zill P, Soyka M, Albrecht U, Rietschel M, Lathrop M, Bakalkin G, Spanagel R, Schumann G. (2011) Effects of the Circadian Rhythm Gene Period 1 (Per1) on Psychosocial Stress-Induced Alcohol Drinking. *Am J Psychiatry*. Aug 9. [Epub ahead of print]
33. Blanco E, Campos-Sandoval JA, Palomino A, Luque-Rojas MJ, Bilbao A, Suárez J, Márquez

- J, de Fonseca FR (2012) Cocaine modulates both glutaminase gene expression and glutaminase activity in the brain of cocaine-sensitized mice. *Psychopharmacology (Berl)*. Aug 2. [E-pub ahead of print]
34. Blanco E, Bilbao A*, Luque-Rojas MJ, Palomino A, bermúdez-Silva FJ, Suárez J, Santín LJ, Estivill-Torrús G, Gutiérrez A, Campos-Sandoval JA, Alonso-Carrión FJ, Márquez J, de Fonseca FR (2012) Attenuation of cocaine-induced conditioned locomotion is associated with altered expression of hippocampal glutamate receptors in mice lacking LPA1 receptors. *Psychopharmacology (Berl)*, Mar;220(1):27-42 (*equal contribution)
 35. Rieker C, Schober A, Bilbao A, Nordheim A, Schütz G, Rodriguez Parkitna J (2012) Ablation of SRF in dopaminergic neurons exacerbates susceptibility towards MPTP-induced oxidative stress. *European Journal of Neuroscience*; Mar;35(5):735-741
 36. Bilbao A (2012) Advanced Transgenic Approaches to Understand Alcohol-Related Phenotypes in Animals. In Current Topics in Behavioral Neuroscience (CTBN) Behavioural Neurobiology of Alcohol Addiction (Springer) Book Chapter. March 3, [E-pub ahead of print]
 37. Rodriguez Parkitna J, Sikora M, Gołda S, Gołombiowska K, Bystrowska B, Engblom D, Bilbao A, Przewłocki R (2012) Novelty-seeking behaviors and the escalation of alcohol drinking after abstinence in mice are controlled by mGluR5 receptors on neurons expressing dopamine D1 receptors. *Biological Psychiatry*, in Press