



ALTRES PUBLICACIONS OTRAS PUBLICACIONES OTHER PUBLICATIONS

Roche, D; Gil, D; Giraldo, J

Mathematical modeling of g protein-coupled receptor function: what can we learn from empirical and mechanistic models?

Advances in experimental medicine and biology Volume: 796 Pages: 159-81, 2014

Monyarch, G; de Castro Reis, F; Zock, JP; et al.
 Chromosomal Bands Affected by Acute Oil Exposure and DNA Repair Errors
 Plos One Volume: 8 Issue: 11,2013

Roche, D; Gil, D; Giraldo, J

Mechanistic analysis of the function of agonists and allosteric modulators: reconciling twostate and operational models.

British journal of pharmacology Volume: 169 Issue: 6 Pages: 1189-202, 2013

· Giraldo, J

Modeling cooperativity effects in dimeric g protein-coupled receptors.

Progress in molecular biology and translational science Volume: 115 Pages: 349-73,**2013**

· Roche, D; Gil, D; Giraldo, J

Multiple active receptor conformation, agonist efficacy and maximum effect of the system: the conformation-based operational model of agonism.

Drug discovery today Volume: 18 Issue: 7-8 Pages: 365-71,2013

- Cárdenas MI, Vellido A, Olier I, Rovira X, Giraldo J Complementing kernel-based visualization of protein sequences with their phylogenetic tree In Lecture Notes in Bioinformatics (LNCS/LNBI), Vol.7548, pp 136-149,2012
- Cárdenas M-I, Vellido A, Olier I, Rovira X, Giraldo J

Kernel Generative Topographic Mapping of Protein Sequences in Medical Applications of Intelligent Data Analysis: Research Advancements, Magdalena-Benedito R, Soria E, Guerrero J, Gómez-Sanchis J

Eds, Information Science Reference (an imprint of IGI Global), 195-208, 2012





• Romero L, Zamanillo D, Nadal X, Sánchez-Arroyos R, Rivera-Arconada I, Dordal A, Montero A, Muro A, Bura A, Segalés C, Laloya M, Hernández E, Portillo-Salido E, Escriche M, Codony X, Encina G, Burgueño J, Merlos M, Baeyens JM, Giraldo J, López-García JA, Maldonado R, Plata-Salamán CR, Vela JM.

Pharmacological properties of S1RA, a new sigma-1 receptor antagonist that inhibits neuropathic pain and activity-induced spinal sensitization.

Br J Pharmacol. 2012;166(8):2289-306.

• Coronado R, Giraldo J, Macaya A, Roig M.

Head circumference growth function as a marker of neurological impairment in a cohort of microcephalic infants and children.

Neuropediatrics. 2012;43(5):271-4.

• Giraldo J, Pin J.P.

G Protein-Coupled Receptors: From Structure to Function. RSC Drug Discovery Series No. 8. Edited by Jesús Giraldo and Jean-Philippe Pin. Royal Society of Chemistry **2011**

Rovira X, Giraldo J

Functional Selectivity of G Protein-coupled Receptors: Bridging the Gap Between Monomeric and Dimeric Receptors

RSC Drug Discovery Series No. 8 G Protein-Coupled Receptors: From Structure to Function Edited by Jesús Giraldo and Jean-Philippe Pin r Royal Society of Chemistry **2011** (446-468)

• Christov Ch, Gonzalez-Bulnes P, Malhaire F, Karabencheva T, Goudet C, Philippe Pin J, Llebaria A, Giraldo J.

Integrated Synthetic, Pharmacological, and Computational Investigation of cis-2-(3,5-Dichlorophenylcarbamoyl)- cyclohexanecarboxylic Acid Enantiomers As Positive Allosteric Modulators of Metabotropic Glutamate Receptor Subtype 4

ChemMedChem. **2011**;6(1):131-40.

• Barreto L, Canadell D, Petrezsélyová S, Navarrete C, Maresová L, Pérez-Valle J, Herrera R, Olier I, Giraldo J, Sychrová H, Yenush L, Ramos J, Ariño J.

A Genomewide Screen for Tolerance to Cationic Drugs Reveals Genes Important for Potassium Homeostasis in Saccharomyces cerevisiae

Eukaryot Cell. 2011;10(9):1241-50.





• Templado C, Donate1 A, Giraldo J, Bosch M, Estop A. Advanced age increases chromosome structural abnormalities in human spermatozoa Eur J Hum Genet. **2011**;19(2):145-51.

Giraldo J

How inverse can a neutral antagonist be? Strategic questions after the rimonabant issue. Drug Discov Today. **2010**; 15(11-12):411-5.

• Rovira X, Pin JP, Giraldo J

The asymmetric / symmetric activation of GPCR dimers as a possible mechanistic rationale for multiple signalling pathways.

Trends Pharmacol Sci. 2010; 31(1):15-21.

• Brea J, Castro M, Giraldo J, López-Giménez JF, Padín JF, Quintián F, Cadavid MI, Vilaró MT, Mengod G, Berg KA, Clarke WP, Vilardaga JP, Milligan G, Loza MI Evidence for distinct antagonist-revealed functional states of 5-hydroxytryptamine(2A) receptor homodimers.

Mol Pharmacol, 2009; 75(6):1380-91

- Rovira X, Vivó M, Serra J, Roche D, Strange PG, Giraldo J Modelling the interdependence between the stoichiometry of receptor oligomerization and ligand binding for a coexisting dimer/tetramer receptor system.

 Br J Pharmacol. **2009**;156(1):28-35.
- García JA, Bartumeus F, Roche D, Giraldo J, Stanley HE, Casamayor EO Ecophysiological significance of scale-dependent patterns in prokaryotic genomes unveiled by a combination of statistic and genometric analyses. Genomics. **2008**;91(6):538-43.
- Giraldo J

On the fitting of binding data when receptor dimerization is suspected. Br J Pharmacol. **2008**;155(1):17-23.

• Roca M, De Maria L, Wodak SJ, Moliner V, Tuñón I, Giraldo J Coupling of the guanosine glycosidic bond conformation and the ribonucleotide cleavage reaction: Implications for barnase catalysis.

Proteins. 2008;70(2):415-28.





• Rovira X, Roche D, Serra J, Julie Kniazeff, Pin J-P, Giraldo J *Modeling the Binding and Function of Metabotropic Glutamate Receptors.* J Pharmacol Exp Ther. **2008**;325(2):443-56.

 Roca M, De Maria L, Wodak SJ, Moliner V, Tuñón I, Giraldo J.
 Coupling of the guanosine glycosidic bond conformation and the ribonucleotidecleavage reaction: Implications for barnase catalysis.
 Proteins. 2007;8:1-6.

• Jiménez-Altayó F, Martín A, Rojas S, Justicia C, Briones AM, Giraldo J, Planas AM, Vila E. Transient middle cerebral artery occlusion causes different structural, mechanical, and myogenic alterations in normotensive and hypertensive rats.

Am J Physiol Heart Circ Physiol. **2007**;293(1):H628-35.

• Giraldo J, Serra J, Roche D, Rovira X.

Assessing receptor affinity for inverse agonists: Schild and Cheng-Prusoff methods revisited.

Curr Drug Targets. 2007;8(1):197-202.

• Fisas A, Codony X, Romero G, Dordal A, Giraldo J, Merce R, Holenz J, Heal D, Buschmann H, Pauwels PJ.

Chronic 5-HT6 receptor modulation by E-6837 induces hypophagia and sustained weight loss in diet-induced obese rats.

Br J Pharmacol. 2006; 148(7):973-83

• Giraldo J, Roche D, Rovira X, Serra J.

The catalytic power of enzymes: conformational selection or transition state stabilization?

FEBS Lett. **2006**; 580(9):2170-7.

• Jimenez-Altayo F, Briones AM, Giraldo J, Planas AM, Salaices M, Vila E. Increased superoxide anion production by interleukin-1beta impairs nitric oxide -mediated relaxation in resistance arteries.

J Pharmacol Exp Ther. **2006**; 316(1):42-52.

• Briones AM, Montoya N, Giraldo J, Vila E.

Ageing affects nitric oxide synthase, cyclooxygenase and oxidative stress enzymes expression differently in mesenteric resistance arteries.

Auton Autacoid Pharmacol. 2005; 25(4):155-62.





• de la Chica RA, Ribas I, Giraldo J, Egozcue J, Fuster C. Chromosomal instability in amniocytes from fetuses of mothers who smoke. JAMA. **2005**; 293(10):1212-22

PROJECTES D'INVESTIGACIÓ (2005-) PROYECTOS DE INVESTIGACIÓN RESEARCH PROJECTS

A. Public Financing Entity

1. PROJECT TITLE Genome-wide transcriptional analysis during development of transmissible spongiform encephalpaties
FINANCING ENTITY Plan Nacional I+D+I (MCyT) EET2002-05168-C04-04
DURATION FROM 2002 TO 2005
PRINCIPAL INVESTIGATOR Joaquín Ariño

Protein phosphorylation and stress signaling
 Acción Estratégica de Genómica y Proteómica (MCyT) GEN2001-4707-C08-03
 FROM 2002 TO 2005

Joaquín Ariño

3. Mathematical modeling of the transduction mechanisms associated to G protein-coupled receptors

Ministerio de Educación y Ciencia. SAF2004-06134

FROM 2005 TO 2007

Jesús Giraldo

4. Signal transduction in eucariotic cells

Generalitat de Catalunya. Direcció General de Recerca. (2005SGR 00542)

FROM 2005 TO 2008

Joaquín Ariño

5. Gene interaction networks and models of cation homeostasis in Saccharomyces cerevisiae - TRANSLUCENT

SysM0 ERA-NET & Acción Especial Genómica y Proteómica. GEN2006-27748-C2-1-E/SYS FROM 2007 TO 2009

Joaquín Ariño (coordinator)

6. Mathematical Modeling of G Protein-Coupled Receptors: The Metabotropic Glutamate Receptors

Ministerio de Educación y Ciencia. SAF2007-65913

FROM 2008 TO 2010

Jesús Giraldo





7. Mathematical modeling of G protein-coupled receptor complex allosteric interactions: mechanistic and probabilistic approaches
Ministerio de Ciencia e Innovación. SAF2010-19257
FROM 2011 TO 2013
Jesús Giraldo

B. Private Financing Entity

1. PROJECT TITLE Statistical analyses of pre-clinical studies FINANCING ENTITY Laboratorios Dr. Esteve, S.A. (University-Private company contract, UAB-160517)

DURATION. FROM 2005 TO 2010, December 31 PRINCIPAL INVESTIGATOR Jesús Giraldo

 Bioinformatics analyses of group-III metabotropic glutamate receptor structuremechanism relationships
 Fundació La Marató de TV3 070530 Call 2006 on Chronic Pain
 FROM 2008 TO 2011
 Jesús Giraldo

SGR

Our group has been acknowledged by the Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR) as SUPORT A GRUPS DE RECERCA DE CATALUNYA - 2009 SGR 1171 for the period 2009-13.

PRINCIPAL INVESTIGATOR Jesús Giraldo