

**Edgar Jesus SORIA-GOMEZ**

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## **EDUCATION**

**2009: Ph.D. Degree** in Sciences. School of Medicine, Doctorate in Biomedical Sciences, Universidad Nacional Autónoma de México, UNAM. Thesis: "Cannabinergic Regulation of Appetitive Behaviors".

Supervisor: Oscar Prospéro García, M.D., Ph. D.

**2004: Psychology B. Sc.** with honors at the Psychology Faculty, UNAM. Thesis: "Function of the endogenous cannabinoids anandamide and oleamide in the nucleus accumbens shell in food intake modulation". Supervisor: Oscar Prospéro García, M.D., Ph. D. Average: 9.18 / 10.

## **RESEARCH EXPERIENCE**

**From 2023: IKERBASQUE research associate / Visitor Professor.** Dept. of Neuroscience, University of the Basque Country. Achucarro Basque Center for Neuroscience.

**2018-2023: IKERBASQUE research fellow / Visitor Professor.** Dept. of Neuroscience, University of the Basque Country. Achucarro Basque Center for Neuroscience.

**2015-2017: Post-doctoral University of Bordeaux.** Neurocentre Magendie. Team: Endocannabinoids and Neuroadaptation. Team leader: Dr. Giovanni Marsicano.

**2011-2015: Post-doctoral INSERM.** Neurocentre Magendie. Team: Endocannabinoids and Neuroadaptation. Team leader: Dr. Giovanni Marsicano.

**2009-2011: Post-doctoral FYSSSEN** Foundation grant. Team: Endocannabinoids and Neuroadaptation. Team leader: Dr. Klaus Petry & Dr. Giovanni Marsicano.

**2002-2009: Laboratory of Cannabinoids,** Group of Neurosciences, School of Medicine, UNAM. Group Leader: Dr. Oscar Prospéro García.

**2007: Research visit** to the Professor Tim C. Kirkham's lab. School of Psychology, University of Liverpool, Liverpool, UK.

**2001-2002: Laboratory of Sleep,** School of Psychology, UNAM. Group Leader: Dr. Maria Corsi-Cabrera.

**TEACHING**

From **2019**. Master class “Brain basis of cognition”. A) Master of Neuroscience. B) Master of Molecular Biology and Biomedicine. University of the Basque Country UPV/EHU.

**REVIEWER AND EDITORIAL ACTIVITY**

**2021-** Associate Editor: *Frontiers in Behavioral Neuroscience*. Associate Editor: *International Journal of Molecular Sciences*.

**2019-2020** Lead Editor. Special Issue on “Olfaction: from Genes to Behavior”

**2016** - Faculty editor. F1000.

**2015** - Associate Editor. *Bioprotocol*.

**2011-** Journal reviewer (e.g., *Pharmacological Research*, *PLoS One*, *Frontiers Neuroscience*, *Neuroscience*, *Molecular and Cellular Neuroscience*, *Obesity*, *Neuropsychopharmacology*, *Scientific Reports*, MDPI group).

**SUPERVISION AND ORGANIZATION:**

**Co-instructor** of PhD students at the European Synapse Summer School (Escube) 2011. Cannabinoid modulation of the CA3 hippocampal circuit.

**Project supervisor** in collaboration with Veronique Deroche-Gamonet (INSERM): “Apprentis Chercheurs MAAD”, Bordeaux 2013-2014, 2014-2015 and 2015-2016. *Pour quoi etudier le cannabis?*

**Project supervisor** in collaboration with Guillaume Ferreira (INRA): Nutribrain summer school, 1<sup>st</sup> edition, Bordeaux, September 2012. *The endocannabinoid system, food intake and olfactory processes*.

**Project supervisor** in collaboration with Guillaume Ferreira (INRA): Nutribrain summer school, 2<sup>nd</sup> edition, Bordeaux, September 2014. *Nutrient-specific modulation of olfactory performance by the endocannabinoid system*.

**Project partner** in collaboration with Gabriel Lepousez (Pasteur Institute, Paris), Guillaume Ferreira (INRA), Giovanni Marsicano (INSERM, Magendie): ANR project ORUPS.

**Co-founder** of the NeuroSocial Meeting (Neurocentre Magendie), a monthly event gathering students from different levels aimed to create a strong research network in a relaxed environment.

**Organizing Committee** for the Achucarro Glia School **2021**.

**Leader of the Organizing and Scientific Committee** for the NEUROGUNE organization **2022** (Pamplona, Spain).

**OTHER RELEVANT EXPERIENCE**

- Programme of training approved by the Universities’ Accreditation Scheme: Modules 1-4. species: rat. No. pil40/8911. University of Liverpool, UK.

- Official accreditation for animal experimentation and project design: R-45GRETA-F1-10. France.

- Official accreditation for animal experimentation and project design: CAP-2478-19. Spain.

- Language skills: Spanish (native), English (fluent), French (fluent), Italian (basic).

- Official accreditation to supervise Master Students (University of Bordeaux).

- Official accreditation to supervise PhD Students (University of the Basque Country).

**GRANTS AND AWARDS**

**2023:** ELKARTEK Project. Interdisciplinary collaborative research (Basque Government). Participant. PI: Xabier Iturbe.

**2023:** IKUR Project. Neurobiosciences. "ExoPsyCog" (Basque Government). Co-PI. (PI Javier Meana).

**2022:** Proyecto de Investigación en Neurociencia. Fundación Tatiana Pérez de Guzmán el Bueno.

**2022:** Proyectos Generación de Conocimientos: PID2021-125763NB-I00. (MCIU/AEI/EU). PI.

**2022:** IBRO Early Career Award.

**2021:** Gobierno Vasco. PIBA - PUE 2021. Co-PI. (PI Ignacio Torres Alemán).

**2019:** MINECOG 2018 (MCIU/AEI/FEDER, EU). PI

**2019:** ENDEAVOUR, Scholarships scheme. EU funds. PI

**2018:** IKERBASQUE Start-up grant. PI

**2017:** CONACyT Fronteras de la Ciencia. Co-participant.

**2017:** IKERBASQUE fellowship.

**2009:** FYSSSEN foundation fellowship.

**2003-2008:** Travel grants to participate in the Society for Neuroscience meetings from the Mexican Chapter of the Society for Neuroscience.

**2007:** CONACyT visitor researcher fellowship.

**2004:** CONACyT PhD fellowship.

**CO-PARTICIPANT IN RESEARCH PROJECTS**

**2019-2021/2022-2025:** Grupos de Investigación del Sistema Universitario Vasco. PI: Pedro Grandes. (Universidad del País Vasco).

**2022-2024:** Red de Investigación en Atención Primaria de Adicciones (RIAPAd). PI: Pedro Grandes. (Universidad del País Vasco).

FULL LIST OF PUBLICATIONS (\* shared authorship; #corresponding author)  
PUBLISHED

- Egaña-Huguet J, **Soria-Gomez E**, Grandes P. **2021**. The Endocannabinoid System in Glial Cells and Their Profitable Interactions to Treat Epilepsy: Evidence from Animal Models. *International Journal of Molecular Sciences*. 22(24):13231. **Corresponding author**.
- Rico-Barrio I, Peñasco S, Lekunberri L, Serrano M, Egaña-Huguet J, Mimenza A, **Soria-Gomez E**, Ramos A, Buceta I, Gerrikagoitia I, Mendizabal-Zubiaga J, Elezgarai I, Puente N, Grandes P. **2021**. Environmental Enrichment Rescues Endocannabinoid-Dependent Synaptic Plasticity Lost in Young Adult Male Mice after Ethanol Exposure during Adolescence. *Biomedicines*. 9(7):825
- Egaña-Huguet J, Saumell-Esnaola M, Achicallende S, **Soria-Gomez E**, Bonilla-Del Río I, García Del Caño G, Barrondo S, Sallés J, Gerrikagoitia I, Puente N, Elezgarai I, Grandes P. **2021**. Lack of the Transient Receptor Potential Vanilloid 1 Shifts Cannabinoid-Dependent Excitatory Synaptic Plasticity in the Dentate Gyrus of the Mouse Brain Hippocampus. *Frontiers in Neuroanatomy*. 15:701573. doi: 10.3389/fnana.2021.701573.
- Robledo-Menendez A, Vella M, Grandes P, **Soria-Gomez E**. **2020**. Cannabinoid control of hippocampal functions: the *where* matters. *FEBS Journal*. doi.org/10.1111/febs.15907. **Corresponding author**.
- **Soria-Gomez E**, Pagano Zottola A, Mariani Y, Desprez T, Barresi M, Bonilla-del Río I, Muguruza C, Le Bon-Jego M, Julio-Kalajzic F, Flynn R, Terral G, Fernández-Moncada I, Robin LM, Oliveira da Cruz JF, Corinti S, Ould Amer Y, Goncalves J, Varilh M, Cannich A, Redon B, Zhao Z, Lesté-Lasserre T, Vincent P, Tolentin-Cortes T, Busquets-García A, Puente N, Bain JS, Hebert-Chatelain E, Barreda-Gómez G, Chaouloff F, Lohman AW, Callado LF, Grandes P, Baufreton J, Marsicano G, Bellocchio L. **2021**. Subcellular specificity of cannabinoid effects in striatonigral circuits. *Neuron*. 109(9): 1513-1526. DOI:10.1016/j.neuron.2021.03.007. **Corresponding author**.
- Zhao Z, **Soria-Gomez E**, Varilh M, Covelo A, Julio-Kalajzic F, Cannich A, Castiglione A, Vanhoutte L, Dubeau A, Zizzari P, Beyeler A, Cota D, Bellocchio L, Busquets-Garcia A, Marsicano G. **2020**. A novel cortical mechanism for top-down control of water intake. *Current Biology*. 30(23), 4789-4798. doi: 10.1016/j.cub.2020.09.011.
- Oliveira da Cruz J, Busquets-Garcia A, Zhao Z, Varilh M, Lavanco G, Bellocchio L, Robin L, Cannich A, Julio-Kalajzic F, Lesté-Lasserre T, Maitre M, Drago F, Marsicano G, **Soria-Gomez E**#. **2020**. Specific Hippocampal Interneurons Shape Consolidation of Recognition Memory. *Cell Reports*. 32(7): 108046. doi: 10.1016/j.celrep.2020.108046. **Corresponding author**.
- **Soria-Gomez E**. **2020**. Editorial: Special Issue "Olfaction: from genes to behavior". *Genes (Basel)*. 11(6):654.

- Terral G, Marsicano G, Grandes P, **Soria-Gomez E. 2020.** Cannabinoid Control of Olfactory Processes: The Where Matters. *Genes (Basel)*. 11(4):431. **Corresponding author.**
- Terral G, Busquets-Garcia A, Varilh M, Achicallende S, Cannich A, Bellocchio L, Bonilla-Del Río I, Massa F, Puente N, **Soria-Gomez E**, Grandes P, Ferreira G, Marsicano G. **2019.** CB1 receptors in the anterior piriform cortex control odor preference memory. *Current Biology*. 29(15), 2455-2464.
- Muguruza C, Redon B, Fois GR, Hurel I, Scocard A, Nguyen C, Stevens C, **Soria-Gomez E**, Varilh M, Cannich A, Danialt J, Busquets-Garcia A, Pelliccia T, Caille S, Georges F, Marsicano G, Chaouloff F. **2019.** Endocannabinoids gate the motivation for exercise over palatable food. *Journal of Clinical Investigation. Insight*. 4(5).
- Busquets-Garcia A, Oliveira da Cruz JF, Terral G, Zottola ACP, **Soria-Gómez E**, Contini A, Martin H, Redon B, Varilh M, Ioannidou C, Drago F, Massa F, Fioramonti X, Trifilieff P, Ferreira G, Marsicano G. **2018.** Hippocampal CB1 receptors control incidental associations. *Neuron*. 99(6), 1247-1259.
- Robin L, Oliveira da Cruz J, Langlais V, Martin-Fernandez M, Metna-Laurent M, Busquets-Garcia A, Bellocchio L, **Soria-Gomez E**, Papouin T, Varihl M, Sherwood MW, Belluomo I, Matias I, Bossier B, Drago F, Van Eeckhaut A, Smolders I, Georges F, Panatier A, Araque A, Olié S, Marsicano G. **2018.** Astroglial CB1 receptors determine synaptic D-serine availability to enable recognition memory. *Neuron*. 98(5), 935-944.
- Gutiérrez-Rodríguez A, Bonilla-Del Río I, Puente N, Gómez-Urquijo SM, Fontaine CJ, Egaña-Huguet J, Elezgarai I, Ruehle S, Lutz B, Robin LM, **Soria-Gómez E**, Bellocchio L, Padwal JD, van der Stelt M, Mendizabal-Zubiaga J, Reguero L, Ramos A, Gerrikagoitia I, Marsicano G, Grandes P. **2018.** Localization of the cannabinoid type-1 receptor in subcellular astrocyte compartments of mutant mouse hippocampus. *Glia*. 66(7), 1417-1431.
- Busquets-Garcia A, **Soria-Gomez E**, Ferreira G, Marsicano G. **2017.** Representation-mediated Aversion as a Model to Study Psychotic-like States in Mice. *Bio-protocol*. 7(12). Published on-line in [www.bio-protocol.org](http://www.bio-protocol.org)
- Busquets-Garcia A, **Soria-Gomez E**, Redon B, Mackenbach Y, Chaouloff F, Varilh M, Ferreira G, Piazza PV, Marsicano G. **2017.** Pregnenolone blocks cannabinoid-induced acute psychotic-like states in mice. *Molecular Psychiatry*. 22(11), 1594-1603. PMID: 28220044.
- Hebert-Chatelain E\*, Desprez T\*, Serrat R\*, Bellocchio L\*, **Soria-Gómez E et al.** **2016.** A cannabinoid link between mitochondria and memory. *Nature*. 539(7630), 555-559.
- Busquets-Garcia A, **Soria-Gomez E**, Bellocchio L, Marsicano G. **2016.** Cannabinoid receptor type-1: breaking the dogmas. *F1000Research*. F1000 Faculty Rev-990.
- **Soria-Gomez E**, Busquets-Garcia A, Hu F, Mehidi A, Cannich A, Roux L, Luit I, Alonso L, Wiesner T, Georges F, Verrier D, Vincent P, Ferreira G, Luo M, Marsicano G. **2015.** Habenular CB1 receptors control the expression of aversive memories. *Neuron*. 88(2), 306-313. Q1

- Busquets-Garcia A, Desprez T, Metna-Laurent M, Bellocchio L, Marsicano G, **Soria-Gomez E#**. 2015. Dissecting the cannabinergic control of behavior: The *where* matters. Invited Review in *BioEssays*. 37(11), 1215-1225. **Corresponding author**. Q1
- **Soria-Gomez E#**, Bellocchio L, Marsicano G. 2014. New insights on food intake control by olfactory processes. Invited Review in the special issue of *Molecular and Cellular Endocrinology*: **Cellular energy sensors and endocrine function**. Edited by Miguel Lopez and Carlos Dieguez. 397 (1-2), 59-66. Review. **Corresponding author**. Q1
- Desprez T, Marsicano G, **Soria-Gomez E#**. 2014. Olfactory habituation in fasted mice. *Bio-protocol*. Published on-line in [www.bio-protocol.org](http://www.bio-protocol.org). **Corresponding author**.
- Chiarlone A, Bellocchio L, Blázquez C, Resel E, **Soria-Gómez E**, Cannich A, Ferrero JJ, Sagredo O, Benito C, Flores JM, Sendtner M, Romero J, Sánchez-Prieto J, Lutz B, Fernández-Ruiz J, Marsicano G, Galve-Roperh I, Guzmán M. 2014. A restricted population of CB1 cannabinoid receptors with neuroprotective activity. *Proceedings of the National Academy of Science*. 111(22), 8257-8262. Q1
- **Soria-Gómez E**, Bellocchio L, Reguero L, Lepousez G, Martin C, Bendahame M, Rühle S, Remmers F, Desprez T, Matias I, Wiesner T, Cannich A, Nissant A, Wadleigh A, Pape HC, Chiarlone AP, Quarta C, Verrier D, Vincent P, Massa F, Lutz B, Guzman M, Gurden H, Ferreira G, Lledo PM, Grandes P, Marsicano G. 2014. The endocannabinoid system controls food intake *via* olfactory processes. *Nature Neuroscience*. 17(3), 407-415. News and views, *Nature Neuroscience*. Research highlights, *Nature Reviews Neuroscience* and *Nature*. Q1
- **Soria-Gómez E\*\***, Massa F\*, Bellocchio L, Rueda-Orozco PE, Cota D, Cioffi P, Oliet S, Prospéro-García O, Marsicano G. 2014. Cannabinoid type-1 Receptors in The Paraventricular Nucleus of The Hypothalamus Inhibit Stimulated Food Intake in Rats. *Neuroscience*. 263, 46-53. **Corresponding author**. Q2
- Bosier B, Bellocchio L, Metna-Laurent M, **Soria-Gómez E**, Matias I, Cannich A, Maitre M, Verrier D, Leste-Laserre T, Cardinal P, Mendizabal-Zubiaga J, Canduela MJ, Reguero L, Chaouloff F, Hermans E, Grandes P, Cota D, Marsicano G. 2013. Astroglial CB1 cannabinoid receptors regulate leptin signaling in brain astrocytes. *Molecular Metabolism*. 2(4), 393-404. Q1
- Bellocchio L\*, **Soria-Gómez E\***, Quarta C, Metna-Laurent M, Cardinal P, Binder E, Cannich A, Delamarre A, Häring M, Martín-Fontecha M, Vega D, Bartsch D, Monory K, Lutz B, Chaouloff F, Guzman M, Pagotto U, Cota D, Marsicano D. 2013. Activation of the sympathetic nervous system mediates, hypophagic and anxiety-related effects of CB1 receptor blockade. *Proceedings of the National Academy of Science*. 110(12), 4786-4791. Q1
- Sales-Carbonell C, Rueda-Orozco PE, **Soria-Gómez E**, Buzsaki G, Marsicano G, Robbe D. 2013. Striatal GABAergic and cortical glutamatergic neurons mediate contrasting effects of cannabinoids on cortical network synchrony. *Proceedings of the National Academy of Science*. 110(2), 719-724. Q1

- Dubreucq S, Durand A, Matias I, Bénard G, Richard E, **Soria-Gómez E**, Glangetas C, Groc L, Wadleigh A, Massa F, Bartsch D, Marsicano G, Georges F, Chaouloff F. **2012**. Ventral tegmental area cannabinoid type-1 receptors control voluntary exercise performance. *Biological Psychiatry*. 73(9), 895-903. Q1
- Metna-Laurent M\*, **Soria-Gómez E\***, Verrier D, Conforzi M, Jego P, Lafenetre P, Marsicano G. **2012**. Bimodal control of fear-coping strategies by CB1 cannabinoid receptors. *Journal of Neuroscience*. 32(21), 7109-7118. Q1
- Benard G, Massa F, Puente N, Lourenco J, Bellocchio L, **Soria-Gómez E**, Matias I, Delamarre A, Metna-Laurent M, Cannich A, Hebert-Chatelain E, Mulle C, Ortega-Gutierrez S, Martín-Fontecha M, Klugmann M, Guggenhuber S, Lutz B, Gertsch J, Chaouloff F, López-Rodríguez ML, Grandes P, Rossignol R, Marsicano G. **2012**. Mitochondrial CB1 receptors regulate neuronal energy metabolism. *Nature Neuroscience*, 15, 558-564. Q1
- Dubreucq S, Kambire S, Conforzi M, Metna-Laurent M, Cannich A, **Soria-Gómez E**, Richard E, Marsicano G, Chaouloff F. **2011**. Cannabinoid type 1 receptors located on single-minded 1-expressing neurons control emotional behaviors. *Neuroscience*, 204, 230-244. Q2
- **Soria-Gómez E**, Márquez-Diosdado MI, Montes-Rodríguez CJ, Cisneros M, Prospéro-García O. **2010**. Oleamide administered into the nucleus accumbens shell regulates feeding behavior via CB1 and 5HT2C receptors. *International Journal of Neuropsychopharmacology*. 13 (9), 1247-1254. Q1
- Rueda-Orozco PE, **Soria-Gómez E**, Montes-Rodríguez CJ, Pérez-Morales M, Prospéro-García O, **2010**. Intrahippocampal administration of anandamide increases REM sleep. *Neuroscience Letters*. 473 (2), 1558-1562. Q3
- **Soria-Gómez E**, Guzmán K, Pech-Rueda O, Montes-Rodríguez CJ, Cisneros M, Prospéro-García O, **2010**. Oleoylethanolamide affects food intake and sleep-waking cycle through a hypothalamic modulation. *Pharmacological Research*. 61(5), 379-384. Q1
- Montes-Rodríguez C, Alavez S, **Soria-Gómez E**, Guzmán K, Rueda-Orozco PE, Morán J, Prospéro-García O, **2009**. BCL-2 and BAX proteins expression throughout the dark-light cycle and modifications induced by sleep deprivation and rebound in adult rat brain. *Journal of Neuroscience Research*. 87 (7), 1602-1609. Q2
- Rueda-Orozco PE, Montes-Rodríguez C, **Soria-Gómez E**, Méndez-Díaz M and Prospéro-García O, **2008**. Impairment of endocannabinoids activity in the dorsolateral striatum delays extinction of behavior in a procedural memory task in rats. *Neuropharmacology*. 55 (1), 55-62. Q1
- Rueda-Orozco PE, **Soria-Gómez E**, Montes-Rodríguez C, Martínez-Vargas M, Galicia O, Navarro L and Prospéro-García O, **2007**. A potential function of endocannabinoids in the selection of a navigation strategy by rats. *Psychopharmacology*. 198 (4), 565-576. Q1

- **Soria-Gómez E**, Matias I, Rueda-Orozco PE, Cisneros M, Petrosino S, Navarro L, Di Marzo V and Prospéro-García O, **2007**. Pharmacological enhancement of the endocannabinoid system in the nucleus accumbens shell stimulates food intake and increases c-Fos expression in the hypothalamus. *British Journal of Pharmacology*, 151 (7), 1109-1116. **Selected as a “must read” article by the Faculty of 1000. Q1**
- Pavel E. Rueda-Orozco, Corinne J. Montes-Rodríguez, **Edgar Soria-Gómez**, Andrea Herrera-Solís, Khalil Guzmán, Aldebaran Prospéro-García, Alejandra E. Ruiz-Contreras y Oscar Prospéro-García, **2006**. Dependencia de los sistemas de memoria al ciclo luz-oscuridad en la expresión de estrategias adaptativas. Second part. *Salud Mental*, 29 (5), 49-58.
- Pavel E. Rueda-Orozco, Corinne J. Montes-Rodríguez, **Edgar Soria-Gómez**, Andrea Herrera-Solís, Khalil Guzmán, Aldebaran Prospéro-García, Alejandra E. Ruiz-Contreras y Oscar Prospéro-García, **2006**. Dependencia de los sistemas de memoria al ciclo luz-oscuridad en la expresión de estrategias adaptativas. First part. *Salud Mental*, 29 (4), 18-24.
- **Edgar Soria** y Oscar Prospéro García, **2005**. ¿Por qué nos gusta la marihuana?. *Liberaddictus*, 83, 3-6.

#### PREPRINTS

- Baraibar AM, Colomer T, Moreno-García A, Bernal-Chico A, Sánchez E, Utrilla C, Serrat R, **Soria-Gómez E**, Rodríguez-Antigüedad A, Araque A, Matute C, Marsicano G, Mato S. **2023**. Autoimmune inflammation triggers aberrant astrocytic calcium signaling to impair synaptic plasticity. *bioRxiv*. doi: <https://doi.org/10.1101/2023.08.01.551248>
- Zhe Zhao, **Edgar Soria-Gomez**, Marjorie Varilh, Francisca Julio-Kalajzic, Astrid Cannich, Adriana Castiglione, Leonie Vanhoutte, Alexia Dubeau, Philippe Zizzari, Anna Beyeler, Daniela Cota, Luigi Bellocchio, Arnau Busquets-Garcia, Giovanni Marsicano. **2019**. Top-down control of water intake by the endocannabinoid system. *bioRxiv*, doi: <https://doi.org/10.1101/729970>.
- Jose F Cruz, Arnau Busquets-Garcia, Zhe Zhao, Marjorie Varilh, Gianluca Lavanco, Luigi Bellocchio, Laurie Robin, Astrid Cannich, Francisca Julio-Kalajzic, Filippo Drago, Giovanni Marsicano, **Edgar Soria-Gomez**<sup>#</sup>. Specific Hippocampal Interneurons Shape Consolidation of Recognition Memory. *bioRxiv*, doi: <https://doi.org/10.1101/842021>. **Corresponding author.**
- Antonio C. Pagano Zottola\*, **Edgar Soria-Gomez**\*, Itziar Bonilla-del-Río, Carolina Muguruza, Geoffrey Terral, Laurie M. Robin, José F. Oliveira da Cruz, Bastien Redon, Thierry Lesté-Lasserre, Tarson Tolentino-Cortes, Nagore Puente, Gabriel Barreda-Gómez, Francis Chaouloff, Luis F. Callado, Pedro Grandes, Giovanni Marsicano, Luigi Bellocchio. **A new mutant mouse model lacking mitochondrial-associated CB1 receptor.** *bioRxiv*, <https://doi.org/10.1101/2020.03.30.009472>.

#### CHAPTERS IN BOOKS



- **“Del placer y el placer a la marijuana” (Of pleasure and pleasure to marijuana)** Oscar Prospéro García, **Edgar Soria**, Pavel E. Rueda, Alejandro Huerta Saquero. In “TEMAS SELECTOS DE NEUROCIENCIAS III”, 2004. Editor: Javier Velazquez Moctezuma.
- **“El sistema canabinérgico, las memorias y las enfermedades mentales” (The cannabinergic system, memories and mental illness)** Pavel E. Rueda Orozco, **Edgar Soria Gómez**, Oscar Prospéro García. In “PSIQUIATRÍA Y NEUROCIENCIAS: 40 ANIVERSARIO, HOSPITAL DE PSIQUIATRÍA “DR. SAMUEL RAMÍREZ MORENO”, 2008. Editors: Dr. Rafael Castro Román, Dr. Javier Velázquez Moctezuma.
- **“Mighty cannabinoids: A potential pharmacological tool in medicine”** Mónica Méndez Díaz, Andrea Herrera-Solís, **Edgar J. Soria-Gómez**, Pavel E. Rueda-Orozco and Oscar Prospéro-García. In “Neural Mechanisms of Action of Drugs of Abuse and Natural Reinforcers”, 2008. Editors: Milagros Méndez Ubach and Ricardo Mondragón-Ceballos. Kerala: Research Signpost; 2008; pp. 137-157.
- **“Cannabinoid control of fear responses”** Mathilde Metna-Laurent, Giovanni Marsicano and **Edgar Soria-Gómez**. In “Cannabinoids, endocannabinoids, and modulation of emotion, memory and motivation” Editors: Patricia Campolongo and Liliana Fattore. Springer. 2015; pp. 131-151. **Corresponding author.**
- **“The endocannabinoid system in the control of behavior”** **Edgar Soria-Gómez**, Mathilde Metna-Laurent, Arnau Busquets-Garcia, Luigi Bellocchio and Giovanni Marsicano. In “Handbook of Neurobehavioral Genetics and Phenotyping” Editors: Valter Tucci. John Wiley & Sons. 2017: 323-356. **Corresponding author.**

#### IKERGAZTE: Conference for Basque Researchers

- **“Mglu2 eta mGlu3 glutamatoaren hartzaile metabotropikoen kokapena CB1 hartzaile kannabinoidearekiko hipokanpoaren hilusean”** Aitor Medrano Peral, Ianire Buceta Salazar, Almudena Ramos Uriarte, Jon Egaña Huguet, Itziar Bonilla Del Rio, Naiara Royo Zubillaga, Irantzu Rico Barrio, Izaskun Elezgarai Gabantxo, Nagore Puente Bustinza, Leire Reguero Acebal, Svein Atxikallende Urkaregi, Itziar Terradillos Irastorza, **Edgar Soria-Gómez**, Juan Luis Mendizabal Zubiaga, Inmaculada Gerrikagoitia Marina, Javier Meana Martínez, Sonia Gomez Urkijo, Pedro Grandes Moreno. In “Ikergazte nazioarteko ikerketa euskaraz III”. Pp: 144 – 149. ISBN: 978-84-8438-684-1 3. Liburukia, **2019**.
- **“Garun traumatismoen epe luzeko eragina hipokanpoko CB1 hartzailean”** Itziar Bonilla Del rio; Jon Egaña-Huguet; Svein Achicallende; **Edgar Soria-Gomez**; Almudena Ramos; ItziarTerradillos; Amaia Mimenza; Maitane Serrano; Leire Lekunberri; Ilazki Anaut Lusar; Ianire Buceta; Irantzu Rico Barrio; Inmaculada Gerrikagoitia; Kate J Neale; Cristina Pinar; Juan Trevi o Paredes; Patrick C Nahirney; Brian R Christie; Nagore Puente; Izaskun Elezgarai;

Pedro Grandes. IV. Ikergazte Nazioarteko ikerketa euskeraz. osasun zientziak, UEU, **09/06/2021**.

- **“Hipokanpoaren mendeko portaeren eta endokannabinoide sistemaren aldaketak loki-lobuluko epilepsiaren animalia eredu batean”**. Ilazki Anaut Lusar; Jon Egaña-Huguet; Itziar Terradillos; **Edgar Soria-Gomez**; Leire Lecumberri; Sonia Gomez Urquijo; Maitane Serrano; Itziar Bonilla Del rio; Amaia Mimenza; Svein Achicallende; Nagore Puente; Almudena Ramos Uriarte; Ianire Buceta; Irantzu Rico Barrio; Inmaculada Gerikagoitia; Izaskun Elezgarai; Pedro Grandes. IV. Ikergazte NAzioarteko ikerketa euskeraz. osasun zientziak, UEU, **09/06/2021**.
- **“Nerabazaroko gehiegizko alkohol kontsumoaren kalt e iraunkorrak C57Bl6j sagu eme helduetan”** Leire Lecumberri; Maitane Serrano; **Edgar Soria-Gomez**; Itziar Bonilla Del rio; Ilazki Anaut Lusar; Amaia Mimenza; Svein Achicallende; Jon Egaña-Huguet; Almudena Ramos Uriarte; Itziar Terradillos; Itziar Terradillos; Inmaculada Gerrikagoitia; Izaskun Elezgarai; Nagore Puente; Irantzu Rico Barrio; Pedro Grandes. IV. Ikergazte NAzioarteko ikerketaeuskeraz. osasun zientziak, UEU, **09/06/2021**.
- **“Omega-3 gantz azidoen propietate onuragarriak”** Maitane Serrano; Leire Lekunberri; **Edgar Soria-Gomez**; Itziar Bonilla Del rio; Amaia Mimenza; Jon Egaña-Huguet; Ilazki Anaut Lusar; Itziar Terradillos; Svein Achicallende; Nagore Puente; Almudena Ramos Uriarte; Inmaculada Gerrikagoitia; Izaskun Elezgarai; Irantzu Rico Barrio; Pedro Grandes. IV. Ikergazte NAzioarteko ikerketaeuskeraz. osasun zientziak, UEU, **09/06/2021**.
- **Hipokanpoko CB1 hartzailaren funtzionamendua, berdina ahal da ar eta emeen artean?** Sangroniz-Beltran, L., Aranguren-Alberdi, A., Reyes, P., Landgraf, N., Bonilla-Del Rio, I., Ramos, A., Grandes, P., Egaña-Huguet, J., **Soria-Gómez, E.** V. Ikergazte NAzioarteko ikerketaeuskeraz. osasun zientziak, UEU, **17/05/2023**.
- **“Epe luzerako ondorioak loki-lobuluko epilepsia sagu-eredu baten garunean: glia zelulak eta CB1 hartzaila”** Garazi Ocerin, Ilazki Anaut-Lusar, Amaia Mimenza, Leire Lekunberri, Maitane Serrano, **Edgar Soria-Gómez**, Inmaculada Gerrikagoitia, Irantzu Rico-Barrio, Nagore Puente, Jon Egaña-Huguet, Izaskun Elezgarai and Pedro Grandes. V. Ikergazte NAzioarteko ikerketaeuskeraz. osasun zientziak, UEU, **17/05/2023**.
- **“Omega-3en propietate onuragarriak alkoholak nerabezaroan eragiten dituen kalteak berreskuratzeko”** Maitane Serrano, Leire Lekunberri, Amaia Mimenza, Ilazki Anaut Lusar, Miquel Saumell-Esnaola, Gontzal García Del Caño, **Edgar Soria Gómez**, Garazi Ocerin, Itziar Bonilla Del Río, Nagore Puente, Almudena Ramos Uriarte, Inmaculada Gerrikagoitia, Izaskun, Elezgarai, Irantzu Rico Barrio and Pedro Grandes. V. Ikergazte NAzioarteko ikerketaeuskeraz. osasun zientziak, UEU, **17/05/2023**.

## OTHERS

- “Así desciframos las bases celulares de los efectos de la marihuana”. 2021. Edgar Soria-Gomez. *The Conversation*. <https://theconversation.com/asi-desciframos-las-bases-celulares-de-los-efectos-de-la-marihuana-162787>.
- **Mobility in Academia” Re-Think Science Podcast. August 2022.** <https://open.spotify.com/show/1DPv4PXmITtWuYOrxZN4qZ>.

## INVITED AS A LECTURER

- 3rd FALAN Congress. Subcellular specificity of cannabinoid control. September 2022. Belém, Brazil.
- Yale School of Medicine. Department of Molecular Psychiatry. Cannabinoid control of memory processes: The *where* matters. June 2022.
- CANNALATAN-ISN SCHOOL. Cannabinoid control of memory and navigation: The *where* matters. Universidad Complutense de Madrid. June 2022.
- Seminario Interno. Centro de Estudios Farmacológicos y Botánicos. Dissecting the cannabinergic control of memory: The *where* matters. CEFYBO – UBA/CONICET, Argentina.
- ZOOPSY: Memoire, apprentissage et therapie. Association Veterinaire de Zoopsychiatrie. 2021. Cannabinergic regulation of aversive memories. Paris, France.
- Neurosciences Update. 2021. Dissecting brain circuits. Universidad Nacional Autónoma de México, UNAM. México City. México. ZOOMinar.
- Conferencias de Neurociencias: De Sinapsis, Ensamblés y Sistemas Dinámicos. 2019. Control Canabinérgico de la Conducta. Ciudad de México. México.
- 19a Reunion annual de la Sociedad Espanola de Investigacion sobre Cannabinoides 2018. CB1 control of inhibitory circuits modulates recognition memory. Universidad Francisco de Vitoria, Madrid. Spain.
- NEUROGUNE. 2018. CB1 control of inhibitory circuits modulates recognition memory. Vitoria-Gasteiz. Spain.
- Achucarro seminars. 2018. Dissecting the cannabinergic control of behavior: The *where* matters. Leioa. Spain.
- DIETECOM. 2017. L’incidence de l’odorat sur les comportements alimentaires. Paris, France.
- 6<sup>ème</sup> Symposium du Neurocentre Magendie. 2017. **The role of mitochondrial CB1 receptors in motor control**. Bordeaux, France.

- Colloque NeuroMem 2016. Habenular CB1 receptors control the expression of aversive memories. Lacanau, France.
- 5<sup>ème</sup> Symposium du Neurocentre Magendie. 2015. Habenular CB1 receptors control the expression of aversive memories. Bordeaux, France.
- 12e Colloque. Société des Neurosciences 2015. Habenular CB1 receptors regulate fear expression. Montpellier, France.
- 7<sup>th</sup> Symposium in Nutrition & Neurosciences. 2014. THE ENDOCANNABINOID SYSTEM CONTROLS FOOD INTAKE VIA OLFATORY PROCESSES. Bordeaux, France.
- 6<sup>th</sup> Symposium in Nutrition & Neurosciences. 2013. ACTIVATION OF THE SYMPATHETIC NERVOUS SYSTEM MEDIATES, HYPOPHAGIC AND ANXIETY-RELATED EFFECTS OF CB1 RECEPTOR BLOCKADE. Bordeaux, France.
- Talk Title: **THE ENDOCANNABINOID SYSTEM CONTROLS FOOD INTAKE VIA OLFATORY PROCESSES.** June 20, 2013. Department of Neuroscience, Institute Pasteur, Paris, France.
- 3<sup>ème</sup> Symposium du Neurocentre Magendie. 2012. CANNABINOID TYPE-1 (CB1)-DEPENDENT REGULATION OF FOOD INTAKE IN THE OLFATORY BULB. Bordeaux, France
- 5<sup>th</sup> Symposium in Nutrition & Neurosciences. 2012. CANNABINOID TYPE-1 (CB1)-DEPENDENT REGULATION OF FOOD INTAKE IN THE OLFATORY BULB. Bordeaux, France.
- 4<sup>th</sup> Symposium in Nutrition & Neurosciences. 2011. ENDOCANNABINOID MEDIATED HYPOPHAGIA IN THE PARAVENTRICULAR NUCLEUS OF THE HYPOTHALAMUS. Bordeaux, France.
- Talk Title: **FUNCTIONAL CHARACTERIZATION OF THE ENDOCANNABINOID SYSTEM IN THE HABENULAR COMPLEX.** July 14, 2011. Bordeaux-Münich DFH Meeting. MPI for Psychiatry, München, Germany.
- Talk Title: **CANNABINERGIC REGAULATION OF FOOD INTAKE.** March 14, 2007. Department of Reproduction Biology, Neuroscience Area. Universidad Autónoma Metropolitana, Iztapalapa, Mexico.
- Talk Title: **CANNABINERGIC REGAULATION OF FOOD INTAKE.** March 22, 2006. Department of Reproduction Biology, Neuroscience Area. Universidad Autónoma Metropolitana, Iztapalapa, Mexico.
- 4to. Congreso de trabajos de investigación formativa, “A la memoria de Augusto Fernández Guardiola” 2005. “Marihuanas endógenas, motivación e ingestión de alimento (Endogenous marihuanas, motivation and feeding behavior)”. Facultad de Psicología, UNAM, Mexico. Oral presentation.

- Talk Title: **CANNABINERGIC REGAULATION OF FOOD INTAKE**. Febraury 1, 2005. Department of Reproduction Biology, Neuroscience Area. Universidad Autónoma Metropolitana, Iztapalapa, Mexico.
- 3er. Congreso de trabajos de investigación formativa, 2004. Thematic table “**Trayectorias de formación en investigación básica**”. School of Psychology, UNAM, Mexico. Oral presentation.
- Talk Title: **MOTIVATION**. November 17, 2004. Department of Reproduction Biology, Neuroscience Area. Universidad Autónoma Metropolitana, Iztapalapa. Mexico.
- XLVII Congreso Nacional de la Sociedad Mexicana de Ciencias Fisiológicas, 2004. “La administración de anandamida y oleamida en el núcleo accumbens shell incrementa la ingesta de alimento en ratas (Anandamide and oleamide administration into the nucleus accumbens shell increases food intake in rats)”

### POSTERS PRESENTATIONS

- 22a Reunión anual de la Sociedad Española de Investigación sobre Cannabinoides 2022. Cellular specificity and sexual dimorphism of hippocampal CB1 receptors on behavioral processes. \***Jon Egaña-Huguet** and **Edgar Soria-Gomez**. Oral presentation.
- FENS forum 2022. Studying the role of CB1 receptors on memory and navigation in male and female mice. July 2022. Paris, France.
- NEUROGUNE 2022. Studying the role of CB1 receptors on memory and navigation in male and female mice. July 2022. Pamplona, Spain.
- Yale School of Medicine. Department of Molecular Psychiatry. Cannabinoid control of memory processes: The *where* matters.
- 21a Reunión anual de la Sociedad Española de Investigación sobre Cannabinoides 2021. Studying the involvement of hippocampal CB1 receptors on memory and navigation. Sangroniz-Beltran... \***Edgar Soria-Gomez**. Abstract-Poster. **Corresponding author**.
- 20a Reunión anual de la Sociedad Española de Investigación sobre Cannabinoides 2019. Studying the role of CB1 receptors in cholinergic circuits. Maria Vella... \***Edgar Soria-Gómez**. Abstract-Poster. **Corresponding author**.
- Gordon Research Conference. Cannabinoid Function in the CNS. 2019. **Edgar Soria-Gómez et al.**, Mitochondrial CB1 receptors bias the adverse effects of cannabinoids in the striatonigral circuit. Abstract-Poster.
- Gordon Research Conference. Cannabinoid Function in the CNS. 2019. Jose F Cruz, Arnau Busquets-Garcia...**Edgar Soria-Gomez**. Deletion of CB1 receptors in D1-positive cells impairs object recognition memory and synaptic plasticity. Abstract-Poster. **Corresponding author**.

- NeuroFrance 2019. Jose F Cruz, Arnau Busquets-Garcia...**Edgar Soria-Gomez**. Deletion of CB1 receptors in D1-positive cells impairs object recognition memory and synaptic plasticity. Abstract-Poster. **Corresponding author**.
- 46 Annual Meeting of the Society for Neuroscience 2016. **Soria-Gómez E et al.**, A cannabinoid link between mitochondria and memory. Abstract-Poster.
- 7<sup>th</sup> European Workshop on Cannabinoid Research & IACM 8<sup>th</sup> Conference on Cannabinoids in Medicine. 2015. **Soria-Gómez E**, Busquets-Garcia A, Mehidi A, Hu F, Roux-Deprun L, Louit I, Alonso L, Verrier D, Wiesner T, Cannich A, Georges F, Luo M, Marsicano G. Habenular CB1 receptors control the expression of aversive memories. Abstract-Poster.
- 44 Annual Meeting of the Society for Neuroscience 2014. **Soria-Gómez E**, Busquets-Garcia A, Mehidi A, Hu F, Roux-Deprun L, Louit I, Alonso L, Verrier D, Wiesner T, Cannich A, Georges F, Luo M, Marsicano G. Habenular CB1 receptors regulate fear expression. Abstract-Poster.
- 11<sup>th</sup> International conference on brain energy metabolism, Helsingør, Denmark. 2014. **Soria-Gómez E\***, Bellocchio L\*, Bendahame M, Rühle S, Remmers F, Reguero L, Desprez T, Matias I, Wiesner T, Wadleigh A, Cannich A, Verrier D, Vincent P, Pape HC, Ferreira G, Massa F, Lutz B, Gurden H, Grandes P, Marsicano G. The endocannabinoid system controls food intake *via* olfactory processes. Abstract-Poster.
- 11e Colloque. Société des Neurosciences 2013. **Soria-Gómez E\***, Bellocchio L\*, Bendahame M, Rühle S, Remmers F, Reguero L, Desprez T, Matias I, Wiesner T, Wadleigh A, Cannich A, Verrier D, Vincent P, Pape HC, Ferreira G, Massa F, Lutz B, Gurden H, Grandes P, Marsicano G. The endocannabinoid system controls food intake *via* olfactory processes. Abstract-Poster.
- 41 Annual Meeting of the Society for Neuroscience 2011. **Soria-Gómez E**, Bellocchio L, Bendahame M, Reguero L, Cannich A, Richard E, Grandes P, Gurden H, Marsicano G. "Cannabinoid type-1 (CB1)-dependent regulation of food intake in the olfactory bulb". Abstract-Poster.
- Gordon Research Conference. Cannabinoid Function in the CNS. 2011. **Soria-Gómez E**, Roux-Deprun L, Cannich A, Verrier D, Marsicano G. Functional characterization of the endocannabinoid system in the habenula. Poster presentation.
- Gordon Research Conference. Cannabinoid Function in the CNS. 2011. **Soria-Gómez E**, Massa F, Bellocchio L, Rueda-Orozco PE, Cota D, Oliet S, Prospéro-García O, Marsicano G. Endocannabinoid mediated hypophagia in the paraventricular nucleus of the hypothalamus. Poster presentation.
- 20th Annual Symposium of the International Cannabinoid Research Society, ICRS. 2010. **Soria-Gómez E**, Massa F, Bellocchio L, Rueda-Orozco PE, Cota D, Oliet S, Prospéro-García O, Marsicano G. Endocannabinoid mediated hypophagia in the paraventricular nucleus of the hypothalamus. Poster presentation.

- Gordon Research Conference. Cannabinoid Function in the CNS. 2009. **Soria-Gómez E**, Rueda-Orozco PE, Montes-Rodríguez CJ, Pérez M, Villanueva I, Aguilar-Roblero R, Prospéro-García O. CB1 mRNA expression in the brain of rats is increased by food deprivation. Poster presentation.
- 38 Annual Meeting of the Society for Neuroscience 2008. Rueda-Orozco PE, Montes-Rodríguez CJ, **Soria-Gómez E**, Méndez-Díaz M, Guzmán K, Prospéro-García O. "Impairment of endocannabinoids activity in the dorsolateral striatum delays extinction of behaviour in a procedural memory task in rats". Abstract-Poster. 589.5.
- 38 Annual Meeting of the Society for Neuroscience 2008. **Soria-Gómez E**, McAdams J and Kirkham TC. "CB1 cannabinoid receptors in the nucleus accumbens shell mediate food deprivation-induced hyperphagia in rats". Abstrac-Postert 584.1.
- 17th Neuropharmacology Conference. Cannabinoid Signaling in the Nervous System 2007. Guzmán K, **Soria-Gómez E** and Prospéro-García O. "Oleoylethanolamide reduces rapid eye movement sleep and c-Fos expression in the hypothalamus". Abstract-Poster P1.2.08.
- 17th Neuropharmacology Conference. Cannabinoid Signaling in the Nervous System 2007. **Soria-Gómez E**, Matias I, Rueda-Orozco PE, Petrosino S, Cisneros M, Navarro L, Di Marzo V and Prospéro-García O. "Inhibition of the Endocannabinoid Reuptake in the Nucleus Accumbens Shell Increases Food Intake and Activates the Hypothalamus in Rats". Abstract-Poster P1.2.23.
- 36 Annual Meeting of the Society for Neuroscience 2006. **E. Soria**, I Matias, M Cisneros, V. Di Marzo and O. Prospéro García. Inhibition of endocannabinoid degradation in the nucleus accumbens shell increases food intake and activates the hypothalamus in rats". Abstract-Poster 457.17.
- 35 Annual Meeting of the Society for Neuroscience 2005. P. E. Rueda Orozco, **E. Soria** and O. Prospéro García. "The effect of anandamide and oleamide on the acquisition of fear conditioning depends on diurnal variations". Abstract-Poster 651.10.
- 35 Annual Meeting of the Society for Neuroscience 2005. **E. Soria**, K. Guzmán and O. Prospéro García. "The cannabinoid receptor 1 antagonist AM251 blocks the hyperphagic effects of anandamide and oleamide when injected into the nucleus accumbens shell". Abstract-Poster 762.20.
- 34 Annual Meeting of the Society for Neuroscience 2004. **E. Soria**, K. Guzmán, R. Aguilar Roblero and O. Prospéro García. "Anandamide and oleamide administration into the nucleus accumbens shell activates the paraventricular nucleus of the hypothalamus in rats". Abstract-Poster 785.9
- 33 Annual Meeting of the Society for Neuroscience 2003. **E. Soria**, K. Guzmán, P. Rueda Orozco, X. García and O. Prospéro García. "Anandamide and oleamide administration into the nucleus accumbens shell increases food intake in rats" Abstract-Poster 929.4.