



III Congreso Internacional y VIII Encuentros
Hispano Cubanos en Ciencias de la Salud

"Sociedad, Entorno y Salud"
17, 18 y 19 de noviembre de 2022

Dra. María José Simón Ferre

Philosophy and Humanities degree, section Psychology (University of Granada, Spain). PhD Program: Experimental Psychology and Behavioral Neurosciences

Date of completion: 06/06/2003. Thesis: Behavioral effects of activation of the brainstem parabrachial complex: relevance of the external lateral parabrachial subnucleus in place and taste learning induced by electrical stimulation or enteral administration of nutrients, University of Granada. Spain.

Research activities

Positive Evaluations of Research: Periods from 2002 to 2007 and from 2008 to 2013 (CNEAI). Period from 2014-2019 in process of evaluation

Publications (Articles):


-Panagis, G., Vlachou, S., Higuera-Matas, A., Simon, M.J.(2022): Neurobehavioral mechanisms of reward: Theoretical and technical perspectives and their implications for neuropathology. Accepted for publishing in Frontiers of Behavioral Neuroscience. -Simon, Maria J., Zafra, M.A., Puerto, A.(2019): Differential rewarding effects of the electrical stimulation of the lateral hypothalamus and parabrachial complex: A functional characterization and the relevance of opioid systems and Dopamine. Journal of Psychopharmacology, 33 (12), 1475-1490.

Zafra, M.A., Mahia,J., Simon, M.J., Molina, F., Puerto, A. (2018): " Enteral feeding: brain-visceral interactions in the processing of nutrients". En VVAA: Feed Your Mind - How Does Nutrition Modulate Brain Function Throughout Life. IntechOpen (ISBN: 978-953-51-6383-1).

-Agüera, A.D.R., Zafra, M.A., Simon, M.J., Molina, F., Puerto, A. (2016): Satiating and re-intake after partial withdrawal of gastric food contents: A dissociation effect in external lateral parabrachial lesioned rats. Brain Research Bulletin, 127, 126-133.

-Simon, María J., Higuera-Matas, A., Roura-Martínez, D., Ucha, M., Santos-Toscano, R., García-Lecumberri, C., Ambrosio, E., Puerto, A. (2016): Changes in D1 but not D2 dopamine or mu-opioid receptor expression in limbic and motor structures after lateral hypothalamus electrical self-stimulation: A quantitative autoradiographic study. Neurobiology of Learning and Memory 127, 17-26.

-García, R., Simon, Maria J., Puerto, A. (2014): Rewarding effects of the electrical stimulation of the parabrachial complex: Taste or place preference?. Neurobiology of Learning and Memory, 107, 101-107.



-Simon, Maria J., Garcia, R., Puerto, A. (2013): Conditioned Taste and Place Preferences Induced by Electrical Stimulation of the External Lateral Parabrachial Nucleus: A General Reinforcing Mechanism? Journal of
III Congreso Internacional y VIII Encuentros
Hispano Cubanos en Ciencias de la Salud

"Sociedad, Entorno y Salud"
17, 18 y 19 de noviembre de 2022

Behavioral and Brain Science, 3, 422-431. -García, R., Simón, M. J., Puerto, A. (2013): Conditioned place preference induced by electrical stimulation of the insular cortex: effects of naloxone. Experimental Brain Research, 226(2)165-174.

-Simon, M.J, García, R. & Puerto, A. (2011): Concurrent stimulation-induced place preference in LH and parabrachial complex: differential effects of naloxone. Behavioural Brain Research, 225, 311-316.

-Simon, M.J., Molina, F. & Puerto (2009): Conditioned place preference but not rewarding self-stimulation after electrical activation of the external lateral parabrachial nucleus. Behavioral Brain Research, 205, 443-449.

-Simon, M.J., Zafra, M.A., Molina, F. & Puerto, A. (2008): Consistent rewarding or aversive effects of the electrical stimulation of the lateral parabrachial complex. Behavioural Brain Research, 190, 67-73.

-Simon, M.J., García, R., Zafra, M.A., Molina, F. & Puerto, A. (2007): Learned preferences induced by electrical stimulation of a food related area of the Parabrachial Complex: Effects of Naloxone. Neurobiology of Learning & Memory, 87 (3), 332-342. -Zafra, M.A., Simon, M.J., Molina, F. & Puerto (2007):

Effects of intragastric administration of predigested nutrients on food intake, body weight and taste acceptability: potential relevance of the cephalic/neural phase of digestion. Nutritional Neuroscience 10 (1-2), 97-103. -Zafra, M.A., Simon, M.J., Molina, F. & Puerto (2005): Lesions of the lateral parabrachial area block the aversive component and induced-flavor preference for the delayed intragastric administration of nutrients in rats: Effects on subsequent food and water intake. Nutritional Neuroscience, 8(5/6): 297-307.

Zafra, M. A. Simon, M. J., Molina, F. & Puerto (2002): The role of the external lateral parabrachial subnucleus in flavor preferences induced by predigested food administered intragastrically, Brain Research, 950, 155-164.

Chapters of books:

Simon, M.J., Gamiz, F., Zafra, M.A. (2022): Neurociencia y conducta humana. La evolución de una especialidad. McGraw Hill, colección Aula Magna. En preparación.

Simon, M.J. (2019): Psicobiología del envejecimiento: Cambios neurológicos, sensoriales, perceptivos, cognitivos y motores. Capítulo 8, pags. 125-152. En: Monereo-Perez J.L. & Maldonado-Molina J.A. "Envejecimiento activo y vida laboral". Editorial Comares, S.L. Granada. ISBN: 978-84-9045-810-5.



Simon, M.J. (2018): Envejecimiento biológico, sensorial, perceptivo y cognitivo. En: Maldonado, J.A. (Coord): Materiales Docentes de Gerontología y Protección de los Mayores. Ed. Dykinson, Madrid (ISBN: 978-84-91-48).

III Congreso Internacional y VIII Encuentros
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17, 18 y 19 de noviembre de 2022

Medina, C., Simon, M.J. (2017): Demencia Frontotemporal de Variante Conductual (Capítulo 24). En Castellon J.J.A. (Coord.): Manual de Neurogeriatria (ISBN: 978-84-16992-41-6).

-Zafra, M. A., Simón, María J. (2005): Factores periféricos en el control de la nutrición, pags. 83-101. En A. Puerto (Coord.): La Proyección Humana de la Psicobiología. Ediciones Aljibe, S.L.

-Simón, María J., García, R. (2005): Los mecanismos de la recompensa cerebral y la adicción, pags. 119-140. En A. Puerto (Coord.): La Proyección Humana de la Psicobiología. Ediciones Aljibe, S.L.

Participation in congresses and scientific meetings:

-García, R., Hurtado, M.M., Simón M.J. & Puerto, A. (2019): Conditioned Place Preference induced by electrical stimulation of the Parabrachial Complex: behavioral effects of Naloxone. III International Congress of Psychobiology, Granada, 2019, May 29-31. -Simon M.J., García R., Puerto A. (2019):

Modulation of hedonic (and possibly motivational) components of reward by electrical stimulation of the LPBe and intake of natural appetizing products". III International Congress of Psychobiology, Granada, 2019, may 29-31. - I Jornada de Neurocientíficas. Centro de Investigación biomédica (CIBM) Universidad de Granada, 12 de febrero de 2018. Título de la Ponencia: "Mecanismos cerebrales del refuerzo: disociación funcional de algunos componentes en el Hipotálamo Lateral y el Area Parabraquial Lateral"

-Simon, M.J.(2019): "Perceptive, cognitive and biological ageing".Invited conference in the International Congress: "Active ageing",University of Granada, 2019, March, 21 & 22.

-Symposium nº 6 (Chair): Psychobiology of Motivation: Mechanisms of deficit and reward. II International Congress of Psychobiology. Avila 2017, July 19-21.

- Jornadas "Cambios sociales y envejecimiento activo" organizado por la UGR, el Master de Gerontología, Dependencia y Protección a los Mayores y el Gabinete de Calidad de Vida de la UGR los días 18 y 19 de Enero de 2016.

-García, R., Simón, M.J. & Puerto, A.. The external lateral parabrachial subnucleus in relation to feeding induced by partial withdrawal of gastric food contents. 8th IBRO World Congress of Neuroscience. Florence (Italy), 14-18/07/2011. -Zafra, M.A., Simón, M.J. & Puerto, A. the external lateral

parabrachial subnucleus in relation to feeding induced by partial withdrawal of

gastric food contents. 43th brain and behavior society meeting, European Brain & Behavior Society (EBBS), Seville (Spain), 9-12/09/2011.

-Garcia, R., Simon, M.J. & Puerto, A. Conditioned place preference after electrical stimulation of the cingulate cortex: effects of Valproic acid. International Symposium on Learning, Memory and Cognition. Fundación Séneca, Mérida, Spain. 10-12/02/2008.

Participation in Research Projects:

"Sociedad, Entorno y Salud"
17, 18 y 19 de noviembre de 2022

- Mecanismos centrales implicados en los efectos reforzantes inducidos por estimulación eléctrica o por la administración enteral de nutrientes cefálicos: análisis comparativo anatómico funcional y farmacológico en el eje visceral-Cerebral. Ministry of Science and Technology. National I+D+I (BS02003-06627).

- El eje anatómico vagal-cerebral como potencial sistema de recompensa natural y artificial. (Ministry of Science and Technology. National I+D+I (SEJ2007-61839/PSIC).

- El eje anatómico vagal-parabraquial-cortical como sistema diferenciado de refuerzo/recompensa cerebral natural y artificial. Ministry of Science and Technology. National I+D+I (PSI2010.17400).

- Envejecimiento Activo y Vida Laboral: trabajadores maduros y pensionistas productivos (DER2017-85096-R). Ministerio de Economía, industria y Competitividad. Investigador responsable: Juan Antonio Maldonado Molina y Jose Luis Monereo Pérez. Nº de investigadores participantes: 16.

Scientific Visits: Laboratory of Psychobiology of the Drug Addiction. Psychobiology, National Distance Education University (U.N.E.D.) From 15/05/2009 to 31/07/2009 and from 05/04/2010 to 06/05/2010 .

Teaching experience

Positive evaluations of teaching:

-Periods: from 01/10/1995 to 30/09/2000; 01/10/2000 to 30/09/2005, 01/10/2005 to 30/09/2010 and 01/10/2010 to 30/09/2015.. Degree (Subjects):

-Psychology of the motivation. Degree in Psychology.

-Psychoendocrinology. D. Psychology.

-Physiological Psychology. D. Psychology.

-Child Neuropsychology. D. Psychology.


-Neuropsychology. D. Psychology.

-Neuropsychological disorders of language. Degree in Educational Sciences

-Psychology. D. Dentistry.

-Developmental Psychobiology (D. Psychology).

-Fundamentals of Psychobiology (Degree in Speech Therapy).



-Neuropsychology of language (Speech Therapy).
-Aphasia and degenerative disorders of language (Speech Therapy)
Master and Doctorate (Subjects):

-Neurobiology of Addiction (Master in Psychobiology and Drugs of abuse). U. Complutense of Madrid, Psychology and Health (Master in Gerontology, Dependence and Social Welfare), University of Granada

Sociedad, Entorno y Salud

17, 18 y 19 de noviembre de 2022

