

## SCIENTIFIC AND TECHNOLOGICAL PROFILE OF THE GROUP

		<b>RICORS Code</b> RD21/0012/0026
<b>Thematic area:</b>	Atención primaria, cronicidad y promoción de la salud	
<b>Programme name:</b>	PRIMARY CARE PROMOTION OF MATERNAL, CHILD AND WOMEN'S HEALTH FOR PREVENTION OF ADULT CHRONIC DISEASES	
<b>Group leader:</b>	José Martínez-Orgado	
<b>Applicant Institution:</b>	FUNDACION INVESTIGACION BIOMEDICA HOSPITAL CLINICO SAN CARLOS FUNDACION INVESTIGACION BIOMEDICA HOSPITAL CLINICO SAN CARLOS	
<b>Working Institution:</b>	INSTITUTO DE INVESTIGACION SANITARIA DEL HOSPITAL CLINICO SAN CARLOS (IdISSC)	
<b>PI Work Institution:</b>	HOSPITAL CLINICO SAN CARLOS	

### Participants

Researcher	Family Name (s)	First Name (s)	Work Institution	Position
1	Martínez Orgado	José	Hospital Clínico San Carlos-IdISSC	Statutory staff
2	Arruza	Luis	Hospital Clínico San Carlos-IdISSC	Contracted
3	Rodríguez	Maria José	Hospital Clínico San Carlos-IdISSC	Contracted
4	de la Pedraja	Iñigo	Hospital Clínico San Carlos-IdISSC	Statutory staff
5	Villa	María	Hospital Clínico San Carlos-IdISSC	Contracted
6				Select
7				Select
				Select

## PUBLICATIONS

Up to twenty selected publications related to the RICORS's Thematic Area (published in the last five years)

1. Arruza L, Pazos MR, Mohammed N, Escribano N, Lafuente H, Santos M, Alvarez-Díaz FJ, Martínez-Orgado J. Hypoxic-ischemic brain damage induces distant inflammatory lung injury in newborn piglets. *Pediatr Res* 2015;79:401-408. doi: 10.1038/pr.2015.87 (SCI IF 2014: 2.314; PEDIATRICS; 17/117 – Q1).
2. Fernández-Ruiz J, Moro MA, Martínez-Orgado J. Cannabinoids in neurodegenerative disorders and stroke/brain trauma: from preclinical models to clinical applications. *Neurotherapeutics* 2015;12:793-806. DOI 10.1007/s13311-015-0381-7. (SCI IF 2016: 4.676; CLINICAL NEUROLOGY; 20/193 – Q1)
3. Lafuente H, Pazos MR, Alvarez A, Mohammed N, Santos M, Arizti M, Alvarez FJ, Martínez-Orgado J. Effects of cannabidiol and hypothermia on short-term brain damage in new-born piglets after acute hypoxia-ischemia. *Front Neurosci* 2016;10:323. doi: 10.3389/fnins.2016.00323. (SCI IF 2016: 3.398; NEUROSCIENCE; 82/252 – Q2)
4. Garberg HT, Huun MU, Escobar J, Martínez-Orgado J, Løberg EM, Solberg R, Saugstad OD. Short-term effects of cannabidiol after global hypoxia-ischemia in newborn piglets. *Pediatr Res.* 2016;80:710-718. doi: 10.1038/pr.2016.149 (SCI IF 2016: 2.761; PEDIATRICS; 16/120 – Q1).
5. Mohammed N, Ceprián M, Jiménez L, Pazos MR, Martínez-Orgado J. Neuroprotective effects of cannabidiol in hypoxic ischemic insult. The therapeutic window in newborn mice. *CNS & Neurological Disorders - Drug Targets* 2017;16: 102-108. doi: 10.2174/1871527315666160927110305. (SCI IF 2016 2.188; PHARMACOLOGY AND PHARMACY: 137/255 – Q3).
6. Ceprián M, Jiménez-Sánchez L, Vargas C, Barata L, Hind W, Martínez-Orgado J. Cannabidiol reduces brain damage and improves functional recovery in a neonatal rat model of arterial ischemic stroke. *Neuropharmacology* 2017;116:151-159. Doi: 10.1016/j.neuropharm.2016.12.017 (SCI IF 2016: 4.856; PHARMACOLOGY AND PHARMACY; 25/255 – D1)
7. Arruza L, Pazos MR, Mohammed N, Escribano N, Lafuente H, Santos M, Alvarez-Díaz FJ, Hind W, Martínez-Orgado J. Cannabidiol reduces lung injury induced by hypoxic-ischemic brain damage in newborn piglets. *Pediatric Res* 2017;82:79-86. Doi: 10.1038/pr.2017.104 (SCI IF 2016: 2.761; PEDIATRICS; 16/120 – Q1).
8. Garberg HT, Solberg R, Barlinn J, Martínez-Orgado J, Løberg EM, Saugstad OD. High-dose cannabidiol-induced hypotension after global hypoxia-ischemia in piglets. *Neonatology* 2017;112:143-149 (SCI IF 2016: 2.754; PEDIATRICS; 18/120 – Q1)
9. Iglesias B, Rodríguez MAJ, Aleo E, Criado E, Martínez-Orgado J, Arruza L. 3-lead electrocardiogram is more reliable than pulse oximetry to detect bradycardia during stabilisation at birth of very preterm infants. *Arch Dis Child Fetal Neonatal Ed.* 2017. doi: 10.1136/archdischild-2016-311492. (SCI IF 2016: 3.969; PEDIATRICS; 10/120 – D1)
10. Sagredo O, Palazuelos J, Gutierrez-Rodríguez A, Satta V, Galve-Roperh I, Martínez-Orgado J. Cannabinoid signalling in the immature brain: encephalopathies and neurodevelopmental disorders. *Biochem Pharmacol* 2018; doi: 10.1016/j.bcp.2018.08.014. (SCI IF 2017: 4.236; PHARMACOLOGY AND PHARMACY; 36/262– Q1)
11. Barata L, Arruza L, Rodríguez MJ, Aleo E, Vierge E, Criado E, Sobrino E, Vargas C, Ceprián M, Gutiérrez-Rodríguez A, Hind W, Martínez-Orgado J. Neuroprotection by cannabidiol and hypothermia in a piglet model of newborn hypoxic-ischemic brain damage. *Neuropharmacology* 2019;146:1-11; doi.org/10.1016/j.neuropharm.2018.11.020 (SCI IF 2016: 4.856; PHARMACOLOGY AND PHARMACY; 25/255 – D1).
12. Cobos-Torres JC, Abderrahim M, Martínez-Orgado J. Non-Contact, Simple Neonatal Monitoring by Photoplethysmography. *Sensors (Basel)* 2018;18(12). doi: 10.3390/s18124362 (SCI IF 2017: 2.475; INSTRUMENTS & INSTRUMENTATION; 15/61 -Q1)
13. Barata L, Cabañas A, Lafuente H, Vargas C, Ceprián M, Campa L, Jiménez-Sánchez L, Pazos MR, Alvarez FJ, Martínez-Orgado J. aEEG and neurologic exam findings correlate with hypoxic-ischemic brain damage severity in a piglet survival model. *Pediatr Res.* 2019; 85 (4):539-545. doi: 10.1038/s41390-019-0282-2 (SCI IF 2016: 2.761; PEDIATRICS; 16/120 – Q1)
14. Franco R, Villa M, Morales P, Reyes-Resina I, Gutiérrez-Rodríguez A, Jiménez J, Jagerovic N, Martínez-Orgado J, Navarro G. Increased expression of cannabinoid CB2 and serotonin 5-HT1A heteroreceptor complexes in a model of newborn hypoxic-ischemic brain damage. *Neuropharmacology* 2019; 152:58-66. doi: 10.1016/j.neuropharm.2019.02.004 (SCI IF 2016: 4.856; PHARMACOLOGY AND PHARMACY; 25/255 – D1)
15. Zozaya C, Avila-Alvarez A, García-Muñoz Rodrigo F, Couce ML, Arruza L, Fernandez-Perez C, Castro A, Cuesta MT, Vacas B, Vento M, Saenz de Pipaón M. The Impact of Postnatal Systemic Steroids on the Growth of Preterm Infants: A Multicenter Cohort Study. *Nutrients.* 2019 Nov 11;11(11):2729. doi: 10.3390/nu11112729. (SCI IF 2019: 4.546; NUTRITION & DIETETICS; Q1)
16. Ceprián M, Vargas C, García-Toscano L, Penna F, Jiménez-Sánchez L, Achicallende S, Elezgarai I, Grandes P, Hind W, Pazos MR, Martínez-Orgado J. Cannabidiol administration prevents hypoxia-ischemia-induced hypomyelination in newborn rats. *Front Pharmacol* 2019;10:1131.. DOI: 10.3389/fphar.2019.01131. (SCI IF 2017: 3.831; PHARMACOLOGY AND PHARMACY; 48/261, Q1)
17. Zozaya C, Avila-Alvarez A, Arruza L, García-Muñoz Rodrigo F, Fernandez-Perez C, Castro A, Cuesta MT, Vacas B, Couce ML, Vento Torres M, Saenz de Pipaón M. The Effect of Morbidity and Sex on Postnatal Growth of Very Preterm Infants: A Multicenter Cohort Study *Neonatology.* 2019;115(4):348-354. doi: 10.1159/000497221 (SCI IF 2019: 2.742; PEDIATRICS; Q1)

18. Rodríguez MJ, Corredera A, Martínez-Orgado J, Arruza L. Cerebral blood flow velocity and oxygenation correlate predominantly with right ventricular function in cooled neonates with moderate-severe hypoxic-ischemic encephalopathy. *Eur J Pediatr.* 2020. DOI: 10.1007/s00431-020-03657-w. (SCI IF 2017: 2.188. PEDIATRICS. Q2).
19. Gila-Díaz A, Herranz Carrillo G, Cañas S, Saenz de Pipaón M, Martínez-Orgado JA, Rodríguez-Rodríguez P, López de Pablo AL, Martín-Cabrejas MA, Ramiro-Cortijo D, Arribas SM. Influence of maternal age and gestational age on breast milk antioxidants during the first month of lactation. *Nutrients* 2020; 12: 2569. doi:10.3390/nu12092569 (SCI IF 2018: 4.171. NUTRITION. Q1)
20. Martínez Orgado J, Villa M, Del Pozo A. Cannabidiol for the treatment of Neonatal Hypoxic-Ischemic Brain Injury. *Front. Pharmacol* 2020. doi: 10.3389/fphar.2020.58453. (SCI IF 2019: 4.225; PHARMACOLOGY AND PHARMACY; 48/261, Q1)

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## INTERNATIONAL AND NATIONAL RESEARCH PROJECTS

(Funded in the last five years)

### GRANTS

- Beca FIS19/00027 (2020-2022): "THE NEUROVASCULAR UNIT AS A THERAPEUTIC TARGET TO PREVENT LONG-TERM SEQUELAE FROM NEWBORN BRAIN ARTERIAL STROKE IN RATS". José Martínez Orgado, Ana Gutiérrez Rodríguez, María Villa, Aarón del Pozo. Amount: 94380 €
- Beca Proyecto Precipita FECYT - JMO.F01FECYT (2019-2020): "Multimodal neuromonitorization for the prevention of preterm newborn brain acquired brain damage". Jose Martinez Orgado. Cristina Cortés, Luis Arruza, Iñigo de la Pedraza. Amount: 5000 €.
- Beca FIS PI16/00689 (2017-2019): "EFFICAY OF A NON-PSYCHOACTIVE CANNABINOID IN THE PREVENTION OF POST-HAEMORRHAGIC CEREBRAL PALSY IN A NEWBORN RAT MODEL" José Martínez Orgado, María Ceprián, Carlos Vargas, Luis Arruza, M<sup>a</sup> José Rodríguez, Iñigo de la Pedraja. Amount: 86515 €
- Beca FIS PI13/01722 (2014-2016): "CANNABIDIOL FOR THE TREATMENT OF CEREBRAL AND EXTRACEREBRAL DAMAGE IN A NEWBORN RAT MODEL OF ARTERIAL ISCHEMIC STROKE" José Martínez Orgado, Luis Arruza, M<sup>a</sup> José Coronado, Natalia Escribano, M<sup>a</sup> José Rodríguez, Nagat Mohammed. Amount: 66187 €

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**PATENTS**

(Granted and licensed patents in the last five years. Include also licensed know-how)

Empty box for reporting patents and licensed know-how.

## RICORS Call: Scientific and Technological Profile of the Participating Groups

**Aim:** describe the major contributions of the different participating groups in terms of papers, funding and patents.

**!** The structure of this template has been designed to ensure that the important aspects of your scientific and technological profile are presented in a way that will enable experts to make an effective assessment against the evaluation criteria.

**!** The font type and size recommended is Arial 9 points. Please respect the page limits and do not take it as a target either! It is in your interest to keep your text as concise as possible, since experts rarely view unnecessarily long documents in a positive light.

### Section 1. List of Participating Groups. PI participants.

**!** Remember

PI's Family Name | PI's First name(s) | PI's Work Institution | **Position \***

\***Position:** officer, statutory staff; contracted; fellow

### Section 2. Papers

**Indicate:** Authors; Title; Journal; PMID; Type of paper; Publication year; Impact Factor (JCR Thomson Reuters) and times cited.

### Section 3. International and National Research Projects

**!** Do not include regional or privately funded projects.

**Indicate:** Project ID; Name of the PI; Title; Funding Agency; Amount of Funding & Duration.

### Section 4. Patents

**Indicate:** Applicant; Title; Inventors; Patent Office; Date of application number; Date of grant and Entity-Organization Exploiting the Patent.