



Curriculum Vitae

July, 2012

PERSONAL DATA

Name: **Anna M. PLANAS, PhD**

Date and place of Birth: July 20, 1960. Sallent, Barcelona, Spain

Nationality: Spanish

Position: -Research Scientist at the Spanish Research Council (CSIC) www.csic.es
-Head of the Department of Brain Ischemia and Neurodegeneration at the Institute for Biomedical Research (IIBB-CSIC) www.iibb.csic.es
-Coordinator of the Neuroscience Area at the *Institut d'Investigacions Biomèdiques August Pi i Sunyer* (IDIBAPS) www.idibaps.ub.edu

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STUDIES AND DEGREES

- Degree on Biology-Biochemistry awarded by the University of Barcelona in 1982.
- Ph.D. fellow under the supervision of Dr. V.J. Cunningham and Dr. P. Farmer at the Medical Research Council, Toxicology Unit in Carshalton, Surrey, England (1984 -1987). During this period I was awarded fellowships: CIRIT (Catalonia, Spain), European Science Foundation, Fleming Award by the British Council and Spanish Ministry of Education and Science. Ph.D. awarded by the Council for National Academic Awards (U.K.) in 1987. My examiner was Prof. Michael Bradbury, King's College London.
- 'Doctor en Biología' awarded by the Spanish Ministry of Education and Science in 1988.
- Postdoctoral fellow at the INSERM U.334, Service Hospitalier Frédéric Joliot, CEA, Orsay, France from 1990 to 1992. During this time I had a 'Mercure' fellowship (France-Spain).
- Title of 'Prospector of radioactive installations' awarded by the 'Servicio de Medicina Nuclear del Hospital Clínic i Provincial de Barcelona' and authorised by the 'Consejo de Energía Nuclear'.

Other scientific activities:

- *Current Member of the Editorial Board* of the '*Journal of Cerebral Blood Flow and Metabolism*' from January 2000, '*Stroke*' from June 2008, '*Neuroscience*' from January 2012.
- *Member of the Board of Directors* of the '*Int. Society for Cereb Blood Flow & Metab*' from 2007 to 2011.

-Local organiser of the *4th European Molecular Imaging Meeting* in Barcelona May27-30, 2009

-Local organiser of the *Brain'11 and Brain-PET* meeting corresponding to the 25th meeting of the 'International Society for Cerebral Blood Flow and Metabolism' that will take place in Barcelona, May 24-27, 2011

RESEARCH TEAM: Head of the *Cerebral ischemia* team at IIBB, CSIC

MAIN RESEARCH PROJECTS (last 5 years)

- Title: CHARACTERIZATION OF BRAIN ISCHEMIC LESION IN EXPERIMENTAL ANIMAL MODELS: COMBINATION OF NON INVASIVE IMAGING TECHNIQUES WITH BIOCHEMICAL, MOLECULAR AND HISTOLOGICAL APPROACHES. Awarded by: FIS (FS041104-O) Length: 3 years (starting 2005) Head of the project: Dr. Anna M. Planas

- Title: DIAGNOSTIC MOLECULAR IMAGING. European Network of Excellence. Awarded by the European Community (LSHB-CT-2005-512146) Length: 5 years (starting April 2005) Project Coordinated by Dr. Andreas Jacobs (Cologne, Germany) Leader of the local team: Dr. Anna M. Planas

- Title: DELAYED NEURONAL DEATH IN BRAIN ISCHEMIA: Molecular and cellular mechanisms Awarded by: Ministry of Education and Science (SAF2005-05793-CO2-01) Length: 3 years (starting 2006) Head of the project: Dr. AM. Planas

- Title: AFFORDING RECOVERY IN STROKE (ARISE) awarded by The European Community FP7 (COOPERATION - HEALTH-2007-2.2.1-1 – n°201024) Length: 5 years (starting 2008)

- Title: INFLAMMATION AND INNATE IMMUNITY AS THERAPEUTIC TARGETS IN STROKE awarded by the Ministry of Education and Science –MEC- (SAF2008-04515-CO2-01) Length: 3 years (starting 2009) Head of the project: Dr. AM Planas

- Title: MULTIPLE FACES OF INFLAMMATION IN STROKE, awarded by the Spanish Ministry of Science and Innovation (MICINN) (SAF2011-30492-CO2-01) Length: 3 years (starting January 2012).

- Title: IMAGING OF NEUROINFLAMMATION IN NEURODEGENERATIVE DISEASES (InMIND) awarded by The European Community FP7 (FP7-HEALTH-2011.2.2.1-2, n° 278850). Length: 5 years (starting March 2012)

- Title: ROLE OF DANGER SIGNALS IN STROKE AND THERAPEUTIC TARGETSING BY NANOBODIES. Awarded by ERA-NET NEURON program (PRI-PIMNEU-2011-1342) Length: 3 years (starting January 2012)

PUBLICATIONS (Selection of Publications within the last 5 years)

- Chamorro A, Urra X, **Planas AM** (2007) Infection after acute ischemic stroke: a manifestation of brain-induced immunodepression. *Stroke* **38**:1097-1103

- Amaro S, Soy D, Obach V, **Planas AM**, Chamorro A (2007) A pilot study of dual treatment with rt-PA and uric acid in acute ischemic stroke. *Stroke* **38**:2173-5

- Rojas S, Martín A, Arranz MJ, Pareto D, Purroy J, Verdaguer E, Llop J, Gómez V, Gispert JD, Millán O, Chamorro A, and **Planas AM** (2007) Imaging brain inflammation with [¹¹C]PK11195 by PET and induction of the peripheral-type benzodiazepine receptor after transient focal ischemia in rats. *J Cereb Blood Flow Metab* **27**:1975-86.

- Endres M, Engelhardt B, Koistinaho J, Lindvall O, Meairs S, Mohr JP, **Planas A**, Rothwell N, Schwaninger M, Schwab ME, Vivien D, Wieloch T, Dirnagl U (2008) Improving Outcome after Stroke: Overcoming the Translational Roadblock. *Cerebrovasc Dis.* **25**(3):268-278

- Petegnief V, Font-Nieves M, Martin ME, Salinas M, **Planas AM** (2008) Nitric oxide mediates NMDA-induced persistent inhibition of protein synthesis through dephosphorylation of eukaryotic initiation factor 4E-binding protein 1 and eukaryotic initiation factor 4G proteolysis. *Biochem J* **411** (3): 667-677

- Martin A, Aguirre J, Sarasa A, Tsoukatou D, Garofalakis A, Meyer H, Ripoll J, **Planas AM** (2008) Imaging changes in lymphoid organs *in vivo* after brain ischemia with three-dimensional fluorescence molecular tomography in transgenic mice expressing GFP in T-lymphocytes. *Mol Imag* **7**(4):157-167

- Urrea X, Cervera A, Obach V, **Planas AM**, Chamorro A (2009) Monocytes are major players in the prognosis and risk of infection after acute stroke. *Stroke* 40:1262-8
- **Planas AM**, Chamorro A (2009) Regulatory T cells protect the brain after stroke. *Nat Med* 15: 138-139
- Psilodimitrakopoulos S, Artigas D, Soria G, Amat-Roldan I, **Planas AM**, Loza-Alvarez P. (2009) Quantitative discrimination between endogenous SHG sources in mammalian tissue, based on their polarization response. *Optics Express* 17(12): 10168-76
- Psilodimitrakopoulos S, Petegnief V, Soria G, Amat-Roldan I, Artigas D, **Planas AM**, Loza-Alvarez P (2009) Estimation of the effective orientation of the SHG source in cortical neurons. *Optics Express* 17(16):14418-25
- Pérez-Asensio FJ, de la Rosa X, Jiménez-Altayó F, Gorina R, Martínez E, Messeguer A, Vila E, Chamorro A, **Planas AM** (2009) Antioxidant CR-6 protects against reperfusion injury after a transient episode of focal brain ischemia in rats. *J Cereb Blood Flow Metab* 30(3): 638-652.
- Cervera A, **Planas AM**, Justicia C, Urrea X, Jensenius JC, Torres F, Lozano F, Chamorro A (2009) Genetically-Defined Deficiency of Mannose-Binding Lectin Protects the Brain from Experimental and Clinical Stroke. *PlosOne* 5(2):e8433.
- Sans-Fons MG, Sole S, Santfeliu C, **Planas AM** (2010) Matrix metalloproteinase-9 and cell division in neuroblastoma cells and bone-marrow macrophages. *Am J Pathol* 177(6):2870-2885
- Casteels C, Martinez E, Bormans G, Camon L, de Vera N, Baekelandt V, **Planas AM**, Van Laere K (2010) Type 1 cannabinoid receptor mapping with [(18)F]MK-9470 PET in the rat brain after quinolinic acid lesion: a comparison to dopamine receptors and glucose metabolism. *Eur J Nucl Med Mol Imaging*. 37(12):2354-63
- Rojas S, Herance JR, Abad S, Jiménez X, Pareto D, Ruiz A, Torrent E, Figueiras FP, Popota F, Fernández-Soriano FJ, **Planas AM**, Gispert JD (2011) Evaluation of Hypoxic Tissue Dynamics with (18)F-FMISO PET in a Rat Model of Permanent Cerebral Ischemia. *Mol Imaging Biol*. 13:558-564
- Gorina R, Font-Nieves M, Marquez-Kisinousky L, Santalucia T, **Planas AM** (2011) Astrocyte TLR4 activation induces a proinflammatory environment through the interplay between MyD88-dependent NFκB signaling, MAPK and Jak1/Stat1 pathways. *Glia*. 59(2):242-55.
- Amaro S, Urrea X, Gómez-Choco M, Obach V, Cervera A, Vargas M, Torres F, Rios J, **Planas AM**, Chamorro A. (2011) Uric acid levels are relevant in patients with stroke treated with thrombolysis. *Stroke* 42(1 Suppl):S28-32.
- **Planas AM**, Traystman RJ. (2011) Advances in Translational Medicine 2010. *Stroke* 2(2):283-4
- Rojas S, Martín A, Pareto D, Herance J-R, Abad S, Ruiz A, Flotats N, Gispert JD, Llop J, Gómez V, **Planas AM** (2011) PET with 11C-Flumazenil in the rat shows preservation of binding sites during the acute phase after 2h-transient focal ischemia. *Neuroscience* 182:208-16.
- Soria L, Ahuilar E, Tudela R, Mullol J, **Planas AM**, Marin C (2011) In vivo magnetic resonance imaging characterization of bilateral structural changes in experimental Parkinson's disease: a T2 relaxometry study combined with longitudinal diffusion tensor imaging and manganese-enhanced magnetic resonance imaging in the 6-hydroxydopamine rat model. *Eur J Neurosci* 33:1551-1560
- Domingo-Espín J, Vazquez E, Ganz J, Conchillo O, García-Fruitós, Cedano J, Unzueta U, Petegnief V, González-Montalbán N, **Planas AM**, Daura X, Peluffo H, Ferrer-Miralles N, Villaverde A (2011) DNA-sustained, nanoparticulate architecture of artificial viruses build by multifunctional proteins *Nanomedicine (Lond)* 6(6):1047-61
- Penas C, Font-Nieves M, Forés J, Petegnief V, **Planas A**, Navarro X, Casas C (2011) Autophagy, and BiP level decrease are early key events in retrograde degeneration of motoneurons. *Cell Death Differ*. 18(10):1617-27
- Márquez-Martín A, Jiménez-Altayó F, Dantas AP, Caracuel L, **Planas AM**, Vila E (2012) Middle cerebral artery alterations in a rat chronic hypoperfusion model. *J Appl Physiol*. 112: 511–518
- Pineda D, Ampurdanés C, Medina MG, Serratosa J, Tusell JM, Saura J, **Planas AM**, Navarro P. (2012) Tissue plasminogen activator induces microglial inflammation via a non-catalytic molecular mechanism involving activation of MAPKs and AKT signalling pathways and AnnexinA2 and Galectin1 receptors. *Glia* 60(4):526-40
- Font-Nieves M, Sans-Fons MG, Gorina R, Bonfill-Teixidor E, Salas-Perdomo A, Marquez-Kisinousky L, Santalucia T, **Planas AM** (2012) Induction of COX-2 and down-regulation of COX-1 expression by LPS control prostaglandin E2 production in astrocytes. *J Biol Chem* 287(9):6454-68
- Ribera J, Pauta M, Melgar-Lesmes P, Tugues S, Fernández-Varo G, Held KF, Soria G, Tudela R, **Planas AM**, Fernández-Hernando C, Arroyo V, Jiménez W, Morales-Ruiz M (2012) Increased nitric oxide production in lymphatic endothelial cells causes impairment of lymphatic drainage in cirrhotic rats. *Gut*. 2012 Jan 20. [Epub ahead of print]

- Urrea X, **Planas AM**, Chamorro A (2012) Letter by Urrea et al regarding article, "Autoimmune responses to the brain after stroke are associated with worse outcome". *Stroke* 43(2):e26

- **Planas AM**, Gómez-Choco M, Urrea X, Gorina R, Caballero M, Chamorro A (2012) Brain-derived antigens in lymphoid tissue of patients with acute stroke. *J Immunol* 188(5):2156-63

- Chamorro A, Meisel A, **Planas AM**, Urrea X, van de Beek D, Veltkamp R (2012) The immunology of stroke. *Nat Rev Neurol* 8(7):401-10