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Dr Ana Maria Gonzalez PhD

Senior Lecturer in Neurosciences

Neurobiology

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Qualifications

- Ph.D. *(Biology, Cum Laude)*, Universidad Autónoma de Madrid, Spain, 1991
- B.S. *(Biology)*, Universidad de los Andes, Bogotá, Colombia, 1982
- Associate of the Higher Education Academy, University of Birmingham, 2011

Biography

Ana Maria Gonzalez received her BSc degree in Biology from Universidad de Los Andes in Bogota, Colombia in 1981. After working for 3 years as a research fellow in Hospital Ramon y Cajal in Madrid, Spain, she moved to the US where she worked in the Laboratories for Neuroendocrinology at the Salk and Scripps Institutes in La Jolla, California. In 1991 she obtained her PhD from Universidad Autonoma de Madrid. She went back to California and in 1995 joined "Selective Genetics" - a biotechnology company in San Diego where she worked as a Senior Scientist for 6 years. In 2001 she moved to London and was appointed Senior Lecturer in the Division of Physiology, School of Biomedical Sciences at King's College London. In 2004, she joined the University of Birmingham.

Teaching

- Module Coordinator of “Neutrauma: Neurodegeneration and Regeneration”, a third year elective Module in the Medical Sciences Programme
- Delivery of lectures and SGT in years 1, 2 and 3 of Medical Sciences Programme
- Delivery of Learning Skills Sessions for year 1 MBChB students
- Personal mentor MBChB and BMedSc students
- Personal mentor for PhD students and Research Fellows
- Supervision of 2nd year Medical Sciences students during Summer Laboratory Studentships
- Internal Supervisor for Elective Studies for 4th year MBChB students

Postgraduate supervision

Supervision of undergraduate and higher degrees in research PhD, MRes, MSc

Research

Dr Ana Maria Gonzalez is a principal Investigator in the CSF Disorders Research Group (**http://www.birmingham.ac.uk/research/activity/mds/domains/cardio-resp-neuro/neurotrauma/cerebrospinal-fluid-disorders/index.aspx (http://www.birmingham.ac.uk/research/activity/mds/domains/cardio-resp-neuro/neurotrauma/cerebrospinal-fluid-disorders/index.aspx)**).

She has a long standing research interest on the roles played by the growth factors and neuropeptides in the injured CNS as well as in other conditions such as intracranial idiopatic hypertension and hydrocephalus.

In collaboration with Professor Andrew Baird at the University of California, San Diego and Professors Conrad Johanson and Ed Stopa at Brown University in Providence, she has been investigating the role that novel peptide hormones may play in CNS homeostasis after trauma. A case of point is a newly recognised neuropeptide encoded by the oesophageal related gene-4 (Ecrg4). These studies clearly suggest this peptide (augurin) plays a role in CSF homeostasis.

Due to her great interest in the field of histology and microscopy and as manager of the Neucar Histology and Microscopy Core Facility she has research collaborations with various research groups across the College.

Other activities

- Member of the Learning and Teaching Committee, School of Clinical and Experimental Medicine, College of Medical and Dental Sciences, University of Birmingham UK
- Member of the eLearning Committee, College of Medical and Dental Sciences, University of Birmingham UK
- Member of the Neurobiology Postgraduate Research Students Review, School of Clinical and Experimental Medicine, University of Birmingham UK
- Deputy coordinator Pharmaceutical Enterprise Module (Masters Programme, School of Pharmacy), College of Medical and Dental Sciences, University of Birmingham UK
- Manager of the Neucar Histology and Microscopy Facilities, School of Clinical and Experimental Medicine, University of Birmingham UK
- Member of the Health and Safety Committee for the School of Clinical and Experimental Medicine, University of Birmingham UK
- Member of the Programme Committee for the Centre for Learning and Academic Development (CLAD), University of Birmingham

Publications

Ahmed Z, Bansal D, Tizzard K, Surey S, Esmaeili M, Douglas MR, Gonzalez AM, Berry M and Logan A (2013) **Decorin blocks scarring and cystic cavitation in acute and induces scar dissolution in chronic spinal cord wounds (http://www.ncbi.nlm.nih.gov/pubmed/?term=Decorin+blocks+scarring+and+cystic+cavitation+in+acute+and+induces+scar+dissolution+in+chronic+spinal+cord+wounds)** . *Neurobiol Dis* 64:163-76

Chan SY, Hancox LA, Martin-Santos A, Loubiere LS, Walter MN, Gonzalez AM, Cox PM, Logan A, McCabe CJ, Franklyn JA and Kilby M (2013) **MCT8 in human fetal cerebral cortex is reduced in severe intrauterine growth restriction (http://www.ncbi.nlm.nih.gov/pubmed/?term=MCT8+in+human+fetal+cerebral+cortex+is+reduced+in+severe+intrauterine+growth+restriction)** . *J Endocrinol* 220(2):85-95

Johanson CE, Gonzalez AM, Miller M, Podvin S, Stopa E and Baird A (2013) Augurin in choroid plexus-cerebrospinal fluid: Implications for subependymal neurogenesis. In The Handbook of Biologically Active Peptides, 2nd edition, A. Kastin, ed., Elsevier Press, 2013

Botfield H, Gonzalez AM, Abdullah O, Skjolding AD, Berry M, McAllister JP II and Logan A (2013) **Decorin prevents the development of juvenile communicating hydrocephalus (http://www.ncbi.nlm.nih.gov/pubmed/?term=Decorin+prevents+the+development+of+juvenile+communicating+hydrocephalus)**. *Brain* 136(Pt 9):2842-58

Gonzalez AM, Podvin S, Lin SY, Miller MC, Botfield H, Leadbeater WE, Roberton A, Dang X, Knowling SE, Cardenas-Galindo E, Donahue JE, Stopa EG, Johanson CE, Coimbra R, Eliceiri BP and Baird A (2011) **Ecrg4 expression and its product augurin in the choroid plexus: impact on fetal brain development, cerebrospinal fluid homeostasis and neuroprogenitor cell response to CNS injury (http://www.ncbi.nlm.nih.gov/pubmed/?term=Ecrg4+expression+and+its+product+augurin+in+the+choroid+plexus%3A+impact+on+fetal+brain+development%2C+cerebrospinal+fluid+homeostasis+and+neuroprogenitor+cell+response+to+CNS+injury**. *Fluids Barriers CNS* 8(1):6

Podvin S, Gonzalez AM, Miller MC, Dang X, Botfield H, Donahue JE, Kurabi A, Boissaud-Cooke M, Rossi R, Leadbeater WE, Johanson CE, Coimbra R, Stopa EG, Eliceiri BP and Baird A (2011) **Esophageal cancer related gene-4 is a choroid plexus-derived injury response gene: evidence for a biphasic response in early and late brain injury (http://www.ncbi.nlm.nih.gov/pubmed/?term=Esophageal+cancer+related+gene-4+is+a+choroid+plexus-derived+injury+response+gene%3A+evidence+for+a+biphasic+response+in+early+and+late+brain+injury)**. *PLoS One* 6(9):e24609

Sawada R, Peterson CY, Gonzalez AM, Potenza BM, Mueller B, Coimbra R, Eliceiri BP and Baird A (2011) **A phage-targeting strategy for the design of spatiotemporal drug delivery from grafted matrices (http://www.ncbi.nlm.nih.gov/pubmed/?term=A+phage-targeting+strategy+for+the+design+of+spatiotemporal+drug+delivery+from+grafted+matrices)**. *Fibrogenesis Tissue Repair* 4:7

Susarla R, Gonzalez AM, Watkinson JC and Eggo MC (2011) **Expression of receptors for VEGFS on normal human thyroid follicular cells and their role in follicle formation (http://www.ncbi.nlm.nih.gov/pubmed/?term=Expression+of+receptors+for+VEGFS+on+normal+human+thyroid+follicular+cells+and+their+role+in+follicle+formation)**. *J Cell Physiol* 227(5):1992-2002

For a full list of Dr Gonzalez' publications click **here (http://www.ncbi.nlm.nih.gov/pubmed/?term=gonzalez+am+%5Bau%5D)**.

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