

CURRICULUM VITAE

First name: Ioannis
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Date of Birth: 20-09-1975
Position: Group Leader / Researcher C/ Investigador FCT

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EDUCATION

BSc in Biology: University of Patras, Greece (2000)

Diploma research project: "Developmental study of glutamate subtype receptor in mouse cerebellum" at Physiology Departments, Biology and Medicine Schools, University of Patras, Greece. Supervisors: Profs Panagiotis Giompres/ Ada Mitsacos (1997-1998)

Research project: Department of Neurology and Psychiatry, Columbia University (NY, USA) supervised by Prof. David Sulzer / Dr Emmanuel Pothos (1999)

Postgraduate studies:

PhD studies at Max-Planck Institute of Psychiatry (Munich, Germany) / University of Heidelberg (Germany) supervised by Dr O.F.X. Almeida / Prof G.E. Pollerberg. Title: "Identification of the cellular mechanisms underlying the contribution of stress and glucocorticoids to Alzheimer's disease pathology" Awarded "**Magna cum laude**" (2001-2006).

Marie Curie Research Training Fellowship at Department of Physiology, University College London, UK (2004-2005).

Post-doc studies:

RIKEN Brain Science Institute, Laboratory for Alzheimer's disease (Wako, Japan)

Visiting Researcher at MRC Center for Synaptic Plasticity, University of Bristol, UK

ICVS Institute, School of Health Sciences, University of Minho, Portugal

FELLOWSHIPS – AWARDS

- a) Parkinson's Disease Foundation (USA): Short-term Fellowship at Department of Neurology and Psychiatry; Columbia University School Of Medicine, NY, NY, USA (Summer 1999)
- b) Pre-doctoral Fellowship, Deutsche Forschungsgemeinschaft (DFG) (2001-2003)
- c) Marie Curie Training Fellowship (2004-2005)
- d) 1st Poster Prize at Max Planck Institute of Psychiatry Annual Symposium (2004)
- e) GlaxoSmithKline Stiftung Travel grant (2004)
- f) Max-Planck Society Stipend (2005-2006)
- g) RIKEN Brain Science Institute (Japan): RIKEN Summer school and Short-term Fellowship at Laboratory for Alzheimer's Disease (supervisor: Dr A. Takashima) (Summer 2006)
- h) RIKEN Brain Science Institute (Japan): Japanese Society for the Promotion of Science (JSPS) post-doc fellowship (March 2007-Jan 2008)
- i) British Council Researcher Exchange Programme Fellowship 2009: research grant at MRC Centre for Synaptic Plasticity, University of Bristol, UK under supervision of Professor K.Cho
- j) Fellowship award 2009 from European College of Neuropsychopharmacology (2009)
- k) 1st Price from Hirlinga Alzheimer's Disease Foundation (2009)
- l) Golden Prize for best presentation at AP Society of Neurochemistry 2010 Meeting (2010)

- m) Canon Foundation Research Fellowship (2014)
- n) FCT Independent Investigator grant (2014)
- o) Alzheimer's & Parkinson's diseases International Conference – Young Faculty Award 2015 (2015)
- p) World Federation of Societies of Biological Psychiatry – Young Investigator Award 2015 (2015)
- q) Janssen Prize 2016 for the best Basic Research study (2016)
- r) Premio Cryoestaminal 2017 (2017)
- s) Foundation Jerome Lejeune Research grant (2017)

PUBLICATIONS

- 1) Dioli C, Patrício P, Trindade R, Pinto LG, Silva JM, Morais M, Ferreiro E, Borges S, Mateus-Pinheiro A, Rodrigues AJ, Sousa N, Bessa JM, Pinto L, **Sotiropoulos I** *. (2017) “*Tau-dependent suppression of adult neurogenesis in the stressed hippocampus*” *Mol Psychiatry* [accepted & cover of the next issue]
- 2) Lopes S, Vaz-Silva J, Pinto V, Dalla C, Kokras N, Bedenk B, Mack N, Czisch M, Almeida OFX, Sousa N, **Sotiropoulos I** (2016) Tau protein is essential for stress-induced brain pathology. *Proc Natl Acad Sci U S A*. 2016 Jun 28;113(26):E3755-63
- 3) Lopes S, Teplytska L, Vaz-Silva J, Dioli C, Trindade R, Morais M, Webhofer C, Almeida OFX, Turck C, Sousa N, **Sotiropoulos I** Filiou MD* (2016) Tau deletion prevents stress-induced dendritic atrophy in prefrontal cortex: role of synaptic mitochondria. *Cerebr Cortex in press* doi: 10.1093/cercor/bhw057
- 4) Lopes S, Lopes A, Pinto V, Guimarães MR, Sardinha MR, Duarte-Silva S, Pinheiro S, Pizarro J, Oliveira JF, Sousa N, Leite-Almeida H, **Sotiropoulos I** (2016). Absence of Tau triggers age-dependent sciatic nerve morphofunctional deficits and motor impairment. *Aging Cell* 15(2):208-16
- 5) Vyas S, Rodrigues AJ, Silva JM, Tronche F, Almeida OFX, Sousa N, **Sotiropoulos I**. (2016) Chronic Stress and Glucocorticoids: From Neuronal Plasticity to Neurodegeneration. *Neural Plasticity in press* doi.org/10.1155/2016/6391686
- 6) Moreira PS*, Sotiropoulos I*, Silva J, Takashima A, Sousa N, Leite-Almeida H, Costa PS. (2016). The Advantages of Structural Equation Modeling to Address the Complexity of Spatial Reference Learning. *Front Behav Neurosci*.10:18. doi: 10.3389/fnbeh.2016.00018. eCollection 2016.
- 7) Pinheiro S, Silva J, Mota C, Vaz-Silva J, Veloso A, Pinto V, Sousa N, Cerqueira J, **Sotiropoulos I** (2016) Tau mislocation in glucocorticoid-triggered hippocampal pathology *Mol Neurobiol* 53(7):4745-53
- 8) **Sotiropoulos I** & Sousa N (2015). Tau as the converging protein between chronic stress and Alzheimer's disease synaptic pathology *Neurodegenerative Diseases* 16(1-2):22-5. doi: 10.1159/000440844.
- 9) **Sotiropoulos I**, Silva J, Kimura T, Rodrigues A.J, Costa P, Almeida OFX, Sousa N, Takashima A (2015) “Female hippocampus vulnerability to environmental stress as precipitating factor in Tau aggregation pathology” *J Alzheimer's Dis* 2015;43(3):763-74
- 10) **Sotiropoulos I**, Lopes A, Pinto V, Lopes S, Carlos S, Duarte-Silva S, Neves-Carvalho A, Pinto-Ribeiro F, Pinheiro S, Fernandes R, Almeida A, Sousa N, Leite-Almeida H. (2014) “Selective impact of Tau loss on nociceptive primary afferents and pain sensation” *Exper Neurology* 261:486-93.
- 11) **Sotiropoulos I**. “The neurodegenerative potential of chronic stress: a link between depression and Alzheimer's disease”. *Adv Exp Med Biol*. 2015;822:221-2. doi: 10.1007/978-3-319-08927-0_29
- 12) Fonseca L, Duarte J, Machado Á, **Sotiropoulos I**, Lima C, Sousa N. Suicidal behaviour in frontotemporal dementia patients--a retrospective study. *Int J Geriatr Psychiatry*. 2014 29:217-8.
- 13) Kimura T, Whitcomb D, Jo J, Regan P, Piers T, Brown C, Hashikawa T, Murayama M, Seok H, **Sotiropoulos I**, et al., Microtubule associated protein tau (MAPT) is essential for long-term depression in the hippocampus. *Philosophical Transactions of The Royal Society:Biological Sciences* 2013 369(1633):20130144 (doi: 10.1098/rstb.2013.0144)

- 14) **Sotiropoulos I.**, Catania C., Pinto LG., Silva R., Pollerberg GE, Takashima A, Sousa N. Almeida O.F.X. "Stress acts cumulatively to precipitate Alzheimer's disease-like TAU pathology and cognitive deficits". *J Neuroscience* 2011 31:7840-7.
- 15) Kokras N., **Sotiropoulos I.**, Pitychoutis P., Almeida O.F.X., Papadopoulou-Zaifoti Z. "Citalopram-mediated anxiolysis and differing neurobiological responses in both sexes of a genetic model of depression" *Neuroscience* 194:62-71
- 16) Kimura T., Fukuda T., Sahara N., Yamashita S., Murayama M., Miziroki T., Yoshike Y., Lee B., **Sotiropoulos I.**, Maeda S. and Takashima A. "Aggregation of detergent-insoluble tau is involved in neuronal loss but not in synaptic loss" *J Biol Chem.* 2010 285(49):38692-9. doi: 10.1074/jbc.M110.136630.
- 17) **Sotiropoulos I.**, Catania C., Reidman T., Fry J., Breen K., Michaelidis T., Almeida O.F.X. (2008) "Glucocorticoids trigger Alzheimer disease-like pathobiochemistry in neuronal cells expressing human tau". *J Neurochemistry* 2008 Oct;107(2):385-97
- 18) C. Catania*, **I. Sotiropoulos*** (equal authorship), R. Silva, C. Onofri, K.C. Breen, N. Sousa and O.F.X. Almeida (2009) "The amyloidogenic potential and behavioral correlates of stress" *Molecular Psychiatry* 14: 95–105.
- 19) **Sotiropoulos I.**, Cerqueira J., Catania C., Sousa N., Almeida O.F.X. " Stress and glucocorticoid footprints in the brain – the path from depression to Alzheimer's disease" (2008) *Neuroscience and Biobehavioral Reviews* Aug;32(6):1161-73.
- 20) Silva R, Mesquita A, Bessa A, Sousa A, **Sotiropoulos I**, Leão P, Almeida OFX, Sousa N. " (2008) Lithium blocks stress-induced changes in depressive like behaviour and hippocampal cell fate: the role of glycogen-synthase-kinase-3 β " *Neuroscience* 152(3):656-69
- 21) Schubert M., Karlisch R., Cerqueira J.,* Catania C.,* **Sotiropoulos I.**,* (equal authorship) Sousa N., Almeida O.F.X., Auer D. (2008) "Effects of altered corticosteroid milieu on rat hippocampal neurochemistry and structure-an in vivo magnetic resonance spectroscopy and imaging study" *Journal of Psychiatric Research* 42: 902–912
- 22) Cerqueira J.,* Catania C.,* **Sotiropoulos I.**,* (equal authorship) Schubert M., Kalisch R., Almeida O.F.X., Auer D., Sousa N. (2005) "Corticosteroid status influences the volume of the rat cingulate cortex – a magnetic resonance imaging study" *Journal of Psychiatric Research* 39: 451-460.
- 23) **Invited Book Chapter:** Catania C., * **Sotiropoulos I.**, * (equal authorship) Breen K., Almeida O.F.X. "A steroid hormone-Alzheimer's disease connection? Upsides-Downsides" in <<Molecular Basis of Neurodegeneration>> *Research Signpost, Kerala* (2005) Editors: Italia Di Liegro & Giovanni Savettieri.
- 24) **Invited Book Chapter** Vyas S, Rodrigues AJ, Silva JM, Tronche F, Sousa N, Sotiropoulos I. ~~Glucocorticoids and Neurodegeneration (2015) In Adrenal Glands and Cortex: Structural Characteristics, Hormones and Related Disorders~~

RESEARCH INTERESTS

- Alzheimer's disease and the role of stress
- Role of APP and Tau in synaptic physiology and brain pathology
- Role of steroids on neuroplasticity and cognition during aging.
- Mechanisms of neuroplasticity in stress-related disorders such as major depression.
- Gender-related differential effect of stress in brain function and pathology

COLLABORATIONS

- Professor Akihiko Takashima, Laboratory for Alzheimer's Disease, RIKEN Brain Science Institute, Wako, Japan
- Professor Ben Wolozin, Boston University, MA, USA

- Professor Roland Brandt, University of Osnabruck, Germany
- Dr Clarissa Waites, Columbia University, NY, USA
- Dr Osborne FX Almeida, Max-Planck Institute of Psychiatry, Munich, Germany
- Professor Christina Dalla, Department of Pharmacology, Medical School of Athens, Greece