

MARINA BRITO, INL

INTRO

Marina Brito has received her Biochemistry degree from Faculdade de Ciências e Tecnologia at Coimbra University, Portugal, in 2006. Integrated in this degree she did an internship at IBMC, where she worked on the description of molecular mechanisms involved in FAP disease (Familial Amyloid Polyneuropathy) development as well as in the identification of new disease's biomarkers. In 2006 she started the Biology and Biomedicine Ph.D. Program (PDBEB) in the University of Coimbra. From 2007 to 2011 she developed her thesis research at Université Pierre et Marie Curie (UPMC), in collaboration with Institute Pasteur and Mauna-Kea Technologies. Her research activities included two different projects: the study of signaling pathways, namely cAMP/PKA cascade involved in the reward system, where she performed pharmacological studies to bring new insights about the dopamine receptors activations and signaling in different regions of the brain; and the development of a new imaging technique FRET using an optical fiber prototype which allows the recording of dual emission biosensors signals in real-time, in the deep rain of living animals. In 2011 she got her Ph.D. degree in Neuroscience from Université Pierre et Marie Curie - Paris 6, France. Afterwards, she continued to work on the optimization the FRET in vivo technique, as researcher at UPMC until 2012. She returned to Portugal to study Project Management at Porto Business School and got her post-graduation in 2013. In July 2013 she joined INL - International Iberian Nanotechnology Laboratory, as junior staff researcher. She is now staff researcher in the Diagnostic Tools and Methods group, part of the Department for Life Sciences. Her research is focused on two major projects: development of an imaging tool for vulnerable atherosclerotic plaque in intervention cardiology and development of biomimetic platforms that mimic in vivo scenarios.

LINKS

ORCID: orcid.org/0000-0002-8973-104X

ResearcherID: [A-4203-2015](https://orcid.org/0000-0002-8973-104X)

WORK EXPERIENCE

STAFF RESEARCHER @ INL — 2013-NOW

INL- International Iberian Nanotechnology Laboratory, Braga, Portugal

POST-DOC IN UPMC, PARIS FRANCE — 2011-2012

UPMC – Université Pierre et Marie Curie, Paris, France

PHD THESIS, UPMC, PARIS FRANCE — 2006-2011

UPMC – Université Pierre et Marie Curie, Institut Pasteur, Paris, France

SCIENTIFIC TRAINING, IBMC, PORTO PORTUGAL — 2005-2006

IBMC - Instituto de Biologia Molecular e Celular, now I₃S, Porto, Portugal

EDUCATION

- 2013 Post-graduation in **Project Management** at Porto Business School, Porto, Portugal
- 2006-2011 **PhD Degree** in Neuroscience Université Pierre et Marie Curie - Paris 6 (UPMC), Paris, France
- 2006 PDBEB (PhD Program Experimental Biology and Biomedicine) **Advanced Courses**, at CNC (Centro de Neurociências) in Coimbra, Portugal

- 1999-2006 **Biochemistry** degree (licenciatura) University of Science and Technology Coimbra, Coimbra, Portugal

AWARDS AND FELLOWSHIPS

- 2011/2012 FRM (Fondation de Recherche Médicale) fellowship
- 2010 – Awarded with fellowship prize from Séminaire Recherche en Imagerie Biomédicale à l'Université Pierre et Marie Curie
- 2006 – PhD Fellowship from FCT (Fundação para Ciência e Tecnologia), Portugal

SCIENTIFIC PARTICIPATIONS

ARTICLES:

- Cardoso I, Brito M, Saraiva MJ. "Extracellular matrix markers for disease progression and follow-up of therapies in familial amyloid polyneuropathy V30M TTR-related"; *Dis Markers*. 2008; 25(1):37-47.
- P. Vincent, L. R. V. Castro, N. Gervasi, E. Guiot, M. Brito, D. Paupardin-Tritsch - "PDE4 Control on cAMP/PKA Compartmentation Revealed by Biosensor Imaging in Neurons"; *Horm Metab Res* 2012; 44:786–789.
- Marina Brito, Elvire Guiot, and Pierre Vincent - "Imaging PKA Activation Inside Neurons in Brain Slice Preparations", *Protein Kinase Technologies, Neuromethods*, vol. 68, Chapter 13, New York 2012.
- R.V. Castro* L, Brito M* ,Guiot E, Polito M, W Korn C, Hervé D, Girault JA, Paupardin-Tritsch D,Vincent P - "Striatal neurones have a specific ability to respond to phasic dopamine re-lease.", * co-first authors. *J Physiol*. 2013 Jul 1; 591(Pt 13):3197-214.
- Brito, M., Jimenez, V. A., Cuevas, J. & Freitas, P. P. Towards detection of vulnerable atherosclerotic plaque: first step – A lab test platform. *Atherosclerosis* 241, e162–e163 (2015).
- Bi, H; Duarte, CM ; Brito, M; Vilas-Boas, V; Cardoso, S; Freitas, P "Performance enhanced UV/vis spectroscopic microfluidic sensor for ascorbic acid quantification in human blood." – *Biosens Bioelectron*. 2016 Nov 15; 85:568-72.

POSTERS:

- Cardoso I, Brito M, and Saraiva MJ. Decreased levels of metalloproteinase-9 following vaccination or doxycycline treatment of an FAP animal model. Boston, November 5-9, 2006.
- Cardoso I, Brito M, and Saraiva MJ. Decreased levels of metalloproteinase-9 following vaccination of an FAP animal model. Neuroscience 2006. Atlanta, October 14-18, 2006
- Cressant A.; Maubourguet N.; Barbosa-Brito M.; Vincent P.; Faure P. and Maskos U. In situ real time functional imaging of neuronal activity in the dopaminergic system. SFN09. Chicago, October 17-21, 2009
- Barbosa-Brito M; Guiot E; Cavellini L.; Zhang J.; Ni, Q; Maskos U.; Paupardin-Tritsch D. and Vincent P. Towards a real-time in vivo monitoring of PKA activity in deep brain regions using fibered fluorescence microscopy with dual emission detection. SFN09. Chicago, October 17-21, 2009
- Maskos U., Barbosa-Brito M., Faure P., Vincent P. and Cressant A. Real-time functional calcium imaging in the dopaminergic system in vivo. FENS2010, Amsterdam, July 3-7, 2010
- Maskos U., Barbosa-Brito M., Faure P., Vincent P. and Cressant A. Real-time functional calcium imaging in the dopaminergic system in vivo. SFN10, San Diego, November 13-17, 2010

- Brito M., Martins M., Cortez H., Jimenez V., Cuevas J., Freitas P.P. – “Towards detection of vulnerable atherosclerotic plaque: first step – a lab test platform”, EAS (European Atherosclerosis Society) Congress – March 2015, Glasgow UK
- Maibohm,C; Silva, F.; Figueiras, E.; Guerreiro, PT; Brito, M.; Romero, R; Crespo, H; Nieder,JB - “At focus compressed 7 and 150 femtosecond pulses for deep tissue multiphoton microscopy”, ICONAN 2016, Paris, France
- Brito M., Jardim P., Martins M., Cortez H., Jimenez V., Cuevas J., Freitas P.P – “Biomarcadores in situ para placa aterosclerótica vulnerável” - III Conferência do INMLCF, Coimbra, Portugal

ORAL PRESENTATIONS:

- “Towards real-time imaging of PKA activity in deep brain regions in vivo”, in the PDBEB/CNC annual meeting 2009, Coimbra, Portugal.
- “Towards real-time imaging of PKA activity in deep brain regions in vivo” in Séminaire Recherche en Imagerie Biomédicale à l’Université Pierre et Marie Curie, January 2010, Paris, France.
- “Real Time imaging of PKA activity in deep brain regions in vivo” at SFN 2010, the 15th of November 2010, San Diego, USA.

INVITED SPEAKER

- Instituto Gulbenkian de Ciência (IGC), Champalimaud Centre for the Unknown previous headquarters, 2011
- Jornadas de Biomédicas – UBI, Covilhã, April 2014
- Jornadas Bioquímica – UM, Braga, April 2014
- BIOCAPS Seminar – October 2015, Vigo Portugal
- BIORSELF , Jornadas de Biologia Aplicada, Braga, 2017
- Evento Maratona da Saúde – Camnihar até aos 100anos, Barcelos 2017