

Fiorio Pla Alessandra

Date of birth: 02/13/1973

Nationality: Italian

Marital Status: Not married

Foreign languages: English

Present position: PhD, Postdoctoral fellow, Department of Human and Animal Biology, University of Torino, Italy

Education

December 20th 2001 PhD title in Physiological Sciences

1998 Honor degree in Biology (Laurea) – University of Torino, Italy

1992 High School Degree (Maturità Scientifica), Torino, Italy

Scientific Activity

From October 1 2007: permanent position as assistant professor at Department of Animal and Human Biology, University of Turin.

2004-2007: Postdoctoral fellowship in cellular physiology, Laboratory of Physiology, Dept. Human and Animal Biology, University of Torino, Torino, IT. The aim of the project is the understanding of the mechanisms that control the cell cycle in microvascular endothelial cells and specifically the role of mitogen-activated calcium influx. Endothelial cell proliferation is modulated by complex pathways showing several points of negative and positive feedback and involving a great number of elements.

2002-2004: Postdoctoral studies in developmental neurobiology and neurophysiology, Laboratory of Neurophysiology, National Institute of Neurological Disorders and Stroke, National Institute of Health, Bethesda, MD. The aim of the project is to investigate bFGF-induced signal transduction pathways during neurogenesis of the embryonic rat cerebral cortex and their role on self renewal and differentiation of neural stem cells. It is studied in detail the contribution of TRPC1 channels in bFGF-mediated self-renewal on neural stem cells.

1998-2001: PhD student in Physiological Sciences at the Department of Human and Animal Biology, University of Torino, Italy with a study focused on the role of calcium entry triggered by bFGF and Arachidonic Acid in endothelial cells. It was also investigated and demonstrated the role of arachidonic acid-induced calcium entry in the control of endothelial cell proliferation.

During the PhD studentship she participated to practical exercitations for the course of General Physiology (Prof. Lovisolo) for students in Biology at the university of Torino. Moreover she took part of the examinations of general physiology for students in Biology

1998-1999: Practical laboratory training at the Department of Human and Animal Biology of the University of Torino. Working on calcium influx induced by mitogens in endothelial cells.

Techniques

Electrophysiology (patch-clamp in the whole cell and inside out configuration), calcium imaging, Western Blot analysis, immunocytochemistry and cell culture.

Workshop and meeting attended

14th International Symposium on Calcium and Calcium Binding Proteins in Health and Disease, Banff, Canada, April 5-10 2005

Society for Neuroscience 33rd annual meeting, november 2003, New Orleans

Gordon Research Conference on Calcium Signalling, Mount Holyoke College, South Hadley, MA july 6-11 2003

Society for Neuroscience 32nd annual meeting, 11/2-7 2002, Orlando

National Congress of Italian Society of Neuroscience (SINS), Torino 8-11 settembre 2001.

Workshop on CALCIUM SIGNALLING AND MODULATION OF CALCIUM PERMEABLE CHANNELS, Torino 2001

European Congress of Cell Biology (ECBO) Congress, Bologna 1999.

Practical courses attended

“Intracellular Ca²⁺ Signalling”, Padova, settembre 2000
Course organized by University of Padova, Italy

“Electrical signalling in the CNS” Trieste, 1999.
Course organized by Physiology and Biophysics School of Trieste

Bibliography

Alessandra Fiorio Pla

List of Publications

Full Papers

Dragan M n Maric, Alessandra Fiorio Pla, Yoong Hee Chang and Jeffery L. Barker
Self-renewing and differentiating properties of cortical neural stem cells are selectively regulated by basic fibroblast growth factor (bFGF) signaling via specific FGFR receptors

J. Neurosci., 27 (8), 1836-1852, 2007

C. Tomatis*, A. Fiorio Pla* & L. Munaron

Cytosolic calcium microdomains by arachidonic acid and nitric oxide in endothelial cells

Cell Calcium, 41 (3), 261-9, 2007

S. Antoniotti, A. Fiorio Pla, S. Barral, O. Scalabrino, L. Munaron D. Lovisolo
Interaction between TRPC channels subunits in endothelial cells

J. Receptor and Signal Transduction **26**, 225-240 2006
Alessandra Fiorio Pla, Dragan Maric, So-Ching Brazer, Paolo Giacobini, Xibao Liu, Yoong Hee Chang, Indu S. Ambudkar, and Jeffery L. Barker
Canonical Transient Receptor Potential 1 Plays a Role in Basic Fibroblast Growth Factor (bFGF)/FGF Receptor-1-Induced Ca²⁺ Entry and Embryonic Rat Neural Stem Cell Proliferation
J. Neurosci. **25**, 2687-2701 2005
L. Munaron, S. Antoniotti, A. Fiorio Pla and D. Lovisolo
Blocking Ca²⁺ entry: a way to control cell proliferation
Current Medicinal Chemistry **11**, 763-771, 2004
S. Antoniotti, A. Fiorio Pla, S. Pregolato, A. Mottola, D. Lovisolo & L. Munaron
Control of endothelial cell proliferation by calcium influx and arachidonic acid metabolism: a pharmacological approach
Journal of Cellular Physiology **9999**, 454-463, 2003
S. Antoniotti, D. Lovisolo, A. Fiorio Pla, L. Munaron
Expression and functional role of bTRPC1 channels in native endothelial cells
FEBS Letters **510**, 189-195, 2002
A. Fiorio Pla & L. Munaron
Calcium influx, arachidonic acid, and control of endothelial cell proliferation
Cell Calcium **30 (4)**, 235-244, 2001
L. Munaron & A. Fiorio Pla
Calcium influx induced by activation of tyrosine kinase receptors in cultured bovine aortic endothelial cells
Journal of Cellular Physiology **185**, 454-463, 2000.

Abstracts

A. Fiorio Pla, D. Maric, B. Singh, Y-H Chang, I. Ambudkar & J.L. Barker
Expression and possible involvement of TRPC channels in bFGF mediated calcium influx and self-renewal of embryonic rat neural stem cells
Program No 242.7. 2003 Abstract viewer/ itinerary planner. Washington DC: Society for Neuroscience
D. Maric, A. Fiorio Pla, Y-H Chang, S.V. Smith & J.L. Barker
BFGF-activated FGFR-1 tyrosine kinase activity determines neural stem cell fate
Program No 242.6. 2003 Abstract viewer/ itinerary planner. Washington DC: Society for Neuroscience
D. Maric, A. Fiorio Pla, Y-H Chang, S.V. Smith & J.L. Barker
BFGF-mediated calcium signaling underlies Self renewal of rat neural stem cells
Society for Neuroscience 32nd annual meeting, 2002, Orlando
L. Munaron & A. Fiorio Pla
Calcium influx induced by mitogens in endothelial cells
Int. J. Mol. Med. **8 (suppl.1)**, S52, 2001
L. Munaron & A. Fiorio Pla
Ionic currents modulated by bFGF and IGF-1 in bovine aortic endothelial cells
Pflugers Arch. **437**, R60, 1999.

Books

L. Munaron & A. Fiorio Pla
Non-capacitative calcium signals activated by Arachidonic Acid in non excitable cells

Calcium Signalling, edited by M.Morad & P.Kostyuk,IOS Press, 2001

Meeting abstracts

Fiorio Pla A, Maric D, Singh B.B., Chang Y.H., Ambudkar I.S. & Barker J.L.
Expression and Possible Involvement of TRPC Channels in bFGF-Mediated Calcium Influx and Self Renewal of Embryonic Rat Neural Stem Cells.
Gordon Research Conference on Calcium Signalling, Mount Holyoke College, South Hadley, MA, 2003.

A. Fiorio Pla, Y.H. Chang, S.V. Smith, J.L. Barker and D. Maric
BFGF-mediated calcium signaling underlies self renewal of rat neural stem cells.
NINDS Intramural Retreat, 2002.

Munaron L. & Fiorio Pla A.
Non capacitative calcium signals activated by arachidonic acid and their role in endothelial cell proliferation.
Advanced Nato Workshop, Il Ciocco, Lucca, 2000.

Fiorio Pla A & Munaron L
Calcium signalling and arachidonic acid metabolism triggered by bFGF: proliferation control in bovine aortic endothelial cells.
Atti dell'European Congress of Cell Biology (ECBO), Bologna, 1999.