



ELENA PARMIGIANI

PERSONAL DATA

Current position	Laboratory of Embryology and Stem Cell Biology, Department of Biomedizin, University of Basel Mattenstrasse 28, 4058 Basel (Switzerland)
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Date and place of birth	26/03/1985, Vercelli, Italy
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EDUCATION

- February 2015: **PhD in Neuroscience**, Department of Neuroscience "Rita-Levi Montalcini", University of Turin *Thesis title*: "Astrocytes and interneurons in the cerebellum: origin and lineage relationships" *Final mark*: excellent. *Discussion date*: February 24, 2015 *Advisors*: Annalisa Buffo, PhD and Ferdinando Rossi, MD, PhD
- March 2010: **Master degree in Medical, Molecular and Cellular Biotechnology** (pharmaceutical curriculum), Vita-Salute San Raffaele University, Milan (Italy) *Thesis title*: "Characterization of a cellular model of oligodendrocyte precursors in order to study the receptor GPR17" *Final mark*: 110/110. *Discussion date*: March 26, 2010 *Advisors*: Patrizia Rosa, PhD and Fabio Grohovaz, PhD
- September 2007: **Bachelor in Medical and Pharmaceutical Biotechnology**, Vita-Salute San Raffaele University, Milan (Italy) *Thesis title*: "Oxidative stress in Alzheimer disease: role of beta-amyloid" *Final mark*: 107/110. *Discussion date*: September 26, 2007 *Advisors*: Franca Codazzi, PhD and Fabio Grohovaz, PhD

RESEARCH EXPERIENCES

- January 2016 – present: Postdoc position in the laboratory of Embryology and Stem Cell Biology, Department of Biomedizin, University of Basel (Switzerland)
- February 2015 – December 2015: **Postdoc position** at the Neuroscience Institute Cavalieri Ottolenghi (NICO), University of Turin (Italy) with Dr. Annalisa Buffo.
- January 2011 -February 2015: **PhD training** under the supervision of prof. Ferdinando Rossi and Dr. Annalisa Buffo at the Neuroscience Institute Cavalieri Ottolenghi (NICO), University of Turin (Italy).

- March 2010 - December 2011: **fellowship as graduate student** in the laboratory of Patrizia Rosa at the Institute of Neuroscience, National Research Council (CNR), Milan (Italy).
- October 2008 -March 2010: **internship as undergraduate student** in the laboratory of Patrizia Rosa at the Institute of Neuroscience, National Research Council (CNR), Milan (Italy) with the supervision of prof. Fabio Grohovaz (Vita-Salute San Raffaele University, Milan).

TEACHING AND TRAINING EXPERIENCES

- May 2015: Laboratory assistant/teacher for the Scientific Summer Academy, Fondazione Agnelli, May 26-29, Turin.
- October 2013 -present: Mentorship of Jessica Aprato and Giulia Marchese, master students in Biotechnology and Biological Sciences, University of Turin, Italy.
- October 2012 -September 2013: Mentorship of Jessica Aprato, bachelor student in Biotechnology, University of Turin, Italy.
- March 2012 -March 2014: Mentorship of Maria Fazzari, master student in Biological Sciences, University of Turin, Italy.
- June 2014: Laboratory assistant/teacher for the Scientific Summer Academy, Fondazione Agnelli, June 9-13, Turin.
- June 2013: Laboratory assistant/teacher for the Scientific Summer Academy, Fondazione Agnelli, June 17-21, Turin.
- June 2012: Laboratory assistant/teacher for the Scientific Summer Academy, Fondazione Agnelli, June 18-22, Turin.
- Participation to the NENS course on Neural Development and Developmental Disorders, Turin (Italy), September 22-26, 2014

PERSONAL SKILLS AND EXPERTISE

During my thesis and doctoral training I gained extensive expertise with primary cultures of different types of CNS-cells (astrocytes, OPCs, neurospheres of neural stem cells) and organotypic slices. I became able to performed *in vitro* assays (transfection, scratch assay, biotinylation assay of membrane protein) and biochemical assay (sucrose gradient, immunoprecipitation, Western blotting, production and purification of polyclonal antibodies from rabbit). Moreover, I acquired basic ability in molecular biology (PCR, RT-PCR, DNA and RNA isolation, subcloning, transformation, plasmids purifications) and lentiviral vector production. I gained also broad experiences with *in vivo* procedures: stereotactic surgery/injections, transplantation in pups and adult mice, in utero injections in the lateral and fourth ventricles and electroporations. Besides, I took advantage of different *in vitro* and *in vivo* clonal analysis approaches to fully investigate the fate potential of single progenitor cells. I also acquired extensive ability to use confocal microscopy.

LANGUAGE SKILLS

Italian: native language

English: good knowledge

French: basic knowledge

LIST OF PUBLICATIONS

Ketty Leto, Marife Arancillo, Esther B.E. Becker, Annalisa Buffo, Chin Chiang, Baojin Ding, William B. Dobyns, Isabelle Dusart, Parthiv Haldipur, Mary E. Hatten, Mikio Hoshino, Alexandra L. Joyner, Masanobu Kano, Daniel L. Kilpatrick, Noriyuki Koibuchi, Silvia Marino, Salvador Martinez, Kathleen J. Millen, Thomas O. Millner, Takai Miyata, [Elena Parmigiani](#), Karl Schilling, Gabriella Sekerková, Roy V. Sillitoe, Constantino Sotelo, Naofumi Uesaka, Annika Wefers, Richard JT Wingate, Richard Hawkes. "Consensus paper: cerebellar development". *Cerebellum*. PMID:26439486

Annarita De Luca, Valentina Cerrato, Elisa Fucà, [Elena Parmigiani](#), Annalisa Buffo and Ketty Leto. "Sonic Hedgehog patterning during cerebellar development". *Cell Mol Life Sci*. PMID: 26499980

[Elena Parmigiani](#), Ketty Leto, Chiara Rolando, María Figueres-Oñate, Laura López-Mascaraque, Annalisa Buffo and Ferdinando Rossi. "Heterogeneity and bipotency of astroglial-like cerebellar progenitors along the interneuron and glial lineages". *J Neurosci*. 2015 May 13;35(19):7388-402

Annarita De Luca, [Elena Parmigiani](#), Guglielmo Tosatto, Serena Martire, Mikio Hoshino, Annalisa Buffo, Ketty Leto and Ferdinando Rossi. "Exogenous sonic hedgehog modulates the pool of GABAergic interneurons during cerebellar development". *Cerebellum*. 2015 Apr;14(2):72-85

Alessandra Fratangeli*, [Elena Parmigiani](#)*, Marta Fumagalli, Davide Lecca, Roberta Benfante, Maria Passafaro, Annalisa Buffo, Maria P. Abbracchio and Patrizia Rosa. (*both these authors contributed equally to this work) "The regulated expression, intracellular trafficking and membrane recycling of the P2Y-like receptor GPR17 in Oli-neu oligodendroglial cells". *J Biol Chem*. 2013 Feb 15;288(7):5241-56

Ketty Leto, Alice Bartolini, Alessandra Di Gregorio, Daniele Imperiale, Annarita De Luca, [Elena Parmigiani](#), Robert K. Filipkowski, Leszek Kaczmarek and Ferdinando Rossi. "Modulation of cell-cycle dynamics is required to regulate the number of cerebellar GABAergic interneurons and their rhythm of maturation". *Development*. 2011 Aug;138(16):3463-72

ORAL AND POSTERS PRESENTATIONS

Invited seminars

- "Chasing cerebellar neurogenesis: lineage contiguities between interneurons and astrocytes". "NICO meets DisFEB" Seminar Series, Department of Pharmacological and Biomedical Sciences, University of Milan, Italy. April 27, 2015.
- "Heterogeneity of astroglial progenitors in the developing cerebellum". CNR, Institute of Neuroscienze, Milan, Italy June 19, 2015.

Oral Presentations at meetings

- **Elena Parmigiani**, Ketty Leto, Annarita De Luca, Chiara Rolando, Elisa Fucà, Annalisa Buffo, Ferdinando Rossi. "Lineage relationship of neuronal and glial phenotypes derived from the prospective cerebellar white matter". Neuroscience 2012, New Orleans (LA, USA), October 13-17, 2012. Oral presentation in nanosymposia.
- **Elena Parmigiani**, Francesca Crippa, Marta Fumagalli, Giuliana Roselli, Maria Pia Abbracchio, Patrizia Rosa. "Expression and trafficking of GPR17 in immortalized oligodendrocyte precursor cells". Oral presentation at the ABCD (Association of Cell Biology and Differentiation) congress "Stem cells, development and regenerative medicine", Parma (Italy), April 9-10, 2010

Poster presentations

- **Elena Parmigiani**, Ketty Leto, Chiara Rolando, Annalisa Buffo, Ferdinando Rossi. "Fate potential and clonal analysis of neural progenitors in distinct germinal niches of the postnatal cerebellum". (Abstract on proceedings), Euroglia meeting, Bilbao (Spain), July 15-18, 2015
- **Elena Parmigiani**, Ketty Leto, Chiara Rolando, Elisa Fucà, Jorge García-Marqués, María Figueres-Oñate, Laura López-Mascaraque, Ferdinando Rossi and Annalisa Buffo. "Generation of interneurons and astrocytes during cerebellar development". Stem Cells in Development and Disease, Basel (Switzerland), September 9-10, 2014
- **Elena Parmigiani**, Ketty Leto, Chiara Rolando, Annalisa Buffo, Ferdinando Rossi. "Neurogenic and gliogenic progenitors in the developing cerebellum". FENS congress, Milan (Italy), July 5-9, 2014
- **Elena Parmigiani**, Ketty Leto, Chiara Rolando, Annalisa Buffo, Ferdinando Rossi. "Neurogenic and gliogenic astroglial progenitors in the developing cerebellum". (Abstract on proceedings), Euroglia meeting, Berlin (Germany), July 3-6, 2013
- **Elena Parmigiani**, Ketty Leto, Annarita De Luca, Chiara Rolando, Elisa Fucà, Annalisa Buffo and Ferdinando Rossi. "Development of GABAergic interneuron progenitors in the postnatal cerebellar white matter". FENS congress, Barcelona (Spain), July 14-18, 2012
- **Elena Parmigiani**, Ketty Leto, Alice Bartolini, Alessandra Di Gregorio, Daniele Imperiale, Annarita De Luca, Robert K. Filipkowski, Leszek Kaczmarek, Ferdinando Rossi. "Modulation of cell-cycle dynamics is required to regulate the number of cerebellar GABAergic interneurons and their rhythm of maturation". IBRO congress, Firenze (Italy), July 14-18, 2011