

GIULIA QUATTROCOLO

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Date of birth: 29 January 1985 Nationality: Italian

Current Position: **Group leader**

Kavli Institute for Systems Neuroscience, NTNU, Trondheim, Norway.

Education: **Ph.D. in Neuroscience** 2014

Northwestern University, Chicago, IL, USA.

Dissertation title: Integration of Cajal-Retzius cells in the developing hippocampal network

Master of Science in Neurobiology 2009

University of Pavia, Pavia, Italy.

Concentration in neurophysiology; graduated *summa cum laude*

Bachelor of Science in Biological Sciences 2007

University of Pavia, Pavia, Italy.

Concentration in physiology; graduated *summa cum laude*

Bibliography

- Publications:

- Glærum IL*, Dunville K*, Montaldo NP, Kirikae H, Nigro MJ, Sætrum P, van Loon B, **Quattrocolo G.** (2022). Persistence of Cajal-Retzius cells in the postnatal hippocampus is required for development of dendritic spines of CA1 pyramidal cells. *Submitted, preprint available on bioRxiv*
doi: <https://doi.org/10.1101/2022.05.09.491146>
- Šimić G, Krsnik Z, Knezović V, Kelović Z, Lysholt Mathiasen M, Junaković A, Radoš M, Mulc D, Španić E, **Quattrocolo G**, Hall VJ, Zaborszky L, Vukšić M, Olucha Bordonau F, Kostović I, Witter MP, Hof PR. (2022). Prenatal development of the human entorhinal cortex. *Journal of Comparative Neurology in press*
- **Quattrocolo G**, Dunville K, Nigro MJ. (2021). Resurgent sodium current in neurons of the cerebral cortex. *Frontiers in Cellular Neuroscience* 15:760610.
- Wamsley B*, Jaglin XH*, Favuzzi E*, **Quattrocolo G**, Nigro MJ, Yusef Y, Khodadadi-Jamayran A, Rudy B, Fishell G. (2018). Rbfox1 mediates cell-type-specific splicing in cortical interneurons. *Neuron* 100(4), 946-859.
- Anstötz M*, **Quattrocolo G***, Maccaferri G. (2018). Cajal-Retzius cells and GABAergic interneurons of the developing hippocampus: close electrophysiological encounters of the third kind. *Brain Research* 1697, 124-133.

(Publications)

- **Quattrocolo G**, Isaac M, Zhang Y, Petros TJ. (2018). Homochronic transplantation of interneuron precursors into early postnatal mouse brains. *Journal of Visual Experiments* (136), e57723.
- **Quattrocolo G**, Fishell G, Petros TJ. (2017). Heterotopic transplantations reveal environmental influences on interneuron diversity and maturation. *Cell Reports* 21(3), 721-731.
- **Quattrocolo G**, Maccaferri G. (2014). Optogenetic activation of Cajal-Retzius cells reveals their glutamatergic output and a novel feed-forward circuit in the developing mouse hippocampus. *Journal of Neuroscience* 34, 13018-13032.
- **Quattrocolo G**, Maccaferri G. (2013). Novel GABAergic circuits mediating excitation/inhibition of Cajal-Retzius cells in the developing hippocampus. *Journal of Neuroscience* 33, 5486-5498.
 - Selected from the F1000
- Nigro MJ, **Quattrocolo G**, Magistretti J. (2012). Distinct developmental patterns in the expression of transient, persistent, and resurgent Na⁺ currents in entorhinal cortex layer-II neurons. *Brain Research* 1463, 30-41.

Research Experience:

- May 2017-December 2020: Postdoctoral fellow, Prof. Edvard Moser, Kavli Institute, NTNU, Trondheim, Norway
- July 2014-April 2017: Postdoctoral fellow, Prof. Gord Fishell, Department of Neuroscience, NYU, New York City, USA
- Fall 2009; Fall 2010-Spring 2014: Graduate student, Prof. Gianmaria Maccaferri. Department of Physiology, Northwestern University, Chicago, USA.
- Spring-Summer 2010: Laboratory rotation student, Prof. Enrico Mugnaini, Department of Cellular and Molecular Biology, Northwestern University, Chicago, USA.
- Winter 2010: Laboratory rotation student, Prof. Catherine S. Woolley, Department of Neurobiology and Physiology, Northwestern University, Chicago, USA.
- Winter 2008-Spring 2009: Master student, Prof. Jacopo Magistretti, Department of Physiology, University of Pavia, Pavia, Italy.
- Spring 2006-Summer 2007: Undergraduate student, Prof. Mauro Toselli, Department of Physiology, University of Pavia, Pavia, Italy.

Teaching and mentoring experience:

- January 2020- *present*: supervisor of 3 Master students; 2 Ph.D. students; 1 postdoctoral fellow
- Fall 2021: Cellular and Molecular Neuroscience NEVR3001, lecture on basic biology of neurons and glia
- Fall 2019-present: Sensory and Motor Neuroscience NEVR3002, lecture on development of neuronal network (2019), development of the central nervous system (2021)
- Fall 2010: Fundamental Neuroscience, NUIN 401-1, with Prof. C.J. Heckman.
- Spring 2010: Neurobiology of Learning and Memory, Biol-Sci 326, with Prof. C.S. Woolley.

Invited Presentations:

- The Australasian Developmental Neuroscience Forum (ADNF), online seminar series hosted by the Australian Neuroscience Society. May 26, 2022
- “Nervous system development and plasticity” online seminar series hosted by Dr. Sepand Rastegar. December 6, 2021
- US-Nordic Precision Neuroscience speed networking event, hosted by Virginia Tech, August 26 2021 (virtual)
- Kavli NeuroFuture Forum, April 12, 2021 (Virtual)
- University of Bristol, UK. November 19, 2020 (Virtual)
- Center of Excellence for Neural Plasticity and Brain Disorders BRAINCITY, Warsaw, Poland. BRAINCITY Symposium. 9-10 June 2020 (Virtual symposium).
- University of Pavia, Italy. “Career Day” for the Neurobiology Master. December 20, 2019
- University of Oslo, Oslo, Norway. August 20, 2019
- Instituto de Neurociencias, Alicante, Spain. Christmas Meeting, 19-20 December 2018
- University of Pavia, Italy. “Career Day” for the Neurobiology Master. December 19, 2017
- University of Pavia, Italy. December 22, 2011

Grants and Awards:

- 2021-2025: FRIPRO Researcher Project for Young Talents. Role: Principal Investigator. Funder: Research Council of Norway
- 2021-2026: The TMS Brain Research Initiative. Role: Principal Investigator and node coordinator. Funder: Trond Mohn Stiftelse
- 2020-2021: Marie Skłodowska-Curie Action Individual Fellowship (CaRe-Space). Role: Principal Investigator. Funder: European Commission (awarded 2019)
- May 2020: FENS-IBRO/PERC grant award, to attend the FENS Virtual Forum 2020 (11-15 July 2020)
- November 2019: IBRO International Travel Grants award, to attend the Cortical Development Conference, in Milazzo, Italy, between 18-22 May 2020 (postponed due to COVID-19 to 20-24 September 2021)
- May 2018-December 2019: NTNU-Faculty of Medicine Internal Postdoctoral fellowship-MCSA seal of excellence
- July 2018: Travel grant to attend the 2018 FENS meeting in Berlin, Germany, awarded from the Italian Society for Neuroscience (SINS)
- October 2017: Best Poster Award at the XVII National Congress of the Italian Society for Neuroscience (SINS)
- July 2018: Travel grant to attend the 2018 FENS meeting in Berlin, Germany, awarded from the Italian Society for Neuroscience (SINS)
- October 2017: Best Poster Award at the XVII National Congress of the Italian Society for Neuroscience (SINS)
- Fall 2013-Spring 2014: affiliate trainee of the Neurobiology of Information Storage Training Program (NIH T32MH067564 Principle Investigator: Aryeh Routtenberg, Ph.D.)

Organization of scientific meetings:

- 2019- Kavli Institutes in Neuroscience Forum, Yale University, New Haven, CT, USA, (planned for April 2020, postponed due to COVID-19, new date TBD), co-organizer and chair of the Program Committee
- 2017- “Career Day” for the Neurobiology Master, University of Pavia, Italy, co-organizer

Reviewing activities:

- Topic Editors for the Research Topic “Biogeography of the cortex: Cell-Type diversity across cortical regions and its functional implications” for *Frontiers in Neural Circuits*)
- Hippocampus, *Frontiers in Cell and Developmental Biology*, *European Journal of Neuroscience*
- Italian Minister of Health

Memberships:

- 2020- Norwegian Neuroscience Society
- 2020- Cellular and Molecular Cognition Society
- 2017- Federation of European Neuroscience Societies
- 2017- Italian Society of Neuroscience
- 2013- Cajal Club
- 2009- Society for Neuroscience

Outreach activities:

- 2019: Scientific image selected for the exhibition on Neurology and Artificial Intelligence at the Ars Electronica Center, Linz, Austria
- 2011-2013: Volunteer in the organization of the Annual Brain Awareness Fair with Nettelhorst Elementary School, Chicago, USA