

Maximiliano Jose Nigro

Email: maximiliano.nigro@gmail.com

Work email: maximiliano.j.nigro@ntnu.no

Website: <https://nigrolab.com/>

Date of birth: 01 March 1979 Nationality: Italian

Current Position: Group leader

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

Education:	Ph.D. in Physiology Neuroscience <i>University of Pavia, Italy.</i>	2010
	Master of Science in Neurobiology <i>University of Pavia, Pavia, Italy.</i> Concentration in neurophysiology	2006
	Bachelor of Science in Biological Sciences <i>University of Pavia, Pavia, Italy.</i> Concentration in cell biology	2004

Bibliography

- Publications:

- Ohara S, Blankvoort S, Nair RR, Nigro MJ, Nilssen ES, Kentros C, Witter MP. (2020) Local circuits of layer Vb-to-Va neurons mediate hippocampal-cortical outputs in lateral but not in medial entorhinal cortex. bioRxiv 2020.09.17.301002
- Jara JH, Sheets PL, **Nigro MJ**, Peric M, Brooks C, Heller DB, Martina M, Andjus PR, Ozdinler H. (2020) The electrophysiological determinants of corticospinal motor neuron vulnerability in ALS. *Front Mol Neurosci* 13:73.
- **Nigro MJ**. (2019) Sense and action across the layers of the rat posterior parietal cortex. *J Neurosci* 40:1606-1607.
- Nilssen ES, Doan TP, **Nigro MJ**, Ohara S, Witter MP. (2019) Neurons and networks in the entorhinal cortex: A reappraisal of the medial and lateral subdivisions mediating parallel cortical pathways. *Hippocampus* 29:1238-1254.
- Wamsley B, Jaglin XH, Favuzzi E, Quattrocchio G, **Nigro MJ**, Yusuf N, Khodaddadi-Jamayran A, Rudy B, Fishell G. (2018) Alternative splicing is essential for cell-type-specific cortical interneuron connectivity. *Neuron* 100:846:859.
- **Nigro MJ**, Hashikawa Y, Rudy B. (2018) Diversity and connectivity of somatostatin interneurons in layer V of the mouse barrel cortex. *J Neurosci* 38:1622-1633.

-Publications:

- Hönigsperger C*, **Nigro MJ***, Storm JF. (2017) Physiological roles of Kv2 channels in entorhinal cortex layer II stellate cells revealed by Guanylylase inhibitor-1E. *J Physiol.* 595:739-757.
- He M, Tucciarone J, Lee S, **Nigro MJ**, Kim Y, Levine JM, Kelly SM, Kruglikov I, Wu P, Chen Y, Gong L, Hou Y, Rudy B, Osten O, Huang J. (2016) Strategies and tools for combinatorial targeting of GABAergic neurons in mouse neocortex. *Neuron.* 91:1228-43.
- **Nigro MJ**, Mateos-Aparicio P, Storm JF. (2014) Expression and functional roles of Kv7/KCNQ/M-channels in rat medial entorhinal cortex layer II stellate cells. *J Neurosci.* 34:6807-12.
- Sekerkova G, Kim JA, **Nigro MJ**, Becker EB, Hartmann J, Birnbaumer L, Mugnaini E, Martina M. (2013) Early onset of ataxia in moonwalker mice is accompanied by complete ablation of type II unipolar brush cells and Purkinje cell dysfunction. *J Neurosci.* 33:19689-94.
- **Nigro MJ**, Quattrocchio G, Magistretti J. (2012) Distinct developmental patterns in the expression of transient, persistent and resurgent Na⁺ currents in entorhinal cortex layer-II neurons. *Brain Res.* 1463:30-41.
- **Nigro MJ**, Perin P, Magistretti J. (2011) Differential effects of Zn²⁺ on activation, deactivation and inactivation kinetics in neuronal voltage-gated Na⁺ channels. *Pflüger Archiv* 462:331-47.
- Castelli L, **Nigro MJ**, Magistretti J. (2007) Analysis of resurgent sodium-current expression in rat parahippocampal cortices and hippocampal formation. *Brain Res.* 1163:44-55.

Poster/Abstracts

- **Nigro MJ**, Convertino L, Witter MP. (2018) Differential distribution of molecularly defined interneurons along the rostro-caudal axis of the mouse perirhinal cortex. FENS Forum Abstr.
- **Nigro MJ**, Witter MP. (2018) Differential distribution of molecularly defined interneurons along the rostro-caudal axis of the mouse perirhinal cortex. EMBO Workshop “Cortical interneurons in health and disease”.
 - Selected for oral presentation in “Poster highlights” session
- **Nigro MJ**, Hashikawa Y, Tremblay R, Rudy B. (2017) Diversity and connectivity of somatostatin interneurons in layer V of the mouse barrel cortex. Italian Society for Neuroscience meeting.
- **Nigro MJ**, Hashikawa Y, Tremblay R, Rudy B. (2016) Diversity and connectivity of somatostatin interneurons in layer V of the mouse barrel cortex. Neuroscience meeting, San Diego.
- Jaglin XH, Wamsley B, Quattrocchio G, Gamallo-Lana B, **Nigro MJ**, Mar A, Rudy B, Fishell G. (2016) Cortical interneuron integration is mediated by the autism spectrum disorder-associated splicing regulator Rbfox1. Neuroscience meeting, San Diego.
- Jaglin XH, Wamsley B, Quattrocchio G, Gamallo-Lana B, **Nigro MJ**, Mar A, Rudy B, Fishell G. (2016) Cortical interneuron integration is mediated by the autism spectrum disorder-associated splicing regulator Rbfox1. Cold Spring Harbor Laboratory meeting on “Axon guidance, synapse formation and regeneration”.

Poster/Abstracts

- Heller D, Jara JH, Sheets P, **Nigro MJ**, Martina M, Shepherd GMG, Ozdinler PH. (2015) Early connectivity defects of corticospinal motor neurons in ALS. Neuroscience meeting, Chicago.
- Hönigsperger C, **Nigro MJ**, Storm JF. (2013) Physiological roles of Kv2 channels in entorhinal cortex layer II cells revealed by Guanyxitoxin-1E. Neuroscience meeting, San Diego.
- **Nigro MJ**, Giglio AM, Storm JF. (2012) Physiological roles of Kv1 potassium channels in neurons of the superficial layers of the medial entorhinal cortex. Neuroscience meeting, New Orleans.
- **Nigro MJ**, Storm JF. (2012) Kv7 potassium channels control excitability of stellate cells of the medial entorhinal cortex. FENS Forum Abstr.
- **Nigro MJ**, Quattrococo G, Magistretti J. (2010) Development of multiple functional components of voltage-dependent sodium current in entorhinal cortex layer II neurons. FENS Forum Abstr.
- **Nigro MJ**, Quattrococo G, Magistretti J. (2009) Resurgent sodium current in entorhinal cortex layer II neurons: interaction with fast and slow sodium channels inactivation and postnatal developmental pattern. Congress of the Italian Society for Neuroscience.
- **Nigro MJ**, Castelli L, Magistretti J. (2009) Pharmacological properties of voltage-dependent sodium currents in entorhinal cortex layer-II neurons: a re-evaluation. Congress of the Italian Society of Physiology.
- Castelli L, **Nigro MJ**, Magistretti J. (2006) Expression of resurgent sodium current in pyramidal neurons of rat perirhinal cortex: evidence for axonal localization of the underlying channels. Congress: The node and the network: the fundamental contribution of Camillo Golgi to modern neuroscience.

Research Experience:

- May 2017-2020: Postdoctoral fellow, Dr. Menno Witter, Kavli Institute, NTNU, Trondheim, Norway.
- July 2014-April 2017: Postdoctoral fellow, Dr. Bernardo Rudy, Department of Neuroscience, NYU, New York City, USA.
- February 2013-June 2014: Research Associate, Dr. Marco Martina. Department of Physiology, Northwestern University, Chicago, USA.
- February 2010-December 2012: Postdoctoral fellow, Dr. Johan Storm, Department of Physiology, University of Oslo, Norway.
- December 2009-January 2010: Research assistant, Dr. Johan Storm, Department of Physiology, University of Oslo, Norway.
- October 2006-November 2009: Graduate student, Dr. Jacopo Magistretti, Department of Physiology, University of Pavia, Italy.
- Winter 2004-Spring 2006: Master student, Prof. Jacopo Magistretti, Department of Physiology, University of Pavia, Pavia, Italy.
- Winter 2003-Summer 2004: Undergraduate student, Dr. Rosanna Nano, Department of Comparative Anatomy, University of Pavia, Pavia, Italy.

Teaching experience:	<ul style="list-style-type: none"> • November 2020: “Course of Methods in neurophysiology” for the Master in Neuroscience, NTNU, Norway • November 2019: “Course of Methods in neurophysiology” for the Master in Neuroscience, NTNU, Norway • August 2014: teaching assistant for Electrophysiological methods course at NYU
Editorial activity	<ul style="list-style-type: none"> • Guest Associate Editor for Frontiers in Neural Circuits: Research Topic “Biogeography of the cortex: cell-type diversity across cortical regions and its functional implications” • Reviewer for Frontiers in Neural Circuits
Invited Presentations:	<ul style="list-style-type: none"> • Bristol Neuroscience, University of Bristol, December 2020 • Nencki Institute of Experimental Biology, June 2020 • Kavli NDI-X Speakers Series, December 2019 • Department of Physiology, 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
Awards:	<ul style="list-style-type: none"> • 2020: Marie Skłodowska-Curie Individual Fellowship • 2018: Seal of Excellence of the EU; • 2018: FENS-IBRO/PERC Travel grant; • 2017: Seal of Excellence of the EU; • 2006-2009: Ph.D. Studentship at the University of Pavia; • 2005: University of Pavia studentship for Neurobiology
Organization of scientific meetings:	<ul style="list-style-type: none"> • 2021- JANUBET Symposium for Young Researchers in the exchange program Norway-Japan • 2017 “Career Day” for the Neurobiology Master, University of Pavia, Italy, co-organizer
Participation in institutional activities:	<ul style="list-style-type: none"> • Since 2021: Co-organizer of the Kavli Institute Seminar Series • 2019-2020 Secretary of the YROCK (Young Researcher Organization of the Neural Computation and the Kavli Institute for Systems Neuroscience) • 2020: Co-organizer of the departmental Journal Club at the Kavli Institute for Systems Neuroscience, NTNU, Norway • 2018-2020: Organizer of the Witter Lab Meeting, NTNU, Norway
Memberships:	<ul style="list-style-type: none"> • Italian Society for Neuroscience; • Federation of European Neuroscience Societies; • Society for Neuroscience (USA); • Cajal Club; • Mediterranean Neuroscience Society
