Personal Information

Family name, First name: Novarino, Gaia

Date of birth: 13 February 1977

Nationality: Italian

URL for web site: www.gnovarino.wix.com/novarino-lab

Education

1996 - 2002 B.S in Molecular Biology, University La Sapienza, Rome, Italy

2002 - 2006 PhD in Cell Biology, Department of Cell Biology, University La Sapienza, Rome, Italy, supervisor: Michele Mazzanti.

Previous Positions

2006 - 2010 Postdoctoral Fellow
Thomas J. Jentsch, Max Delbruck Center for Molecular Medicine, Berlin, Germany

2010 - 2013 Postdoctoral Fellow
Joseph G. Gleeson, Neuroscience Department, School of Medicine, University of California San Diego (UCSD), USA

2014 - 2019 Assistant Professor, Institute of Science and Technology Austria, Klosterneuburg

Current Positions

2019 - Present Professor, Institute of Science and Technology Austria, Klosterneuburg

2016 - Present FENS-Kavli network of excellence scholar (Vice Chair)

Awards and distinctions (since 2014)

2014 CURE (Citizens United for Research in Epilepsy) Taking flight award

2016 Simons Foundation Autism Research Initiative Investigator

2016 Boehringer Ingelheim FENS (Federation European Neuroscience Societies) Research award

2016 Selected FENS Kavli Network of Excellence Scholar

2016 ERC Starting award

Publication list

*indicates corresponding authors

a) Refereed journals

1. Deliu E, Arecco N, Morandell J, Dotter CP, Contreras X, Girardot C, Kaesper E, Kozlova A, Kishi K, Chiaradia I, Noh K*, **Novarino G***. *Haploinsufficiency of intellectual disability-gene SETD5 disturbs developmental gene expression and cognition*. ***Nature Neuroscience,*** 2018 Nov 19.
2. Marsh APL, **Novarino G**, Lockhart PJ, Leventer R*. *CUGC for pontocerebellar hypoplasia type 9 and spastic paraplegia-63.* ***EJHG*** 2018 Aug 8.
3. Tarlungeanu D and **Novarino G***. *Genomics in neurodevelopmental disorders: an avenue to personalized medicine*. ***Experimental and Molecular Medicine*** 2018 Aug 7;50(8):100.
4. Marin-Valencia I, **Novarino G**, Johansen A, Rosti B, Issa MY, Musaev D, Bhat G, Scott E, Silhavy JL, Stanley V, Rosti RO, Gleeson JW, Imam FB, Zaki MS, Gleeson JG*. *A homozygous founder mutation in TRAPPC6B associates with a neurodevelopmental disorder characterised by microcephaly, epilepsy and autistic features*. ***J Med Genet.*** 2018 Jan;55(1):48-54.
5. Sacco R, Cacci E, **Novarino G***. *Neural stem cells in neuropsychiatric disorders*. ***Curr.***

Opin Neurobiol. 2017 Dec 26;48:131-138.

6. Tarlungeanu DC, Deliu E, Dotter CP, Kara M, Janiesch C, Scalise M, Galluccio M, Tesulov M, Morelli E, Sonmez FM, Bilguvar K, Ohgaki R, Kanai Y, Johansen A, Esharif S, Ben-Omran T, Topcu M, Schlessinger A, Indiveri C, Duncan K, Caglayan AO, Gunel M, Gleeson JG, **Novarino G***. *Impaired amino acid transport at the blood brain barrier is a cause of autism spectrum disorders.* ***Cell*** 2016 Dec 1; 67(6):1481-1494.
7. Sauerzopf U, Sacco R, **Novarino G**, Niello M, Weidenauer A, Praschak-Rieder N, Sitte H, Willeit M*. *Are reprogrammed cells a useful tool for studying dopamine dysfunction in psychotic disorders? A review of the current evidence*. **Eur J Neurosci.** 2016 Sep 30.
8. Kuechler A, Zink AM, Wieland T, Lüdecke HJ, Cremer K, Salviati L, Magini P, Najafi K, Zweier C, Czeschik JC, Aretz S, Endele S, Tamburrino F, Pinato C, Clementi M, Gundlach J, Maylahn C, Mazzanti L, Wohlleber E, Schwarzmayr T, Kariminejad R, Schlessinger A, Wieczorek D, Strom TM#, **Novarino G#**, Engels H#*. *Loss-of-function variants of SETD5 cause intellectual disability and the core phenotype of microdeletion 3p25.3 syndrome.* ***Eur J Hum Genet.*** 2015 Jun; 23(6):753-60.
9. Baek ST, Kerjan G, Bielas SL, Lee JE, Fenstermaker AG, **Novarino G**, Gleeson JG*. *Off-target effect of doublecortin family shRNA on neuronal migration associated with endogenous microRNA dysregulation.* ***Neuron*** 2014 June, 18; 82(6):1255-62.
10. **Novarino G**, Fenstermaker AG, Zaki MS, Hofree M, Silhavy JL, Heiberg AD, Abdellateef M, Rosti B, Scott E, Mansour L, Masri A, Kayserili H, Al-Aama JY, Abdel-Salam GM, Karminejad A, Kara M, Kara B, Bozorgmehri B, Ben-Omran T, Mojahedi F, Mahmoud IG, Bouslam N, Bouhouche A, Benomar A, Hanein S, Raymond L, Forlani S, Mascaro M, Selim L, Shehata N, Al-Allawi N, Bindu PS, Azam M, Gunel M, Caglayan A, Bilguvar K, Tolun A, Issa MY, Schroth J, Spencer EG, Rosti RO, Akizu N, Vaux KK, Johansen A, Koh AA, Megahed H, Durr A, Brice A, Stevanin G, Gabriel SB, Ideker T, Gleeson JG*. *Exome sequencing links corticospinal motor neuron disease to common neurodegenerative disorders.* ***Science*** 2014 Jan 31;343(6170):506-11.
11. **Novarino G*,** El-Fishawy P, Kayserili H, Meguid NA. , Scott ES., Schroth J, Silhavy JL., Kara M, Khalil RO., Ben-Omran T, Ercan-Sencicek A.G, Hashish AF.,Sanders SJ., Gupta AR., Hashem HS., Matern D, Gabriel S, Sweetman L, Rahimi Y, Harris RA., State MW and Gleeson JG.* *Mutations in the BCKD-kinase lead to a potentially treatable form of autism with epilepsy*. ***Science*** 2012 Oct 19;338(6105):394-397.
12. Dixon-Salazar TJ., Silhavy JL., Udpa N, Schroth J, Bielas S, Schaffer AE., Olvera J, Bafna V, Zaki MS., Abdel-Salam GH, Mansour LA., Selim L, Abdel-Hadi S, Marzouki N, Ben-Omran T, Al-Saana NA., Sonmez FM., Celep F, Azam M, Hill KJ., Collazo A, Fenstermaker AG., **Novarino G**, Akizu N, Garimella KV., Sougnez C, Russ C, Gabriel SB. and Gleeson JG*. *Exome sequencing can improve diagnosis and alter patient management.* ***Science Translational Medicine*** 2012 June 13; 138(4).
13. **Novarino G**, Akizu N, Gleeson JG*. *Modeling human disease in humans: the ciliopathies.* ***Cell*** 2011 Sep 30;147(1):70-9.
14. **Novarino G**, Weinert S, Rickheit G & Jentsch TJ*. *Endosomal chloride-proton exchange rather than chloride conductance is crucial for renal endocytosis.* ***Science*** 2010 Jun 11;328(5984):1398-401.
15. Rickheit G, Wartosch L, Schaffer S, Stobrawa SM, **Novarino G**, Weinert S, Jentsch TJ*. *Role of ClC-5 in renal endocytosis is unique among ClC exchangers and does not require PY-motif-dependent ubiquitylation*. ***J Biol Chem.*** *2010 Jun 4;285(23):17595-603.*
16. Schwartz JW, **Novarino G**, Piston DW, DeFelice LJ*. *Substrate binding stoichiometry and kinetics of the norepinephrine transporter.* ***J Biol Chem.*** *2005 May 13;280(19):19177-84*.
17. **Novarino G**, Fabrizi C, Tonini R, Denti MA, Malchiodi-Albedi F, Lauro GM, Sacchetti B, Paradisi S, Ferroni A, Curmi PM, Breit SN, Mazzanti M*. *Involvement of the intracellular ion channel CLIC1 in microglia-mediated beta-amyloid-induced neurotoxicity.* ***J Neurosci****. 2004 Jun 9;24(23):5322-30.*

b) Books and book chapters

1. Schroeder JC, Deliu E, **Novarino G***, Schmeisser MJ*. *Genetic and Pharmacological Reversibility of Phenotypes in Mouse Models of Autism Spectrum Disorder*. ***Adv Anat Embryol Cell Biol***. 2017;224:189-211.
2. Hill-Yardin EL, McKeown SJ, **Novarino G**, Grabrucker AM*. *Extracerebral Dysfunction in Animal Models of Autism Spectrum Disorder.* ***Adv Anat Embryol Cell Biol***. 2017;224:159-187.
3. Stauber T, **Novarino G** and Jentsch TJ*. *Physiology and Pathology of Chloride Transporters and Channels in the Nervous System: From Molecules to diseases*. Chapter 4: The ClC family of chloride channels and transporters. ***Elsevier Academic Press*** *2009.*

c) Other publications

1. **Novarino G**. *Zika-associated microcephaly: reduce the stress and race for the treatment* ***Science Translational Medicine*** 2017.
2. **Novarino G**. *The vicious epigenetic cycle of neuronal activation* ***Science Translational Medicine*** 2017*.*
3. **Novarino G**. *The riddle of CHD8 haploinsufficiency in autism spectrum disorder* ***Science Translational Medicine*** 2017.
4. **Novarino G**. *More excitation for Rett syndrome* ***Science Translational Medicine*** 2017.
5. **Novarino G**. *Rett syndrome modeling goes simian* ***Science Translational Medicine*** 2017.
6. **Novarino G**. *The antisocial side of antibiotics* ***Science Translational Medicine*** 2017.
7. **Novarino G**. *The Science of Love in ASD and ADHD* ***Science Translational Medicine*** 2017.
8. **Novarino G**. *Modeling Alzheimer's disease in mice with human neurons*. ***Science Translational Medicine*** 2017.
9. **Novarino G**, Baek ST, Gleeson JG*. *The sacred disease: the puzzling genetics of epileptic disorders*. ***Neuron*** 2013 Oct 2;80(1):9-11.

Scientific talks at conferences or workshops (since 2014)

1. **SFB35 symposium** (2014, Vienna, Austria), invited speaker.
2. **Next Generation Sequencing Symposium** (2014, Vienna, Austria), invited speaker.
3. **HSP Symposium** (2015, Graz, Austria), invited speaker.
4. **OMICS in biomedical research** (2015, Split, Croatia), invited speaker.
5. **Biomedical Transporters** (2015, Lugano, Switzerland), invited speaker.
6. **10th FENS forum**, (2016, Copenhagen, Denmark), FENS research award special lecture.
7. **Gordon Research Conference**, Membrane transporters: translating Molecules to Medicine (2016, Lucca, Italy), invited speaker.
8. **SFB35 Symposium** (2016, Vienna, Austria), invited speaker and co-organizer.
9. **American Epilepsy Society meeting**, (2016, Houston, USA), invited speaker.
10. **Gordon Research Conference**, Mechanisms of Membrane Transport (2017, New London, USA), invited speaker.
11. **NYU-Nature Conference on Neurogenetics** (2017, New York, USA), invited speaker.
12. **Reverse engineering the developing brain symposium** (2017, Geneve, Switzerland), invited speaker.
13. **17th SINS conference** (2017, Ischia, Italy), symposium speaker.
14. **Personalized medicine symposium** (2017, Vienna, Austria), invited speaker.
15. **Amino Acid Transporter Defects meeting** (2018, Madrid, Spain), invited speaker.
16. **Simmesn conference** (2017, Rome, Italy), invited speaker.
17. **FKNE winter symposium** (2017, Klosterneuburg, Austria), co-organizer and invited speaker.
18. **Synapsy, The Neurobiology of Mental Health** (2018, Genève, Switzerland), invited speaker.
19. **EMBO Conference on Neural Development** (2018, Taipei, Taiwan), invited speaker.
20. **SFARI Science Meeting** (2018, New York, USA), invited speaker.
21. **Membrane Proteins in Health and Disease** (2018, Alberta, Canada), invited speaker.
22. **Translating Translation: From Basic Mechananisms to Molecular Medicine – 38th Blankenese Conference** (2018, Hamburg, Germany), invited speaker.
23. **15th meeting of the Asian-Pacific Society for Neurochemestry** (2018, Macau, China), invited speaker.
24. **SSIEM symposium** (2018, Athens, Greece), invited speaker.

25. **Neurodevelopment and Vulnerability of the Central Nervous System symposium**, (2018, Erlangen, Germany), invited speaker.
26. **Meeting of the Hungarian Neuroscience Society**, (2019, Debrecen, Hungary), keynote speaker.
27. **ECNP Workshop**, (2019, Nice, France), invited speaker.
28. **Brain Malformations: A Roadmap for Future Phenotyping and Research**, (2019, Rehovot, Israel), invited speaker.
29. **Neuroscience Winter Conference**, (2019, Soelden, Austria), symposium speaker.
30. **14th Troina Meeting on Genetics of Neurodevelopmental Disorders**, (2019, Troina, Italy), invited speaker.

Scientific lectures or courses at external institutions (since 2014)

2014 SFB35 retreat, scientific talk.
2014 IMBA, Vienna, Austria, scientific talk.
2014 Research Center for Molecular Medicine (CeMM), Vienna, Austria, scientific talk.
2014 Department of Biology Charles Darwin, University La Sapienza of Rome, scientific lecture for students.
2015 Department of Neuroscience, University of Ulm, Ulm, Germany, scientific talk.
2015 Research Center for Molecular Medicine (CeMM), Vienna, Austria, scientific lecture for students.
2016 Department of Biology Charles Darwin, University La Sapienza of Rome, scientific lecture for students.
2016 Institute of Neuroscience, Alicante, Spain, scientific talk.
2016 Department of Neuroscience, University of Lausanne, scientific talk.
2017 University Hospital Heidelberg, scientific talk.
2017 Department of Medical Sciences, University of Turin, lecture for the PhD program in Genetics.
2017 MRC Centre for Neurodevelopmental Disorders, King's College London, scientific talk.
2017 Department of Biology Charles Darwin, University La Sapienza of Rome scientific talk.
2017 Champalimaud Insitute, Lisbon, scientific talk.
2018 ZMNH, Hamburg, scientific talk.
2018 Institute of Neuroscience, Alicante, Spain, scientific talk.
2018 University of Zurich's Brain research Institute, scientific talk.
2018 University La Sapienza Department of Child Neurology and Psychiatry, lecture for specialization course.
2019 Freiburg University, Freiburg, Germany, scientific talk.