BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Yuri Bozzi	Full Professor of Physiology; Director, Center for Mind/Brain Sciences, University of Trento, Italy

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	MM/YY	FIELD OF STUDY
University of Pisa (Italy)	M.Sc.	1991	Biology
Scuola Normale Superiore, Pisa (Italy)	Ph.D.	1996	Neurobiology
IGBMC, Strasbourg (France)	Postdoctoral	1996-1999	Molecular neurobiology
Scuola Normale Superiore, Pisa (Italy)	Postdoctoral	1999-2000	Molecular neurobiology
CNR Institute of Neuroscience, Pisa (Italy)	Postdoctoral	2000-2001	Molecular neurobiology

A. Personal Statement

Research performed in my laboratory investigates the molecular basis of neurodevelopmental disorders, namely autism and epilepsy. Through a multidisciplinary approach, we use mouse models to identify anatomical and gene expression alterations involved in the genesis of these human pathological conditions, aiming at identifying novel neurobiological mechanisms and potential therapeutic targets. Work performed in my laboratory showed somatosensory processing and connectivity deficits in Cntnap2 (Balasco et al., Neurobiol. Dis. 2022), Shank3b (Balasco et al., Cerebral Cortex 2021; Zerbi et al., Molecular Psychiatry 2021; Ciancone-Chama et al., 2022 bioRxiv preprint) and Engrailed-2 (Chelini et al., J Neurosci 2019) mouse models of autism. We also extensively contributed to describe E/I imbalance in these models (e.g., Balasco et al., Neurobiol. Dis. 2022; Sgadò et al., Mol Autism 2013). These results were achieved through collaborations with several research partners (namely, Dr. A. Gozzi and Dr. G. Iurilli at IIT - Italian Institute of Technology in Rovereto, Italy, who contributed their expertise in mouse fMRI and behavior/electrophysiology, respectively; and Dr. G. Provenzano at CIBIO, University of Trento, Italy, for behavioral and molecular experiments). Recently, we contributed to the characterization of the Ube3a2x mouse model of autism (Montani et al., 2022 bioRxiv preprint) and developed a novel automated tool for posture detection in freely-moving mice challenged with somatosensory stimuli (Chelini et al., eNeuro 2023). In the recent past, we also described for the first time the pro-epileptic effects of the pro-inflammatory CCL2 chemokine (Cerri et al J Neurosci 2016). We also contributed to discover that Foxg1 upregulation in a mouse model of West Syndrome enhances neocortical activity (Tigani et al., Cerebral Cortex 2020), and that early depolarizing GABA controls critical period plasticity in the rat visual cortex (Deidda et al., Nature Neurosci 2015). At the beginning of my career, my research contributed to describe the role of dopamine D2 receptor signaling in seizure onset (Bozzi and Borrelli, Trends Neurosci 2006; Bozzi et al., J. Neurosci 2000) and pituitary tumor progression (Saiardi et al., Neuron 1997).

B. Positions and Honors

- Positions and Employment

2001-2017 Research Scientist, CNR Institute of Neuroscience, Pisa (Italy)
2002-2008 Assistant Professor, University of Pisa (Italy)
2010-2017 On-contract Professor of Physiology, University of Trento (Italy)
2017-present Full Professor of Physiology, CIMeC Mind/Brain Centre, University of Trento, Italy
2019 Coordinator, PhD in Cognitive and Brain Sciences, Univ. of Trento, Italy
2019-2021 President of the Recruitment Committee, University of Trento
2022-present Director, CIMeC Mind/Brain Centre, University of Trento, Italy

- Other Experience and Professional Memberships

2014-present Senior Editor, Neuroscience (the official journal of IBRO)

2014 Guest Editor (with Dr. Roberto Canitano), Frontiers in Pediatrics - Child and Neurodevelopmental Psychiatry Research Topic “New treatment perspectives in autism spectrum disorders”.
2015-2023 member of the Consulting Editors Board of Epilepsy Research.
2015 Guest Editor (with Dr. Roberto Canitano), Frontiers in Psychiatry - Research Topic “Autism Spectrum Disorders: developmental trajectories, neurobiological basis, treatment update”.
2017 Editor (with Dr. Roberto Canitano), Frontiers eBook “Autism Spectrum Disorders: developmental trajectories, neurobiological basis, treatment update”.
2016-present: Editorial Board Member, “Journal of Neurodevelopmental Disorders” (BioMed Central).
2018: Review Editor, Frontiers in Molecular Neuroscience.
2018: Guest Editor (with Dr. Roberto Canitano and Dr. Dick Dossche), Frontiers in Psychiatry - Research Topic “Second edition: Autism Spectrum Disorders: developmental trajectories, neurobiological basis, treatment update”.
2020: Guest Editor (with Prof. Michela Fagiolini), Neuroscience Special Issue on “Animal Models of Neurodevelopmental Disorders” https://www.sciencedirect.com/journal/neuroscience/vol/445

2014-2017 Member of the Directive Council, Italian Society of Neuroscience (SINS).
2018-present Member of Italian Committee of Full Professors in Physiology.
Memberships SINS, FENS, International Brain Research Organization (IBRO).

- Honors

1996: Prize, best communication, V Italian Congress "Young Researchers in Neuroscience" (Pisa, Italy).

C. Selected Peer-reviewed Publications *(*15 best peer-reviewed publications out of 90, full list available at https://pubmed.ncbi.nlm.nih.gov/?term=bozzi+y&sort=date)

1. Ciancone-Chama AG, Bonaldo V, Biasini E, **Bozzi Y**, Balasco L (2022) Gene expression profiling in trigeminal ganglia from Cntnap2-/- and Shank3b-/- mouse models of autism spectrum disorder. *Submitted to Neuroscience, under review - preprint available in bioRxiv https://www.biorxiv.org/content/10.1101/2022.10.23.513403v1.full.pdf+html*
2. Montani C, Pagani M, De Guzman E, Balasco L, Alvino FG, de Felice A, Galbusera A, Nickl-Jockschat TK, Lau P, Pasqualetti M, Mattioni L, Provenzano G, **Bozzi Y**, Lombardo MV, Gozzi A(2022) Sex-biasing influence of autism-associated Ube3a gene overdosage at connectomic, behavioral and transcriptomic levels. *Submitted to Science Advances, under revision - Preprint available in bioRxiv https://biorxiv.org/cgi/content/short/2022.10.25.513747v1*
3. Chelini G, Trombetta EM, Fortunato-Asquini T, Ollari O, Pecchia T, **Bozzi Y** (2022) Automated segmentation of the mouse body language to study stimulus-evoked emotional behaviors. *eNeuro, in press - Preprint available in bioRxiv doi: https://doi.org/10.1101/2022.11.27.518077*
4. Balasco L, Pagani M, Pangrazzi L, Chelini G, Viscido F, Chama AGC, Galbusera A, Provenzano G, Gozzi A, **Bozzi Y**. Somatosensory cortex hyperconnectivity and impaired whisker-dependent responses in Cntnap2-/- mice. Neurobiol Dis. 2022 Jul;169:105742. doi: 10.1016/j.nbd.2022.105742.
5. Balasco L, Pagani M, Pangrazzi L, Chelini G, Ciancone Chama AG, Shlosman E, Mattioni L, Galbusera A, Iurilli G, Provenzano G, Gozzi A, **Bozzi Y** (2021) Somatosensory processing deficits and altered cortico-hippocampal connectivity in Shank3b-/- mice. Cerebral Cortex, advanced online publication. bhab399, https://doi.org/10.1093/cercor/bhab399.
6. Zerbi V, Pagani M, Markicevic M, Matteoli M, Pozzi D, Fagiolini M, **Bozzi Y**, Galbusera A, Scattoni ML, Provenzano G, Banerjee A, Helmchen F, Basson MA, Ellegood J, Lerch JP, Rudin M, Gozzi A, Wenderoth N. Brain mapping across 16 autism mouse models reveals a spectrum of functional connectivity subtypes. Mol Psychiatry. 2021 Aug 11. doi: 10.1038/s41380-021-01245-4.
7. Tigani W, Rossi MP, Artimagnella O, Santo M, Rauti R, Sorbo T, Ulloa FPS, Provenzano G, Allegra M, Caleo M, Ballerini L, **Bozzi Y**, Mallamaci A. Foxg1 upregulation enhances neocortical activity. Cereb Cortex. 30:5147-5165. doi: 10.1093/cercor/bhaa107.
8. Chelini G, Zerbi V, Cimino L, Grigoli A, Markicevic M, Libera F, Robbiati S, Gadler M, Bronzoni S, Miorelli S, Galbusera A, Gozzi A, Casarosa S, Provenzano G, **Bozzi Y** (2019) Aberrant

somatosensory processing and connectivity in mice lacking *Engrailed-2*. J Neurosci. 39(8):1525-1538. doi: 10.1523/JNEUROSCI.0612-18.2018.
9. Cerri C, Genovesi S, Allegra M, Pistillo F, Püntener U, Guglielmotti A, Perry VH, **Bozzi Y***, Caleo M* (2016) The chemokine CCL2 mediates the seizure enhancing effects of systemic inflammation (*equal contribution as senior authors). J The Journal of Neuroscience, 36:3777-3788; doi:10.1523/JNEUROSCI.0451-15.2016
10. Deidda G., Allegra M., Cerri C., Naskar S., Bony G, Zunino G, **Bozzi Y**, Caleo M, Cancedda L (2015) Early depolarizing GABA controls critical period plasticity in the rat visual cortex. Nat Neurosci. 18(1):87-96. doi: 10.1038/nn.3890.
11. Provenzano G, Pangrazzi L, Poli A, Sgadò P, Genovesi S, Zunino G, Berardi N, Casarosa S, **Bozzi Y** (2014) Hippocampal dysregulation of neurofibromin-dependent pathways is associated with impaired spatial learning in Engrailed 2 knockout mice. The Journal of Neuroscience, 34:13281-13288. doi: 10.1523/JNEUROSCI.2894-13.2014.
12. Sgadò P, Provenzano G, Dassi E, Adami V, Zunino G, Genovesi S, Casarosa S, **Bozzi Y** (2013) Transcriptome profiling in Engrailed2 knockout mice reveals common molecular pathways associated with ASD. Molecular Autism, 4:51 doi:10.1186/2040-2392-4-51.
13. **Bozzi Y**, Borrelli E (2006) Dopamine in neurotoxicity and neuroprotection: what do D2 receptors have to do with it? Trends Neurosci 29:167-74.
14. **Bozzi Y**, Vallone D, Borrelli E (2000) Neuroprotective role of dopamine against hippocampal cell death. J Neurosci 20:8643-9.
15. Saiardi A, **Bozzi Y**, Baik JH, Borrelli E (1997) Antiproliferative role of dopamine: loss of D2 receptors causes hormonal dysfunction and pituitary hyperplasia. Neuron 19:115-26.

D. Research Support

- Ongoing Research Support

2021-2023 Research grant, Fondazione CARITRO. Trento. Title of the project: “Molecular and behavioural consequences of early postnatal stress in a genetic mouse model of autism spectrum disorder”. Role in the project: Supervisor (Postdoctoral fellow: Dr. Gabriele Chelini). Budget: 63,000 €.
2022-2024. Spanish Phelan-McDermid Syndrome Association 2021 Award. Research Project “Targeting cerebellar inflammation to rescue sensorimotor deficits in Shank3Δ4-22 knockout mice”. Role in the project: Principal Investigator. Budget: 120,000 €.

- Completed Research Support

2010-2013 PI. Research grant, Italian Ministry of Health, “Ricerca Finalizzata” Program. Title of the project: “Role of inflammation in the genesis of late-onset epilepsies: gene expression studies in animal models and mutation analysis in epileptic patients”. Budget € 230,000.
2010-2012 PI. Research grant, Italian Ministry of Education, PRIN Program. “Neuroanatomical and behavioural characterization of Engrailed-2 knockout mice, a model for autism spectrum disorders”. Budget € 36,000.
2008−2009 PI. Research grant, Italian National Research Council (CNR) − "Ricerche Spontanee a Tema Libero" (RSTL). “Identification of novel genes involved in epileptogenesis through DNA microarrays technology”. Budget: € 35,000.
2007−2008 PI. Research grant, Parents Against Childhood Epilepsy (PACE, USA). "Suppression of a seizure focus by infusion of botulinum neurotoxin in mouse models of temporal lobe epilepsy". Budget: $50,000.
2005−2006 Co-PI (PI Dr. Matteo Caleo). Research grant GGP04086, Telethon Foundation (Italy). "Antiepileptic effects of botulinum toxins in rodent models of temporal lobe epilepsy". Budget: € 110,000.
2004−2005 PI. Research grant R−04−38, Pierfranco and Luisa Mariani Foundation (Italy). "Antiepileptic and neuroprotective effects of intracerebral delivery of Botulinum Toxin E in an animal model of temporal lobe epilepsy". Budget: € 50,000.
2000−2002 PI - Research grant 461/bi, Telethon Foundation (Italy). "In vivo and in vitro models to study the genetic program of neuronal death and survival".PI. Budget: € 55,000.
2010-2014: Research grant, Provincia Autonoma di Trento / EC Marie Curie COFUND action. Co-PI (PI: Dr. Paola Sgadò). Title of the project: “Neurobiological basis of autism spectrum disorders: development of cortical inhibitory systems in Engrailed-2 mutant mice” (EnCort project). Budget: 150,000 €.
2010-2017: PI. Start-up grant from the University of Trento. Budget: 10,000 - 30,000 € per year.

2013-2015: Research grant, Italian Ministry of Education and Research (PRIN 2010 Program). PI of participating unit (Coordinator: Prof. Michele Simonato, University of Ferrara, Italy). Title of the project: “Role of BDNF in inhibitory system development in Engrailed-2 mutant mice”. Budget: 90,000 €.
2013-2016: Telethon Research Grant. PI of participating unit (Coordinator: Prof. Antonello Mallamaci, SISSA, Trieste, Italy). Title of the project: “Modelling etiopathogenesis of the Foxg1-linked variant of West syndrome”. Budget of the unit: 35,000 €.
2019-2021: INFRAFRONTIER2020 precision mammalian model development. Coordinator of a project for the development of a new genetic mouse model of autism. Budget: 20,000 €.
2018-2022: TRAIN – Trentino Autism Initiative. University of Trento Strategic Project Research Grant. Project coordinator. Budget: 240,000 €.
2021-2022. CARITRO Cultura project “Al museo mi diverto anch’io! Progetto di accessibilità museale per bambini e adulti con autismo” (“I also have fun at the musem: accessibility project for young and adult autistic people”). Role in the project: Coordinator of participating unit. Budget: 6,300 €.
2022-2023. Autism Research Institute (ARI) 2021 Award. Research Project “Targeting cerebellar inflammation to rescue sensorimotor deficits in Shank3b mutant mice”. Role in the project: Principal Investigator. Budget: 50,000 $.