



Prof. Dr. med. Antonio Malgaroli

Specialista in Psichiatria e Psicoterapia, membro FMH

Sprachen

EN,IT

Berufserfahrung

- seit 2020 Head of Field Project Master in Cognitive Psychology and H.C., USI - UniSR, Sant'Anna Clinic
- seit 2017 Director of the Centre for the Study of Behaviour (International Center for Behavioral Neuroscience and Communication) University Vita-Salute San Raffaele, Milan, IT
- seit 2016 Clinical Activity as Neuropsychiatrist, VilleTurro San Raffaele Hospital, San Donato Group, Milan, IT
- seit 2000 Full Professor of Human Physiology, University Vita-Salute San Raffaele, Milan, IT
- 2017-2019 Clinical activity as Psychiatrist, The Tourette's Centre, IRCCS Galeazzi Hospital, San Donato group, Milan
- 1993-2000 Head of Unit of Neurobiology of Memory, San Raffaele Scientific Institute
- 1989-1992 Postdoctoral fellow, Department of Molecular and Cellular Physiology, Stanford University, Stanford, CA, US
- 1985-1989 Clinical fellow in Psychiatry and Psychotherapy, Postgraduate Degree in Psychiatry, Department of Psychiatry, Faculty of Medicine, University of Milan, Milan, Italy
- 1982-1985 Research Fellow, Department of Pharmacology, Faculty of Medicine, University of Milan, Milan

Ausbildung

- 1991 University of Milan, Specialisation Diploma in Psychiatry and Psychotherapy
- 1985 University of Milan, Degree in Medicine and Surgery
- 1985 Licence to practise medicine and surgery

Mitgliedschaften

- seit 2016 Member of Scientific Board, Italian Tourette Syndrome Association (AIST)

Publikationen

Ferro M, Lamanna J, Spadini S, Nespoli A, Sulpizio S, Malgaroli A. Synaptic plasticity mechanisms behind TMS efficacy: insights from its application to animal models. J Neural Transm (Vienna). 2022 Jan;129(1):25-36. doi: 10.1007/s00702-021-02436-7.

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A.Malgaroli La complessità dell'uomo e la psicosomatica. à jour! *Psychotherapie Berufsentwicklung*, 4(2):71-74 · November 2018, Psychosozial Verlag doi.org/10.30820/8245.31

Briguglio M, Dell'Osso B, Panzica G, Malgaroli A, Banfi G, Zanaboni Dina C, Galentino R, Porta M. Dietary Neurotransmitters: A Narrative Review on Current Knowledge. *Nutrients*. 2018 May 10;10(5).

Putzu, S. Valtorta, G. Di Grigoli, M. Haenggi, A. Malgaroli, M. Gemma, G. Landoni, L. Beretta, RM Moresco (2017) Regional differences in cerebral glucose metabolism after cardiac arrest and resuscitation in rats using [18F]FDG positron emission tomography and autoradiography. *Neurocritical Care*, Sep 5.

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Arena A, Lamanna J, Gemma M, Ripamonti M, Ravasio G, Zimarino V, De Vitis A, Beretta L, & Malgaroli A (2017) A linear transformation of the encoding mechanism for light-intensity underlies paradoxical enhancement of cortical visual responses by sevoflurane. *J. Physiology J Physiol.* Jan 1;595(1):321-339

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Lamanna J, Malgaroli A, Cerutti S, Signorini MG. (2012) Detection of fractal behavior in temporal series of synaptic quantal release events: a feasibility study. *Comput Intell Neurosci.* 704673: 1-9

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Croccolo F, Quintini A, Barni R, Ripamonti M, Malgaroli A, Riccardi C (2009). H-mode inductive coupling plasma for PVC surface treatment. *The European Physical Journal. d, atomic, molecular and optical physics,* vol. 54, p. 477-480.

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Bernasconi F, Malgaroli A, Vallar L. (2006) Independent Regulation of Rap1 and Mitogen-Activated Protein Kinase by the alpha Chain of G(o). *Neurosignals* 15:180-189

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Lundstrom K, Abenavoli A, Malgaroli A, Ehrenguber MU (2003) Novel Semliki Forest Virus vectors with reduced cytotoxicity and temperature-sensitivity: long-term enhancement of transgene expression. *Mol Therapy*, 7 :202-9.

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Abenavoli A, Forti L & Malgaroli A (2000) Mechanisms of spontaneous miniature activity at CA3-CA1 synapses: evidence for a divergence from a random Poisson process. *Biology Bull*. 199:184-6.

Malgaroli, A.(1999) Silent synapses: I can't hear you! Could you please speak aloud. *Nature Neuroscience*, 2 : 3-5.

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Wanke, E., Ferroni, A., Malgaroli, A., Ambrosini, A., Pozzan T. & Meldolesi, J.(1987) Activation of a muscarinic receptor selectively inhibits a rapidly inactivated Ca²⁺ current in rat sympathetic neurons. *Proc. Natl. Acad. Sci. USA*, 84: 4313-4317.

Malgaroli, A., Vallar, L. RezaElahi, F., Pozzan,T., Spada, A. & Meldolesi, J. (1987). Dopamine inhibits cytosolic Ca²⁺ increases in ratlactotroph cells: evidence of a dual mechanism of action *J. Biol. Chem.*, 262: 13920-13927.

Malgaroli, A. , Milani, D., Meldolesi, J. & Pozzan, T.(1987) Fura-2 measurement of cytosolic free Ca²⁺ in monolayers and suspensions of various types of animal cells. *J. Cell Biol.*, 105: 2145-2155.

Pandiella, A., Malgaroli, A. Vicentini, L.M. &Meldolesi, J. (1986) Early raise of cytosolic Ca²⁺ induced by NGF in PC12 and Chromaffin cells. *FEBS Letters*, 208: 48-51.

Awards

1985-88: Recipient of the AIRC research fellowship

1988-89: Recipient of the Monte Tabor research fellowship

1988: DeVisart award

1989-91: Recipient of the G. Moruzzi FIDIA research fellowship

1991: Chemofux prize, University of Vienna (Co-Recipient with Anna Teti)

1998-2001: Human Frontier grant award

1999: Herbert W. Rand Award, MBL

2000: Frank Lillie Award, MBL

2000: Elected as a member of the Physiological Society London

2000: Elected as a member of EMBO

Forschung

Antonio Malgaroli ha pubblicato più di cento pubblicazioni nel campo della neurofisiologia, neuroscienze, psicologia e psichiatria, 58 di queste sono articoli peer-reviewed con circa 3500 citazioni complessive; ha un h-index di 26, g-index di 58 (fonte Google Scholar). Il suo lavoro è stato ampiamente descritto in molti libri di testo e recensioni nel campo della fisiologia e neuroscienze. Per quanto concerne la sua attuale attività di ricerca, i suoi interessi si focalizzano sui meccanismi della plasticità sinaptica cerebrale. Oltre ai risvolti maladattativi, che portano ad anomalie funzionali e/o anatomiche e che per questo motivo sono coinvolte nella genesi di molte malattie neuropsichiatriche, i fenomeni di plasticità sono alla base di molti processi di compenso, come quelli indotti dalle terapie, non solo farmacologiche ma anche psicoanalitiche e psicoterapiche. Nel dettaglio, i principali interessi di ricerca si incentrano su quattro aree tematiche:

1. La plasticità delle reti neurali e suoi meccanismi cellulari e molecolari. In questo campo ha ottenuto risultati importanti relativi alla comprensione dei meccanismi di induzione e di espressione della plasticità sinaptica, sia nell'ippocampo che nella corteccia prefrontale.
2. Sviluppo di tecniche innovative per lo studio funzionale dei circuiti sinaptici in vitro ed in vivo. Tra i risultati ottenuti, la prima tecnologia per la misura elettrica dell'attività di una singola sinapsi centrale, e la prima tecnologia per la valutazione funzionale delle modifiche di attività sinaptica di una rete neurali in vitro. Recentemente, dopo alcuni anni di lavoro ha sviluppato l'unica metodica oggi disponibile per registrare l'attività sinaptica in vivo (GreenZip), tecnica che viene utilizzata per molte domande al punto 3, qui sotto.
3. I meccanismi neurobiologici e gli aspetti clinici di alcune condizioni psicopatologiche quali l'ansia e lo stress, anoressia, sindrome di Tourette, comprensione del meccanismo d'azione di alcuni psicofarmaci quali la ketamina, oggi utilizzata per la cura della depressione maggiore non responsiva ad altri trattamenti.

Tra i progetti clinici sull'uomo: lo studio del disturbo DOC nella Sindrome di Tourette; ii) L'implementazione dei protocolli di stimolazione magnetica cerebrale TMS al fine di indurre modifiche plastiche durature a carico dei circuiti cerebrali coinvolti in alcuni disturbi psichiatrici (DOC, anoressia, depressione, S. Tourette); L'utilizzo della TMS per valutare il coinvolgimento di alcune aree cerebrali negli aspetti attentivi e decisionali e dell'effetto degli stati emozionali.

Akkreditierung

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