CURRICULUM VITAE

GUIDO MANNAIONI

Department of Pharmacology,
University of Florence
Viale Pieraccini 6
50139 Firenze, Italy
Tel +39-055 42 71 261
Fax +39-055 42 71 280
Email guido.mannaioni@unifi.it

PERSONAL INFORMATION:

Name:	Guido MANNAIONI
Place and date of birth:	Florence, Italy, August 15th, 1966.
Citizenship:	Italian
Foreign languages:	English, Italian
Current address:	Via delle Croci 1, Sesto Fiorentino 50019, Firenze, Italy

EDUCATION:

2001:	Ph.D. in Pharmacology and Toxicology, University of Florence, Florence, Italy
1997:	Residency in Pharmacology and Toxicology, University of Florence, Florence, Italy
1991:	Medical Degree (110/110 cum laude), University of Florence, Florence, Italy.
1983:	Bachelor of Arts (50/60), Liceo "Dante Alighieri" Florence, Italy.

RESEARCH TRAINING AND JOB EXPERIENCE.

October 2018-present **Full Professor** of Pharmacology and Toxicology, Department of Neuroscience, Psychology, Drug Research and Child Health (NEUROFARBA), Section of Pharmacology and Toxicology, Università degli Studi di Firenze and director of Medical Toxicology Unit and Poison Control Center of Firenze, Azienda Ospedaliero Universitaria Careggi.

January 2004-October 2018 **Associate Professor** of Pharmacology and Toxicology, Department of Pharmacology and Toxicology Unit, University of Florence, Florence, Italy

2001-December 2003: **Instructor in Pharmacology** under an H1b visa status in the laboratory directed by **Dr. Stephen Traynelis** at Emory University School of Medicine, Department of Pharmacology (Chairman: Dr. R. Dingledine), Atlanta, Georgia, U.S.A.

January 1999-2001: **Postdoctoral fellow** of Pharmacology under a J1 visa status in a joint training program in the laboratories directed by Dr. Jeffrey Conn and Dr. Stephen Traynelis at Emory University School of Medicine, Department of Pharmacology (Chairman: Dr. R. Dingledine), Atlanta, Georgia, U.S.A.. Projects: a) role of mGluR5 and mGluR1 in hippocampal transmission (**P.I. Dr. Jeffrey Conn**) b) protease activated receptor-1 (PAR1) activation and hippocampal function (P.I. **Dr. Steve Traynelis**).

1994- December 1998: **Residency in Pharmacology and Toxicology** at the Department of Pharmacology and at the Toxicology Unit, University of Florence, Italy (**mentor: Dr. Flavio Moroni**).
Projects: a) interaction between ionotropic and metabotropic glutamate receptors in the mouse cortex. b) role of excitatory amino acids in the pathogenesis of hepatic encephalopathy. c) electrophysiological studies (extracellular and intracellular recordings) in rat hippocampal slices with oxindole and 5-oxindole, two

tryptophan metabolites able to modify neuronal function. d) metabotropic glutamate receptor and signal transduction mechanisms in hippocampal slices.

October 1996-April 1997: **Visiting scientist** at the Federal Institute für Neurobiologie, Magdeburg, Germany. Learning of the sharp electrode technique applied on CNS slices (**mentor: Dr. K. Rayman**).

1992-1993: **Draft as Medical Officer** at the Military School of Medicine, Florence.

1989-1991: **Research Student** at the Department of Pharmacology, University of Florence (mentor: Prof. F. Moroni). Project: the pharmacological characterization of NMDA receptors in the guinea-pig myenteric plexus and in the mouse cortex (topic of M.D. thesis).

AWARDS

2018 Independent Investigator Award, Cassa di Risparmio di Firenze (CRF). Project Title: "A MULTIDISCIPLINARY APPROACH TO TARGET PARKINSON'S DISEASE IN GAUCHER RELATED POPULATION". Principal Investigator: Francesca Cardona, Amelia Morrone and Guido Mannaioni.

2018 Director of Clinical Toxicology and Poison Center (Azienda Ospedaliero Universitaria Careggi, AOUC).

2017 Independent Investigator Award, Molteni Farmaceutici, Firenze, Italy. Project Title: "Observational, prospective study to evaluate levomethadone safety profile and effectiveness in subjects under opioid maintenance treatment". Principal Investigator: Guido Mannaioni.

2016 Independent Investigator Award, Cassa di Risparmio di Firenze (CRF). Project Title: "New Psychoactive Substances (NPS): Early on-line identification". Principal Investigator: Elisabetta Bertol and Guido Mannaioni.

2016 Independent Investigator Award, Cassa di Risparmio di Firenze (CRF). Project Title: "Coeliac disease and kainate neurotoxicity in epilepsy models". Principal Investigator Guido Mannaioni.

2015 Director of Clinical Pharmacology & Toxicology Residency Training.

2014 Independent Investigator Award, Cassa di Risparmio di Firenze (CRF). Project Title: "Ethanol induced neurodegeneration mechanisms and Fetal alcohol spectrum disorders (FASDs)". Principal Investigator Guido Mannaioni.

2013 Independent Investigator Award, Cassa di Risparmio di Firenze (CRF). Project Title: "Ih current modulation as a new pharmacological target for Parkinson Disease_RENEWAL_". Principal Investigator Guido Mannaioni.

2012 Independent Investigator Award, Cassa di Risparmio di Firenze (CRF). Project Title: "Ih current modulation as a new pharmacological target for Parkinson Disease". Principal Investigator Guido Mannaioni.

2012 Agenzia Italiana del Farmaco (AIFA). Project title "Progetto Nazionale FarViCAV". Principal Investigator Guido Mannaioni.

2011 Michael J Fox Foundation. Project Title: "Investigation of the pathogenic significance of the hyperpolarization-activated current (Ih) in the degeneration of substantia nigra pars compacta dopaminergic neurons".

2008: AIFA (Agenzia Italiana del Farmaco-Italian Medicine Agency). Project title: Plasma R-methadone level and "optimization" therapy in heroin dependent patients.

2007: PRIN (Program for Scientific Researches of Relevant National Interest). Project title: identification of the molecular mechanisms underlying ischemic neuronal death and their relative contribution to stroke-induced neurodegeneration.

2005: PRIN (Program for Scientific Researches of Relevant National Interest). Project title: Role of metabotropic glutamate receptors and endocannabinoids in modulating perirhinal cortex synaptic transmission. Principal Investigator: Guido Mannaioni.

2005: Independent Investigator Award, Cassa di Risparmio di Firenze (CRF). Project Title: New Therapeutic Approaches to Parkinson Disease (annual renewal). Principal Investigators Guido Mannaioni and Flavio Moroni.

2004: Independent Investigator Award, Cassa di Risparmio di Firenze (CRF). Project Title: New Therapeutic Approaches to Parkinson Disease. Principal Investigators Guido Mannaioni and Flavio Moroni.

2001: Awarded fellowship from the National Alliance for Research on Schizophrenia and Depression (NARSAD). Principal Investigator Guido Mannaioni.

1988: Awarded fellowship from the University of Florence.

1987: Awarded fellowship from the University of Florence.

Teaching Activity

2003-present
Professor of Pharmacology and Toxicology, Università di Firenze School of Medicine.
Lecturer in "General Toxicology", Residency in Medical Toxicology, Università di Firenze School of Medicine.
Lecturer in "Pharmacology and Toxicology in first aid", Degree course in Nursing, Università di Firenze School of Medicine.
Lecturer in "Pharmacology", Degree course in Biomedical Laboratory Techniques, Università di Firenze School of Medicine.
Lecturer in "Pharmacology", Degree in Health Care, Università di Firenze School of Medicine.
Lecturer in "Anaesthesia and analgesia in obstetrics, clinical pharmacology and toxicology", Degree in Obstetrics, Università di Firenze School of Medicine.
Lecturer in "Pharmacological Addictions" as part of the Integrated Course "diseases with high social impact", Degree course in Health Care, Università di Firenze School of Medicine.
Lecturer in "Toxicology and Addiction", Degree Course in Medical Education, Università di Firenze School of Medicine.
Lecturer in "therapy of central nervous system diseases", Università di Firenze School of Pharmacy.
Member of the Academic Board of the PhD School in Pharmacology.

Memberships

1988 Italian Society of Pharmacology
1990 Society for Neuroscience, USA
1991 International Brain Research Organization (I.B.R.O.)
1992 Italian Group of Molecular Neurobiology
1993 Italian Society of Neuroscience
1994 Società Italiana di Tossicologia (S.I.Tox.)

REFEREE ACTIVITY

European Journal of Neuroscience
Journal of Neurochemistry
Brain Research

Journal of Neuroscience Research
Neuroscience Letters
Neurobiology of disease
Life Science
British Journal of Pharmacology
Neurological Science
Scientific Reports
Neuroscience

BIBLIOGRAPHY:

I) PUBLICATIONS IN PEER REVIEWED JOURNALS (last 5 years; from PubMed)

: Gerace E, Zianni E, Landucci E, Scartabelli T, Berlinguer Palmini R, Iezzi D, Moroni F, Di Luca M, Mannaioni G, Gardoni F, Pellegrini-Giampietro DE. Differential mechanisms of tolerance induced by NMDA and 3,5-dihydroxyphenylglycine (DHPG) preconditioning. J Neurochem. 2020 Apr 28. doi: 10.1111/jnc.15033. Epub ahead of print. PMID: 32343420.

2: Schiavi S, Iezzi D, Manduca A, Leone S, Melancia F, Carbone C, Petrella M, Mannaioni G, Masi A, Trezza V. Reward-Related Behavioral, Neurochemical and Electrophysiological Changes in a Rat Model of Autism Based on Prenatal Exposure to Valproic Acid. Front Cell Neurosci. 2019 Oct 25;13:479. doi: 10.3389/fncel.2019.00479. PMID: 31708750; PMCID: PMC6824319.

3: Lombardi N, Bettiol A, Crescioli G, Ravaldi C, Bonaiuti R, Venegoni M, Vighi GD, Mugelli A, Mannaioni G, Vannacci A; MEREAFaPS Study group. Risk of hospitalisation associated with benzodiazepines and z-drugs in Italy: a nationwide multicentre study in emergency departments. Intern Emerg Med. 2020 Apr 24. doi: 10.1007/s11739-020-02339-7. Epub ahead of print. PMID: 32333265.

4: Masi A, Narducci R, Mannaioni G. Harnessing ionic mechanisms to achieve disease modification in neurodegenerative disorders. Pharmacol Res. 2019 Sep;147:104343. doi: 10.1016/j.phrs.2019.104343. Epub 2019 Jul 4. PMID: 31279830.

5: Gerace E, Landucci E, Bani D, Moroni F, Mannaioni G, Pellegrini-Giampietro DE. Glutamate Receptor-Mediated Neurotoxicity in a Model of Ethanol Dependence and Withdrawal in Rat Organotypic Hippocampal Slice Cultures. Front Neurosci. 2019 Jan 24;12:1053. doi: 10.3389/fnins.2018.01053. PMID: 30733663; PMCID: PMC6353783.

6: Scarpino M, Lanzo G, Salimova M, Lolli F, Del Vecchio A, Cossu C, Bastianelli M, Occupati B, Lanzi C, Pallanti S, Amantini A, Mannaioni G, Grippo A. Efficacy of high-frequency (15Hz) repetitive transcranial magnetic stimulation (rTMS) of the left premotor cortex/dorsolateral prefrontal cortex in decreasing cocaine intake (the MagneTox study): A study protocol for a randomized placebo-controlled pilot trial. Neurophysiol Clin. 2019 Feb;49(1):1-9. doi: 10.1016/j.neucli.2018.10.002. Epub 2018 Oct 26. PMID: 30712533.

7: Dani C, Pratesi S, Ilari A, Lana D, Giovannini MG, Nosi D, Buonvicino D, Landucci E, Bani D, Mannaioni G, Gerace E. Neurotoxicity of Unconjugated Bilirubin in Mature and Immature Rat Organotypic Hippocampal Slice Cultures. Neonatology. 2019;115(3):217-225. doi: 10.1159/000494101. Epub 2019 Jan 15. PMID: 30645995.

8: Dini L, Del Lungo M, Resta F, Melchiorre M, Spinelli V, Di Cesare Mannelli L, Ghelardini C, Laurino A, Sartiani L, Coppini R, Mannaioni G, Cerbai E, Romanelli MN. Selective Blockade of HCN1/HCN2 Channels as a Potential Pharmacological Strategy Against Pain. Front Pharmacol. 2018 Nov 8;9:1252. doi:

10.3389/fphar.2018.01252. PMID: 30467478; PMCID: PMC6237106.

9: Laurino A, Landucci E, Resta F, De Siena G, Pellegrini-Giampietro DE, Masi A, Mannaioni G, Raimondi L. Anticonvulsant and Neuroprotective Effects of the Thyroid Hormone Metabolite 3-Iodothyroacetic Acid. Thyroid. 2018 Oct;28(10):1387-1397. doi: 10.1089/thy.2017.0506. PMID: 30129879.

10: Nardoni S, D'Ascenzi C, Caracciolo I, Mannaioni G, Papini RA, Pistelli L, Najar B, Mancianti F. Activity of selected essential oils on spoiling fungi cultured from Marzolino cheese. Ann Agric Environ Med. 2018 Jun 20;25(2):280-284. doi: 10.26444/aaem/80907. Epub 2018 Jan 23. PMID: 29936811.

11: Moroni F, Mannaioni G. Response to Letter to the Editor by Ernesto de Bernadis. Eur Addict Res. 2018;24(2):89-90. doi: 10.1159/000488720. Epub 2018 Jun 14. PMID: 29902790.

12: Mannaioni G, Lanzi C, Lotti M, Galli V, Totti A, Pacileo I, Sili M, Pracucci C, Dilaghi A, Bertieri L, Quaranta M, Orsini F, Occupati B, Michahelles A, Ciuti R, Bianchini E, Fabbro G, Biggeri A, Masini E, Moroni F. Methadone Dose Adjustments, Plasma R-Methadone Levels and Therapeutic Outcome of Heroin Users: A Randomized Clinical Trial. Eur Addict Res. 2018;24(1):9-18. doi: 10.1159/000485029. Epub 2018 Jan 31. PMID: 29393208.

13: Resta F, Micheli L, Laurino A, Spinelli V, Mello T, Sartiani L, Di Cesare Mannelli L, Cerbai E, Ghelardini C, Romanelli MN, Mannaioni G, Masi A. Selective HCN1 block as a strategy to control oxaliplatin-induced neuropathy. Neuropharmacology. 2018 Mar 15;131:403-413. doi: 10.1016/j.neuropharm.2018.01.014. Epub 2018 Jan 12. PMID: 29339292.

14: Gerace E, Resta F, Landucci E, Renzi D, Masi A, Pellegrini-Giampietro DE, Calabrò A, Mannaioni G. The gliadin peptide 31-43 exacerbates kainate neurotoxicity in epilepsy models. Sci Rep. 2017 Nov 9;7(1):15146. doi: 10.1038/s41598-017-14845-4. PMID: 29123180; PMCID: PMC5680182.

15: Sartiani L, Mannaioni G, Masi A, Novella Romanelli M, Cerbai E. The Hyperpolarization-Activated Cyclic Nucleotide-Gated Channels: from Biophysics to Pharmacology of a Unique Family of Ion Channels. Pharmacol Rev. 2017 Oct;69(4):354-395. doi: 10.1124/pr.117.014035. PMID: 28878030.

16: Carbone C, Costa A, Provensi G, Mannaioni G, Masi A. The Hyperpolarization-Activated Current Determines Synaptic Excitability, Calcium Activity and Specific Viability of Substantia Nigra Dopaminergic Neurons. Front Cell Neurosci. 2017 Jun 28;11:187. doi: 10.3389/fncel.2017.00187. PMID: 28701928; PMCID: PMC5487410.

17: Turrini L, Fornetto C, Marchetto G, Müllenbroich MC, Tiso N, Vettori A, Resta F, Masi A, Mannaioni G, Pavone FS, Vanzi F. Optical mapping of neuronal activity during seizures in zebrafish. Sci Rep. 2017 Jun 8;7(1):3025. doi: 10.1038/s41598-017-03087-z. PMID: 28596596; PMCID: PMC5465210.

18: Muzzi M, Gerace E, Buonvicino D, Coppi E, Resta F, Formentini L, Zecchi R,

Tigli L, Guasti D, Ferri M, Camaioni E, Masi A, Pellegrini-Giampietro DE, Mannaioni G, Bani D, Pugliese AM, Chiarugi A. Dexpramipexole improves bioenergetics and outcome in experimental stroke. Br J Pharmacol. 2018 Jan;175(2):272-283. doi: 10.1111/bph.13790. Epub 2017 May 12. PMID: 28320070; PMCID: PMC5758384.

19: Lupi C, Pracucci C, De Cesaris F, Rossi E, Geppetti P, Benemei S, Galli V, Occupati B, Mazzucco V, Mannaioni G. P057. Prophylaxis with low-dose methadone in patients affected by daily refractory headache and medication-overuse headache: a prospective cohort study (METACEF study). J Headache Pain. 2015 Dec;16(Suppl 1):A118. doi: 10.1186/1129-2377-16-S1-A118. PMID: 28132270; PMCID: PMC4759405.

20: Sartiani L, Bucciantini M, Spinelli V, Leri M, Natalello A, Nosi D, Maria Doglia S, Relini A, Penco A, Giorgetti S, Gerace E, Mannaioni G, Bellotti V, Rigacci S, Cerbai E, Stefani M. Biochemical and Electrophysiological Modification of Amyloid Transthyretin on Cardiomyocytes. Biophys J. 2016 Nov 1;111(9):2024-2038. doi: 10.1016/j.bpj.2016.09.010. PMID: 27806283; PMCID: PMC5103001.

21: Lucarini L, Durante M, Lanzi C, Pini A, Boccalini G, Calosi L, Moroni F, Masini E, Mannaioni G. HYDAMTIQ, a selective PARP-1 inhibitor, improves bleomycin-induced lung fibrosis by dampening the TGF-β/SMAD signalling pathway. J Cell Mol Med. 2017 Feb;21(2):324-335. doi: 10.1111/jcmm.12967. Epub 2016 Oct 4. PMID: 27704718; PMCID: PMC5264150.

22: Vivoli E, Cappon A, Milani S, Piombanti B, Provenzano A, Novo E, Masi A, Navari N, Narducci R, Mannaioni G, Moneti G, Oliveira CP, Parola M, Marra F. NLRP3 inflammasome as a target of berberine in experimental murine liver injury: interference with P2X7 signalling. Clin Sci (Lond). 2016 Oct 1;130(20):1793-806. doi: 10.1042/CS20160400. Epub 2016 Jul 20. PMID: 27439970.

23: Resta F, Masi A, Sili M, Laurino A, Moroni F, Mannaioni G. Kynurenic acid and zaprinast induce analgesia by modulating HCN channels through GPR35 activation. Neuropharmacology. 2016 Sep;108:136-43. doi: 10.1016/j.neuropharm.2016.04.038. Epub 2016 Apr 27. PMID: 27131920.

24: Gerace E, Landucci E, Totti A, Bani D, Guasti D, Baronti R, Moroni F, Mannaioni G, Pellegrini-Giampietro DE. Ethanol Toxicity During Brain Development: Alterations of Excitatory Synaptic Transmission in Immature Organotypic Hippocampal Slice Cultures. Alcohol Clin Exp Res. 2016 Apr;40(4):706-16. doi: 10.1111/acer.13006. PMID: 27038592.

25: Novella Romanelli M, Sartiani L, Masi A, Mannaioni G, Manetti D, Mugelli A, Cerbai E. HCN Channels Modulators: The Need for Selectivity. Curr Top Med Chem. 2016;16(16):1764-91. doi: 10.2174/1568026616999160315130832. PMID: 26975509; PMCID: PMC5374843.

26: Masi A, Narducci R, Resta F, Carbone C, Kobayashi K, Mannaioni G. Differential contribution of Ih to the integration of excitatory synaptic inputs in substantia nigra pars compacta and ventral tegmental area dopaminergic

neurons. Eur J Neurosci. 2015 Nov;42(9):2699-706. doi: 10.1111/ejn.13066. Epub 2015 Oct 19. PMID: 26354486.

27: Gerace E, Pellegrini-Giampietro DE, Moroni F, Mannaioni G. Poly(ADP-Ribose)Polymerase 1 (PARP-1) Activation and Ca(2+) Permeable α-Amino-3-Hydroxy-5-Methyl-4-Isoxazolepropionic Acid (AMPA) Channels in Post-Ischemic Brain Damage: New Therapeutic Opportunities? CNS Neurol Disord Drug Targets. 2015;14(5):636-46. doi: 10.2174/1871527314666150430162841. PMID: 25924998.

28: Park H, Han KS, Seo J, Lee J, Dravid SM, Woo J, Chun H, Cho S, Bae JY, An H, Koh W, Yoon BE, Berlinguer-Palmini R, Mannaioni G, Traynelis SF, Bae YC, Choi SY, Lee CJ. Channel-mediated astrocytic glutamate modulates hippocampal synaptic plasticity by activating postsynaptic NMDA receptors. Mol Brain. 2015 Feb 3;8:7. doi: 10.1186/s13041-015-0097-y. PMID: 25645137; PMCID: PMC4320468.