



Prof.ssa Paola Fadda

CURRICULUM VITAE

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PERSONAL INFORMATION

Family name, First name: FADDA Paola

Researcher unique identifier(s) 0000-0002-0642-6710 (ORCID) 6603695059 (Scopus Author ID):

Nationality: Italian

URL for web site: https://web.unica.it/unica/it/ateneo_s07_ss01.page?contentId=SHD30345

• EDUCATION

07/1987 DEGREE Biological Science University of CAGLIARI / Italy

• CURRENT POSITION(S)

- from December 2017-present: **Full Professor of Pharmacology** (SSD BIO/14), Faculty of Medicine, Department of Biomedical Sciences, University of Cagliari, Italy
- from 2018- present: Associated Researcher, CNR Institute of Neuroscience- Cagliari, National Research Council, Italy.
- from 2018-present Component of Equal didactic Committee, Faculty of Medicine, University of Cagliari, Italy.
- from 2019 present: **Coordinator of the PhD Program in Neuroscience**, Department of Biomedical Sciences, University of Cagliari, Italy.
- from May 2021-present: **Vice- Rector** for the Facilities of Monserrato- University of Cagliari

• PREVIOUS POSITIONS

- 1997-2006: Assistant Professor, Dept of Neuroscience, Faculty of Medicine, University of Cagliari, Italy.
- 1989-1997: Researcher, Center of Neuropharmacology, National Research Council (CNR) University of Cagliari, Italy.
- 1997-2006: Assistant Professor, Dept of Neuroscience, Faculty of Medicine, University of Cagliari, Italy.
- 2000-2012: Researcher affiliated with the Center of Excellence 'Neurobiology of Addiction' University of Cagliari, Italy.
- July 2003 - December 2003: Visiting Scientist, Department of Biomedical Sciences, University of Aberdeen- Scotland UK.
- 2006 - October 2017: Associate Professor Department Biomedical Sciences, Faculty of Medicine University of Cagliari, Italy.



- **FELLOWSHIPS AND AWARDS**

- **1988-1989** Postgraduate Fellow (FIDIA Research Laboratories-Abano Terme) Department of Neuroscience, University of Cagliari.
- **July 2003 - December 2003:** Visiting Scientist, Department of Biomedical Sciences, University of Aberdeen- Scotland UK.
- **08/ 2003 to 12/ 2003** Research Fellow Department of Biomedical Sciences, University of Aberdeen, Scotland UK
- **2004 - 2008** Research Assistant School of Medical Science (Biomedical Sciences), University of Aberdeen, Scotland UK
- **2018-2021:** Councilor's Governing Board - Italian Society of Neuroscience (SINS).

- **SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS (if applicable)**

About 60 students (graduate, PhD, Residency)

Department of Neuroscience, Department of Biomedical Sciences University of Cagliari

- **INSTITUTIONAL RESPONSIBILITIES**

- **2012-2018:** Coordinator of the First Cycle Degree (Bachelor) of Nursing, Faculty of Medicine, University of Cagliari, Italy.
- **2012 - 2018:** Coordinator of the Second Cycle Degree (Master) Science of Nursing and Midwifery, Faculty of Medicine, University of Cagliari, Italy
- **2016-2020:** Member of the Guarantee Committee (Comitato Unico di Garanzia - CUG) for the promotion of equal opportunities, workers' welfare and non-discrimination, University of Cagliari, Italy.
- **2017- 2021** Component of SUPERA Team (Supporting the Promotion of Equality in Research and Academia) Horizon 2020 project of the University of Cagliari, Italy.
- **2018-november 2020:** Coordinator of the International Programs and Student Mobility Committee, Faculty of Medicine, University of Cagliari, Italy.
- **2020-2021:** GEV expert for the exercise of research quality assessment (VQR) 2015-2019 - Italian Ministry of Research, Italy.
- **from 2018-present** Component of Equal didactic Committee, Faculty of Medicine, University of Cagliari, Italy.
- **from 2019 present:** Coordinator of the PhD Program in Neuroscience, Department of Biomedical Sciences, University of Cagliari, Italy.
- **from May 2021-present:** Vice- Rector for the Facilities of Monserrato University of Cagliari

- **MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

Italian Society of Pharmacology SIF (member)

Italian Society of Neuroscience SINS (member)

Italian Society of Neuropsychopharmacology SINPF (past member)

Mediterranean Neuroscience Society MNS (member)

Society for Neuroscience SFN, USA (member)



International Cannabinoid Research Society ICRS, USA (past member)

From 2018 to 2021 Councilor of the Governing Board of the Italian Society of Neuroscience (SINS)

• **MAJOR National and International COLLABORATIONS**

- **Cocco Eleonora** Dipartimento di Scienze mediche e sanità pubblica- Università di Cagliari
- **Mirko Manchia** Dipartimento di Scienze mediche e sanità pubblica- Università di Cagliari
- **Alessio Squassina**, Dipartimento di Scienze Biomediche - Università di Cagliari
- **Bernardini Renato** Dipartimento di Scienze Biomediche e Biotecnologiche- Università di Catania
- **Giuseppina Cantarella** Dipartimento di Scienze Biomediche e Biotecnologiche- Università di Catania
- **Cifani Carlo**, Scuola di Scienze del Farmaco e dei Prodotti della Salute-Università di Camerino
- **Caterina Scuderi** Dipartimento Fisiologia e Farmacologia "V. Erspamer" – Università La Sapienza Roma
- **Raffaella Molteni** Dipartimento di Biotecnologie Mediche e Medicina Traslazionale - Università di Milano
- **Marco Andrea Riva** Dipartimento di Scienze Farmacologiche e Biomolecolari Rodolfo Paoletti-Università di Milano

- **Eric R. Kandel**, Director KIBS, Fred Kavli Professor Departments of Neuroscience, Psychiatry, Biochemistry & Molecular Biophysics, and Physiology & Cellular Biophysics Columbia University, USA Co-Director, Zuckerman Mind Brain Behavior Initiative, Senior Investigator, Howard Hughes Medical Institute

- **Denise Kandel**, Department of Epidemiology of Substance Abuse at the New York State Psychiatric Institute, Professor of Sociomedical Sciences and Psychiatry, Columbia University, USA.

- **Beat Lutz**, Institute of Physiological Chemistry, University Medical Center of the Johannes Gutenberg University Mainz, Germany.

- **Gernot Riedel**, School of Medical Sciences, College of Life Sciences and Medicine, University of Aberdeen, Aberdeen, UK

- **Javier Fernandez-Ruiz** Departamento de Bioquímica y Biología Molecular, Instituto Universitario de Investigaciones Neuroquímicas, Universidad Complutense, Madrid, Spain

- **Roger Pertwee** Institute of Medical Sciences, University of Aberdeen, Aberdeen, UK.

- **Alexander Makriyannis** Department of Pharmaceutical Sciences, Northeastern University, Boston, Massachusetts.



PREVIOUS EXPERIENCES, SCIENTIFIC AND DESIGN SKILLS RELATED TO THE TOPIC OF THE RESEARCH PROGRAM

In her career, Prof. Paola Fadda was first trained in biochemical pharmacology as a graduate student and postgraduate fellow and then begun performing behavioral studies on animal models of mental disorders and neuropharmacology. Initially, the major focus of her research was on the investigation of the mechanism of action of antidepressant and antipsychotic drugs, along with the modulation of dopaminergic receptors in REM sleep deprivation and dopamine's interaction with the opioid systems. Furthermore, since one of the major interests of her group was the study of neurobiology of drug abuse, she has also contributed to study the opioid, dopaminergic and serotonergic systems, and their cross talk with the endocannabinoid system as well as their reciprocal role in the neurobiology of psychiatric diseases, with an emphasis on their co-morbidities. Guided by this, part of her research has been directed towards the study of the behavioral and neurochemical modifications induced by the administration of drugs acting on the CNS in rats and mice. She has also spent several months at Aberdeen University performing a research project focusing on the effects of cannabinoids on cognitive function in rats. Over the last few years, she has extended her interests on the study of the neurobiology of eating disorders and some of these studies have recently been published.

Actually, she is interested in several new line of research. For example, she is studying the role of Renin-Angiotensin System (RAS) in the CNS both in psychiatric and neurological disorders. In fact, RAS, known as a pleiotropic vascular regulator, is expressed also in the brain, where it is involved in the control of physiological functions. Thus, dysregulated RAS may be implicated in several brain disorders with prominent neuroinflammation, oxidative stress and age-related pathophysiological processes. The overall goal of her research is to investigate the role of RAS in CNS related disorders inflammatory processes and endothelial lesions, in the attempt to identify new molecular targets using *in vitro* and *in vivo* models, in particular the CAG-hACE2 transgenic line of mice, which highly express the hACE2 transgene,

Prof. Fadda published several papers that underline her expertise in behavioral and molecular protocols in animal models in rodents and humans and manage several projects in the field described above.

SUMMARY OF RESEARCH ACTIVITY

Author of more than 122 on peer review journal and several chapter of book

Hindex: 40

Total number citation: 4,451

- Balla J Siddi C, Scherma M, **Fadda P**, Dedoni S Antibody conjugates in neuroblastoma: a step forward in precision medicine *Front Oncol.* 2025 Mar 10;15:1548524 doi: 10.3389/fonc.2025.1548524. eCollection 2025.
- Spero V, Scherma M, D'Amelio S, Collu R, Dedoni S, Camoglio C, Siddi C, Fratta W, Molteni R, **Fadda P**. Activity-based anorexia (ABA) model: Effects on brain neuroinflammation, redox balance and neuroplasticity during the acute phase. *Neurochem Int.* 2024 Nov;180:105842. doi: 10.1016/j.neuint.2024.105842. Epub 2024 Sep 6. PMID: 39244038
- Paribello, P., Manchia, M., Isayeva, U., ... Fadda, P., Carpiniello, B. A Secondary Analysis of the Complex Interplay between Psychopathology, Cognitive Functions, Brain Derived



Neurotrophic Factor Levels, and Suicide in Psychotic Disorders: Data from a 2-Year Longitudinal Study *International Journal of Molecular Sciences*, 2024, 25(14), 7922

- Mercuriali G, Lodde L, Paribello P, Sapienza J, Corona A, Ave C, Pacini D, Nocera D, Corrias C, El Kacemi S, D'Incalci M, Frau I, Monzani E, Valtorta F, Congiu D, Meloni A, Scherma M, **Fadda P**, Dedoni S, Siddi C, Sut S, Dall'Acqua S, Nasini S, Barzon B, Squassina A, Cavallaro R, Manchia M, Pisanu C, Bosia M, Comai S. The clock is ticking on schizophrenia: a study protocol for a translational study integrating phenotypic, genomic, microbiome and biomolecular data to overcome disability. *Front Psychiatry*. 2024 Oct 30;15:1451678. doi: 10.3389/fpsy.2024.1451678. eCollection 2024. PMID: 39540006
- Manchia, M., Isayeva, U., Collu, R., ... **Fadda, P.**, Carpiniello, B. Do Long-Acting Injectable Antipsychotics Influence Serum Levels of Brain-Derived Neurotrophic Factor in People with Schizophrenia and Schizoaffective Disorder? *Mental Illness* This link is disabled., 2024, 2024, 3672159
- Paribello P, Manchia M, Isayeva U, Upali M, Orrù D, Pinna F, Collu R, Primavera D, Deriu L, Caboni E, Iaselli MN, Sundas D, Tusconi M, Scherma M, Pisanu C, Meloni A, Zai CC, Congiu D, Squassina A, Fratta W, **Fadda P**, Carpiniello B. A Secondary Analysis of the Complex Interplay between Psychopathology, Cognitive Functions, Brain Derived Neurotrophic Factor Levels, and Suicide in Psychotic Disorders: Data from a 2-Year Longitudinal Study. *Int J Mol Sci*. 2024 Jul 19;25(14):7922. doi: 10.3390/ijms25147922.
- Camoglio C, Balla J, **Fadda P**, Dedoni S. Oleoylethanolamide and Palmitoylethanolamide Enhance IFN β -Induced Apoptosis in Human Neuroblastoma SH-SY5Y Cells. *Molecules*. 2024 Apr 2;29(7):1592. doi: 10.3390/molecules29071592. PMID: 38611871
- Isayeva U, Manchia M, Collu R, Primavera D, Deriu L, Caboni E, Iaselli NM, Sundas D, Tusconi M, Pinna F, Paribello P, Scherma M, Pisanu C, Meloni A, Zai CC, Congiu D, Squassina A, Fratta W, **Fadda P**, Carpiniello B. Symptomatic remission and recovery in major psychosis: Is there a role for BDNF? A secondary analysis of the LABSP cohort data. *Schizophr Res*. 2024 Apr;266:197-204. doi: 10.1016/j.schres.2024.02.019. Epub 2024 Feb 28. PMID: 38422890
- Fattore L, Amchova P, **Fadda P**, Ruda-Kucerova J. Olfactory Bulbectomy Model of Depression Lowers Responding for Food in Male and Female Rats: The Modulating Role of Caloric Restriction and Response Requirement. *Biomedicines*. 2023 Sep 7;11(9):2481. doi: 10.3390/biomedicines11092481. PMID: 37760922
- Scherma M, Palmas MF, Pisanu A, Masia P, Dedoni S, Camoglio C, Fratta W, Carta AR, **Fadda P**. Induction of Activity-Regulated Cytoskeleton-Associated Protein and c-Fos Expression in an Animal Model of Anorexia Nervosa. *Nutrients*. 2023 Sep 1;15(17):3830. doi: 10.3390/nu15173830. PMID: 37686862
- Margiani G, Castelli MP, Pintori N, Frau R, Ennas MG, Zottola ACP, Orrù V, Serra V, Fiorillo E, **Fadda P**, Marsicano G, De Luca MA. Correction to: Adolescent self-administration of the synthetic cannabinoid receptor agonist JWH 018 induces neurobiological and behavioral alterations in adult male mice. *Psychopharmacology (Berl)*. 2023 Mar 17. doi: 10.1007/s00213-023-06353-3. Online ahead of print. PMID: 36928987



- Dedoni S, Scherma M, Camoglio C, Siddi C, Dazzi L, Puliga R, Frau J, Cocco E, **Fadda P**. An overall view of the most common experimental models for multiple sclerosis. *Neurobiol Dis.* 2023 Aug;184:106230. doi: 10.1016/j.nbd.2023.106230. Epub 2023 Jul 13. PMID: 37453561
- Paribello, P., Carpiniello, B., Murgia, R., ... Scherma, M., Manchia, M. Identifying Neurobiological Markers in Obsessive–Compulsive Disorder: A Study Protocol for a Cross-Sectional Study in Subgroups of Differing Phenotype *Applied Sciences (Switzerland)*, 2023, 13(12), 7306
- Giunti E, Collu R, Dedoni S, Castelli MP, Fratta W, Scherma M, **Fadda P**. Food restriction and hyperactivity induce changes in corticolimbic brain dopamine and serotonin levels in female rats. *Behav Brain Res.* 2023 Apr 27; 444:114374. doi: 10.1016/j.bbr.2023.114374. Epub 2023 Feb 28. PMID: 36863461
- Santoni M, Sagheddu C, Serra V, Mostallino R, Castelli MP, Pisano F, Scherma M, **Fadda P**, Muntoni AL, Zamberletti E, Rubino T, Melis M, Pistis M. Maternal immune activation impairs endocannabinoid signaling in the mesolimbic system of adolescent male offspring. *Brain Behav Immun.* 2023 Mar; 109:271-284. doi: 10.1016/j.bbi.2023.02.002. Epub 2023 Feb 4. PMID: 36746342
- Qvist JS, Scherma M, Jayaram-Lindström N, Fratta W, Kandel DB, Kandel ER, **Fadda P**, Melas PA. Synaptoproteomic Analysis of the Prefrontal Cortex Reveals Spatio-Temporal Changes in SYNGAP1 Following Cannabinoid Exposure in Rat Adolescence. *Int J Mol Sci.* 2022 Dec 31;24(1):698. doi: 10.3390/ijms24010698. PMID: 36614142 Free PMC article.
- Manchia M, Isayeva U, Collu R, Primavera D, Deriu L, Caboni E, Iaselli MN, Sundas D, Tusconi M, Pinna F, Paribello P, Scherma M, Pisanu C, Meloni A, Zai CC, Congiu D, Squassina A, Fratta W, **Fadda P**, Carpiniello B. Converging Evidence Points to BDNF as Biomarker of Depressive Symptoms in Schizophrenia-Spectrum Disorders. *Brain Sci.* 2022 Dec 4;12(12):1666. doi: 10.3390/brainsci12121666. PMID: 36552127 Free PMC article.
- Isayeva U, Manchia M, Collu R, Primavera D, Deriu L, Caboni E, Iaselli N, Sundas D, Tusconi M, Pinna F, Paribello P, Scherma M, Pisanu C, Meloni A, Zai CC, Congiu D, Squassina A, Fratta W, **Fadda P**, Carpiniello B. Exploring the association between brain-derived neurotrophic factor levels and longitudinal psychopathological and cognitive changes in Sardinian psychotic patients. *Eur Psychiatry.* 2022 Oct 25;65(1): e71. doi: 10.1192/j.eurpsy.2022.2333. PMID: 36281033 Free PMC article.
- Santoro M, **Fadda P**, Klephan KJ, Hull C, Teismann P, Platt B, Riedel G. J Neurochemical, histological, and behavioral profiling of the acute, sub-acute, and chronic MPTP mouse model of Parkinson's disease. *Neurochem.* 2023 Jan;164(2):121-142. doi: 10.1111/jnc.15699. Epub 2022 Nov 9. PMID: 36184945
- Palmas MF, Etzi M, Pisanu A, Camoglio C, Sagheddu C, Santoni M, Manchinu MF, Pala M, Fusco G, De Simone A, Picci L, Mulas G, Spiga S, Scherma M, **Fadda P**, Pistis M, Simola N, Carboni E, Carta AR. The Intranigral Infusion of Human-Alpha Synuclein Oligomers Induces a Cognitive Impairment in Rats Associated with Changes in Neuronal Firing and Neuroinflammation in the Anterior Cingulate Cortex. *Cells.* 2022 Aug 24;11(17):2628. doi: 10.3390/cells11172628. PMID: 36078036 Free PMC article.



- Dedoni S, Avdoshina V, Camoglio C, Siddi C, Fratta W, Scherma M, **Fadda P**. K18- and CAG-hACE2 Transgenic Mouse Models and SARS-CoV-2: Implications for Neurodegeneration Research. *Molecules*. 2022 Jun 28;27(13):4142. doi: 10.3390/molecules27134142. PMID: 35807384 Free PMC article. Review.
- Cocco E, **Fadda P**. Treatment of multiple sclerosis fatigue with the synthetic psychoactive drug modafinil. *Exp Neurol*. 2022 Jan;347:113906. doi: 10.1016/j.expneurol.2021.113906. Epub 2021 Oct 26. PMID: 34710403 Review.
- Pintori N, Castelli MP, Miliano C, Simola N, **Fadda P**, Fattore L, Scherma M, Ennas MG, Mostallino R, Flore G, De Felice M, Sagheddu C, Pistis M, Di Chiara G, De Luca MA. Repeated exposure to JWH-018 induces adaptive changes in the mesolimbic and mesocortical dopaminergic pathways, glial cells alterations, and behavioural correlates. *Br J Pharmacol*. 2021 Sep;178(17):3476-3497. doi: 10.1111/bph.15494. Epub 2021 Jun 29. PMID: 33837969 Free PMC article.
- Ghandour F, Squassina A, Karaky R, Diab-Assaf M, **Fadda P**, Pisanu C. Presenting Psychiatric and Neurological Symptoms and Signs of Brain Tumors before Diagnosis: A Systematic Review. *Brain Sci*. 2021 Feb 27;11(3):301. doi: 10.3390/brainsci11030301. PMID: 33673559 Free PMC article. Review.
- Melas PA, Scherma M, Fratta W, Cifani C, **Fadda P**. Cannabidiol as a Potential Treatment for Anxiety and Mood Disorders: Molecular Targets and Epigenetic Insights from Preclinical Research. *Int J Mol Sci*. 2021 Feb 13;22(4):1863. doi: 10.3390/ijms22041863. PMID: 33668469 Free PMC article. Review.
- Boi L, Pisanu A, Palmas MF, Fusco G, Carboni E, Casu MA, Satta V, Scherma M, Janda E, Mocchi I, Mulas G, Ena A, Spiga S, **Fadda P**, De Simone A, Carta AR. Modeling Parkinson's Disease Neuropathology and Symptoms by Intranigral Inoculation of Preformed Human α -Synuclein Oligomers. *Int J Mol Sci*. 2020 Nov 12;21(22):8535. doi: 10.3390/ijms21228535. PMID: 33198335
- Scherma M, Muntoni AL, Riedel G, Fratta W, **Fadda P**. Cannabinoids and their therapeutic applications in mental disorders^[SEP]. *Dialogues Clin Neurosci*. 2020 Sep;22(3):271-279. doi: 10.31887/DCNS.2020.22.3/pfadda. PMID: 33162770 Free PMC article. Review.
- Fattore L, **Fadda P**, Zanda MT, Fratta W. Analysis of Opioid-Seeking Behavior Through the Intravenous Self-Administration Reinstatement Model in Rats. *Methods Mol Biol*. 2021;2201:231-245. doi: 10.1007/978-1-0716-0884-5_21. PMID: 32975804
- Scherma M, Fattore L, Fratta W, **Fadda P**. Conditioned Place Preference (CPP) in Rats: From Conditioning to Reinstatement Test. *Methods Mol Biol*. 2021;2201:221-229. doi: 10.1007/978-1-0716-0884-5_20. PMID: 32975803
- Scherma M, Qvist JS, Asok A, Huang SC, Masia P, Deidda M, Wei YB, Soni RK, Fratta W, **Fadda P**, Kandel ER, Kandel DB, Melas PA. Cannabinoid exposure in rat adolescence reprograms the initial behavioral, molecular, and epigenetic response to cocaine. *Proc Natl Acad Sci U S A*. 2020 May 5;117(18):9991-10002. doi: 10.1073/pnas.1920866117. Epub 2020 Apr 20. PMID: 32312805



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- Collu R, Post JM, Scherma M, Giunti E, Fratta W, Lutz B, **Fadda P**, Bindila L. Altered brain levels of arachidonic acid-derived inflammatory eicosanoids in a rodent model of anorexia nervosa. *Biochim Biophys Acta Mol Cell Biol Lipids*. 2020 Apr;1865(4):158578. doi: 10.1016/j.bbalip.2019.158578. Epub 2019 Nov 26. PMID: 31778792
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- Sagheddu C, Scherma M, Congiu M, **Fadda P**, Carta G, Banni S, Wood JT, Makriyannis A, Malamas MS, Pistis M. Inhibition of N-acylethanolamine acid amidase reduces nicotine-induced dopamine activation and reward. *Neuropharmacology*. 2019 Jan;144:327-336. doi: 10.1016/j.neuropharm.2018.11.013. Epub 2018 Nov 12. PMID: 30439418
- Scherma M, Masia P, Deidda M, Fratta W, Tanda G, **Fadda P**. New Perspectives on the Use of Cannabis in the Treatment of Psychiatric Disorders. *Medicines (Basel)*. 2018 Oct 2;5(4):107. doi: 10.3390/medicines5040107. PMID: 30279403 Free PMC article. Review.
- Kononoff J, Melas PA, Kallupi M, de Guglielmo G, Kimbrough A, Scherma M, **Fadda P**, Kandel DB, Kandel ER, George O. Adolescent cannabinoid exposure induces irritability-like behavior and cocaine cross-sensitization without affecting the escalation of cocaine self-administration in adulthood. *Sci Rep*. 2018 Sep 17;8(1):13893. doi: 10.1038/s41598-018-31921-5. PMID: 30224774 Free PMC article.
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- Primavera D, Manchia M, Deriu L, Tusconi M, Collu R, Scherma M, Fadda P, Fratta W, Carpiniello B. Longitudinal assessment of brain-derived neurotrophic factor in Sardinian psychotic patients (LABSP): a protocol for a prospective observational study. *BMJ Open.* 2017 May 25;7(5):e014938. doi: 10.1136/bmjopen-2016-014938. PMID: 28550022 Free PMC article.
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