

Prof. Lucia Ciranna

CURRICULUM VITAE

PERSONAL DETAILS

Surname: Ciranna

First name: Lucia

Date of birth:

Marital status: married

Nationality: italian.

University address:

Dipartimento di Scienze Biomediche e Biotecnologiche, Sezione di Fisiologia

Università di Catania

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EDUCATION

Degree in Pharmacy

7th november 1989, University of Catania

Duration of studies: 5 years (1984-1989). Evaluation mark: 110/110 e lode (highest).

Title of thesis: "Identificazione di recettori per la serotonina nel nucleo di Deiters"
(identification of serotonin receptors in Deiters' nucleus).

PhD in Neuroscience

16th october 1995, Louis Pasteur University of Strasbourg (France)

Duration of research: 4 years. Evaluation mark: "Très honorable avec félicitations du Jury"
(highest)

Title of PhD thesis: "Modulation of voltage-dependent calcium currents by serotonin in the intermediate lobe of the pituitary".

Composition of the Jury: Prof. Paul Feltz (Université Louis Pasteur, Strasbourg, France); Prof. Annette Dolphin (Royal Free Hospital, School of Medicine, London, U.K.); Prof. Jurgen Hescheler (Institut für Pharmakologie, Köln, Deutschland); Prof Pascal Bousquet (Université Louis Pasteur, Strasbourg, France); Prof Francesca Santangelo (Università di Catania, Italia); Dr. Martin Galvan (Marion Merrel Dow research Institute, Strasbourg, France).

POST-GRADUATE RESEARCH EXPERIENCE

1989-1990

Dipartimento di Scienze Fisiologiche, Università di Catania

6, Viale Andrea Doria, 95125 Catania, Italy

Supervisor: Prof. Francesca Santangelo

Research subject: effects of serotonin and noradrenaline on neuronal electrical activity in the vestibular nuclei.

1990-1994

Laboratoire de Physiologie Générale, Université Louis Pasteur

21, rue René Descartes, 67084 Strasbourg, France

Position: PhD student

Supervisors: Prof. Paul Feltz & Dr. Rémy Schlichter

Research subject: effects of serotonin on voltage -dependent calcium (Ca^{2+}) channels and on intracellular free Ca^{2+} concentration $[\text{Ca}^{2+}]_i$ in neuroendocrine cells of rat hypophyseal intermediate lobe.

1994- 2006:

Dipartimento di Scienze Fisiologiche, Università di Catania
6, viale Andrea Doria, 95125 Catania, ITALY.

Position: Researcher for the Faculty of Pharmacy.

Research subjects:

- effects of serotonin and noradrenaline on the firing activity of neurons of the rat red nucleus; interaction between GABA and NA in the control of neuronal activity in the red nucleus;
- effects of the neuropeptides PACAP and VIP on glutamate-mediated synaptic transmission in the hippocampus.

28th october - 28th december 1998:

Laboratory of Adaptive Systems, National Institute of Neurological Disorders and Stroke N.I.H., Building 36, Room B205, Bethesda, Maryland 20892, U.S.A.

Supervisors: Dr Daniel Alkon e Dr. Bernard Schreurs.

Research subject: brain slice preparation for project Biotech BIO4-98-0517.

From 2006 to present:

Dipartimento di Scienze Fisiologiche (since 2011 Dipartimento di Scienze Bio-Mediche) Università di Catania, 6, viale Andrea Doria, 95125 Catania, ITALY.

Position: Associate Professor of Physiology.

Research subjects: effects of serotonin on glutamate-mediated synaptic transmission and on long-term synaptic plasticity in the hippocampus in wild type and in Fmr1 KO mice, an animal model of Fragile X syndrome; pharmacological evaluation of new compounds acting on AMPA and on NMDA receptors for glutamate.

08/02/2012 : qualification to the function of Professeur des Université (France), section 69 (Neurosciences). Qualification No.: 12169226456.

03/08/2018: qualification to the function of Professore Ordinario, settore 05/D1 Fisiologia (Full Professor of Physiology) , Abilitazione Scientifica Nazionale, Ministero dell'Istruzione , dell'Università e della Ricerca (MIUR), Italy.

RESEARCH GRANTS

2023-2025 Scientific director of Research Unit in project “Investigating the role of transposable elements in physiological and pathological genetic and molecular mechanisms involved in the development of the nervous system in animal models. Searching for pathways and future therapies for neurological diseases”, project P2022XPAW4 financed by Italian Ministry of University (MUR, call PRIN 2022 PNRR); research unit funding 124.500 euros; total project funding 249.000 euros.

2022 Principal investigator of project “Neurons and astrocytes from induced pluripotent stem cells derived from Fragile X Syndrome patients: a human model to validate animal studies and develop new patient-targeted treatments”, Università di Catania, call CHANCE 2022, funding: euros 10.000.

2018-2021: Principal investigator and PhD supervisor of project: “Serotonin receptors as new pharmacological targets for Fragile X Syndrome”, PhD grant financed by Italian Ministry of Research and Education (MIUR, call PON Ricerca e Innovazione 2014-2020).

2018-2020: collaboration to the research project: “Identification of the influence of the knockout of the 5-HT7 receptor gene on the structure and functions of mouse DRN neurons”, PI Prof Grzegorz Hess (Maj Institute of Pharmacology, Polish Academy of Sciences, Krakow, Poland), funded by the National Science Center, Poland (project no. UMO-2017/27/B/NZ4/01527).

2017-2018: Principal Investigator of research project: “Gs-coupled serotonin receptors as novel pharmacological targets in neurodevelopmental disorders”, Università di Catania, call CHANCE 2017, funding: euros 10.000.

2013-2016: Principal Investigator of research project: “Activation of serotonin type 7 (5-HT₇) receptors as a novel therapeutic strategy in Fragile X Syndrome”, financed by Telethon Foundation (2013, grant n. GGP13145). Total amount of funding: euros 330.000.

2013-2014: Principal Investigator of research project: “Preclinical evaluation of serotonin type 7 (5-HT₇) receptor agonists as novel pharmacological tools in Fragile X Syndrome”, financed by FRAXA Research Foundation (call 2013), U.S.A. Total amount of funding: U.S. dollars 66.000.

2014: participation to research project FIR 2014 “Modulazione della trasmissione spinale degli stimoli nocicettivi nella demenza di Alzheimer”, PI Prof. Agata Copani, , Università di Catania.

2008-2010: Principal Investigator of research project PRIN 2007L92XSP financed by the Italian Ministry of Research and Education (MIUR). Title of project: Neurotransmitter-mediated regulation of AMPA receptor function: implications in physiological transmission and pathology. Total amount of funding: euros 127.142.

2003-2004: participation to projet PRIN 2002 (2002051388_007, PI: Prof. Vincenzo Perciavalle, University of Catania), financed by MIUR. Title of project: Noradrenergic modulation of vestibular nuclei responsiveness to GABA and glutamate.

2001-2002: participation to projet PRIN 2000 (MM05082288_005, PI Prof. Federico Cicirata, University of Catania), financed by MIUR. Title of project: Role of noradrenaline in the modulation of cerebellar and vestibular output.

1998-2000: participation to European projet Biotech BIO4-98-0517 “Physiological functions of PACAP/VIP receptors in the nervous system”. (PI: Dr. Sebastiano Cavallaro, Istituto di Bioimmagini e Fisiopatologia del Sistema Nervoso Centrale, C.N.R. Catania, Italy).

1992: Individual short-term fellowship (3 months) from European Science Foundation (Strasbourg, France).

REVISION OF ARTICLES

Journal of Neurochemistry (Blackwell, U.S.A.); Pharmacological Research (Elsevier, The Netherlands), Molecular Brain Research (Elsevier, The Netherlands); Frontiers in Neuropharmacology (Frontiers Journals); International Journal of Developmental Neuroscience (Elsevier); Hippocampus (Wiley); PLOS One (U.S.A.); The Journal of Physiology (London); Frontiers in Behavioral Neuroscience (Frontiers Journals); Biological Psychiatry (Elsevier); CNS Spectrums (Cambridge Journals); Neurobiology of aging (Elsevier); British Journal of Pharmacology (Elsevier); Frontiers in Neuroscience (Frontiers Journals); Neuroscience and Biobehavioral Reviews (Elsevier); Frontiers in Cellular Neuroscience (Frontiers Journals); Archiv der Pharmazie (Wiley); Behavioral Brain Research (Elsevier); CNS Neuroscience & Therapeutics (Wiley); Front. Synaptic Neurosci (Frontiers Journals); Psychopharmacology (Springer); Molecular Neurobiology (Springer); Neuropharmacology (Elsevier); Frontiers in Molecular Neuroscience (Frontiers); Molecular Medicine (Springer); International Journal of Molecular Sciences (MDPI); Translational Neuroscience (De Gruyter); European Journal of Neuroscience (Wiley).

EDITORIAL BOARD MEMBERSHIP

International Journal of Neurology Research; Frontiers in Cellular Neuroscience; Current Neuropharmacology; Frontiers in Molecular Neuroscience.

REVISION OF GRANT APPLICATIONS

2004: Health Research Board, Ireland, (PhD Training Sites 2004).
2012: Wellcome Trust/ DBT India Alliance.
2013: Italian Ministry of Education and University (MIUR; projects PRIN2012 and FIRB 2013).
2015: Fondation pour la Recherche Médicale (France), call: “Pathophysiology of Psychiatric Diseases”.
2017: Medical Research Council (U.K.), call: MRC-Industry Asset Sharing.
2017: National Science Center (Poland), call: OPUS, NCN panel NZ4
2018: Medical Research Council (U.K.), call: Research Boards Jan 2018 Submissions.
2018: National Science Center (Poland), call OPUS, NCN panel NZ3.
2020: National Science Center (Poland), call: OPUS-18, NCN panel NZ4.
2021: National Science Center (Poland), call: OPUS, Reg. n. 2021/41/B/NZ4/02603, NCN panel NZ4.
2022: Wellcome trust/DBT India Alliance Fellowship application review (IA/I/22/1/506224).
2023: National Science Center (Poland), call: PRELUDIUM-22, Reg.n.2023/49/N/NZ4/02660, NCN panel NZ4.

REVISION OF SCIENTIFIC BOOKS

2015 to present-: Member of the Jury for the National Prize of Scientific Publication “Premio Nazionale di Divulgazione Scientifica”, Associazione Italiana del Libro.

AFFILIATION TO SCIENTIFIC SOCIETIES

2009-2018 Society for Neuroscience (SfN); **2013** European Mind and Metabolism Association (EMMA); **2017-present**: Italian Society for Neuroscience (SINS); **2005-present**: Società Italiana di Fisiologia (SIF).

TEACHING EXPERIENCE

1st june – 30th november 1990: "Maitre de conference invité" in Physiology, Louis Pasteur University of Strasbourg (France);
1999-2004: “Chemical composition of dietary food”, School of Pharmacy of Catania University (Italy);
2000-2001: “Endocrinology”, School of Pharmacy of Catania University (Italy);
2003-2009: “Physiology of Nutrition”, School of Pharmacy of Catania University (Italy).
2009-2018: “Human Physiology”, School of Pharmacy of Catania University.
2018-2023: “Physiology”, Degree in Speech and Language Therapy, University of Catania.
2012 -: “Physiology and Biophysics”, School of Medicine of Catania University.
2019 -: “Human Physiology”, School of Medicine of Catania University.
2023 -: “Cell Physiology”, Degree in Medicine and Surgery, School of Medicine of Catania University.
2006-2008: Member of Doctorate Board of the PhD School in Applied Biomedical Sciences (Scienze Biomediche Applicate, University of Catania).
2010-2012: Member of Doctorate Board of the PhD School in Neuroscience, University of Catania.
2018 -: Member of Doctorate Board of the PhD School in Biotechnologies, University of Catania.
2006 -: Mentor and supervisor of graduate students of the School of Pharmacy, University of Catania.
2016 -: Mentor and supervisor of graduate students, Scuola Superiore, University of Catania.

2017: Member of the Jury for a PhD thesis in Biomedicine and Neuroscience, Università di Palermo, Italy.

2017: Member of the Jury for a PhD thesis in Neuroscience, Universitas Miguel Hernandez, Alicante, Spain.

2017: Member of the Jury for a PhD thesis in Neuroscience, Université Louis Pasteur, Strasbourg (France).

2018-2021: Member of the Advisory Board (Thesis Follow-up Committee, TFC) for Mr Sebastien Delhay, PhD student, University of Nice Sophia-Antipolis, Nice (France).

2017-2018: Organization and supervision of lectures: “Synaptic dysfunction in cognitive diseases: pathophysiology mechanisms and new therapeutic perspectives”, Scuola Superiore di Catania, Università degli Studi di Catania (Italy).

2017-: Learning agreement with Prof. Vincenzo Crunelly (University of Cardiff, UK) for research training of undergraduate students of Cardiff University (Professional Training Year, PTY).

2019-2020: Organization and supervision of lectures: “Sports medicine in the third millennium: new trends in nutrition, pharmacology, psychology and cognition, with regard to new legislative rules”, Scuola Superiore di Catania, Università degli Studi di Catania (Italy).

2021-2022: Scientific supervisor of the students Holly Griffiths and Olivia Squire, Professional Training Year, University of Cardiff, U.K., for a 9-months research training period (1st October 2021- 30th June 2022) at the University of Catania.

2022- Member of the Teaching Committee, PhD in Biotecnologies, University of Catania.

2024: Evaluation of a PhD thesis in Pharmaceutical Sciences (Scienza del Farmaco; applicant: Mr Kardelem Dalim Filiz), Università degli Studi di Napoli Federico II (Italia).

LIST OF PUBLICATIONS

FULL ARTICLES

- 48) **Ciranna, L.* and Costa, L.**, (2025) Therapeutic effects of pharmacological modulation of serotonin brain system in human patients and animal models of Fragile X Syndrome. *Int.J. Mol. Sci.*, 26, 2495. DOI 10.3390/ijms26062495.
- 47) **Barraco, M., Kudova, E., Bucolo, C., Ciranna, L., Sortino, M.A., Chisari, M.***, (2025) Cholesterol metabolites modulate ionotropic P2X4 and P2X7 receptor current in microglia cells. *Neuropharmacology*, 266:110294, DOI: 10.1016/j.neuropharm.2024.110294. I.F 4.6.
- 46) **Krzisch M., D'Antoni S. and Ciranna L.**, (2024) Editorial: Role of glia in neurodevelopmental disorders, *Front Cell Neurosci*, 18, 1404362, ISSN 1662-5102, DOI 10.3389/fncel.2024.1404362. IF 6.1
- 45) **Merlo S., Costa L., Chiechio S., Busceti C.L., Ciranna L., Santangelo R., Sortino M.A., Fornai F., Nicoletti F. and Copani A.**, (2023). Increased Heat Pain Tolerance but Hyperalgesia to Tonic Inflammatory Pain in the CRND8 Mouse Model of Alzheimer's Disease, *J Alzheimers Dis*, DOI 10.3233/JAD-230148. I.F. 4.0
- 44) **Chisari M., Barraco M., Bucolo C., Ciranna L. and Sortino M. A.**, (2023) Purinergic ionotropic P2X7 and metabotropic glutamate mGlu5 receptors crosstalk influences pro-inflammatory conditions in microglia, *European Journal of Pharmacology*, 175389, ISSN 0014-2999, <https://doi.org/10.1016/j.ejphar.2022.175389>. IF 4.4
- 43) **Ciranna L., Reglodi D., Chow B. K. and Vaudry D.** (2021) Editorial: Novel Therapeutic Potential for Pituitary Adenylate Cyclase-Activating Polypeptide (PACAP), Vasoactive Intestinal Peptide (VIP) and Related Peptides in Cognition Deficits. *Front. Cell. Neurosci.*, 13 September 2021 | <https://doi.org/10.3389/fncel.2021.748970>. IF 6.1
- 42) **Leggio G.M., Torrisi S.A., Mastrogiacomo R., Mauro D., Chisari M., Devroye C., Scheggia D., Nigro M., Geraci F., Pintori N., Giurdanella G., Costa L., Bucolo C., Ferretti V., Sortino M.A., Ciranna L., De Luca M.A., Mereu M., Manago F., Salomone S., Drago F. and Papaleo F.** (2021). The epistatic interaction between the dopamine D3 receptor and dysbindin-1 modulates higher-order cognitive functions in mice and humans. *Mol Psychiatry*, 26: 1272-1285. IF 13.4.
- 41) **Costa L., Tempio A., Lacivita E., Leopoldo M. and Ciranna L.** (2021). Serotonin 5-HT7 receptors require cyclin-dependent kinase 5 to rescue hippocampal synaptic plasticity in a mouse model of Fragile X Syndrome, *Eur J Neurosci*, DOI 10.1111/ejn.15246 . IF 3.6
- 40) **Tempio A., Niso M., Laera L., Trisolini L., Favia M., Ciranna L., Marzulli D., Petrosillo G., Pierri C.L., Lacivita E. and Leopoldo M.** (2020). Mitochondrial Membranes of Human SH-SY5Y Neuroblastoma Cells Express Serotonin 5-HT7 Receptor, *Int J Mol Sci*, 21. IF 6.2.
- 39) **Lacivita E., Niso M., Stama M.L., Arzuaga A., Altamura C., Costa L., Desaphy J.F., Ragozzino M.E., Ciranna L. and Leopoldo M.** (2020). Privileged scaffold-based design to identify a novel drug-like 5-HT7 receptor-preferring agonist to target Fragile X syndrome, *Eur J Med Chem*, 199: 112395. IF 7.0
- 38) **Ciranna L. and Costa L.** (2019) Pituitary Adenylate Cyclase-Activating Polypeptide Modulates Hippocampal Synaptic Transmission and Plasticity: New Therapeutic Suggestions for Fragile X Syndrome. *Front. Cell. Neurosci.*, 27 November 2019 | <https://doi.org/10.3389/fncel.2019.00524>. IF 6.1.
- 37) **Maurin T., Melancia F., Jarjat M., Castro L., Costa L., Khayachi A., Delhay S., Castagnola S., Mota E., Di Giorgio A., Servadio M., Drozd M., Poupon G., Schiavi S., Sardone L. M., Azoulay S., Ciranna L., Martin S., Vincent P., Trezza V. and Bardoni B.** (2019) Involvement of Phosphodiesterase 2A activity in the pathophysiology of Fragile X Syndrome. *Cerebral Cortex*, 29: 3241-3252. DOI:10.1093/cercor/bhy192. IF: 4.8.

- 36) Costa L., Sardone L.M., Bonaccorso C.M., D'Antoni S., Spatuzza M., Gulisano W., Tropea M.R., Puzzo D., Leopoldo M., Lacivita E., Catania M.V. and Ciranna L. (2018) Activation of serotonin 5-HT₇ receptors modulates hippocampal synaptic plasticity by stimulation of adenylate cyclases and rescues learning and behavior in a mouse model of Fragile X Syndrome. *Front. Mol. Neurosci.* 11:353. doi: 10.3389/fnmol.2018.00353 IF: 6.2
- 35) Aloisi E., Le Corf K., Dupuis J., Zhang P., Ginger M., Labrousse V., Spatuzza M., Haberl M.G., Costa L., Shigemoto R., Tappe-Theodor A., Drago F., Piazza P.V., Mulle C., Groc L., Ciranna L., Catania M.V. and Frick A. (2017) Altered surface mGluR5 dynamics provoke synaptic NMDAR dysfunction and cognitive defects in *Fmr1* knockout mice. *Nature Communications*, 8: 1103, DOI: 10.1038/s41467-017-01191-2|. IF: 17.6.
- 34) Pecoraro V., Sardone L. M., Chisari M., Licata F., Li Volsi G., Perciavalle V., Ciranna L.* and Costa L. (2017) A subnanomolar concentration of Pituitary Adenylate Cyclase Activating Polypeptide (PACAP) pre-synaptically modulates glutamatergic transmission in the rat hippocampus acting through acetylcholine. *Neuroscience* 340, 551-562. IF 3.7
- 33) Chisari M.*, Scuderi A., Ciranna L., Li Volsi G., Licata F. and Sortino M.A. (2017) Purinergic P2Y₁ receptors control rapid expression of plasma membrane processes in hippocampal astrocytes *Molecular Neurobiology* 54, 4081-4093, doi: 10.1007/s12035-016-9955-6. IF 5.6
- 32) Costa L., Sardone L. M., Lacivita E., Leopoldo M. and Ciranna L.* (2015) Novel agonists for serotonin 5-HT₇ receptors reverse metabotropic glutamate receptor-mediated long-term depression in the hippocampus of wild-type and *Fmr1* KO mice, a model of Fragile X Syndrome, *Frontiers in Behavioral Neuroscience* 9:65. doi: 10.3389/fnbeh.2015.00065 IF 3.6
- 31) Ciranna L.* and Catania M.V. (2014) 5-HT₇ receptors as modulators of neuronal excitability, synaptic transmission and plasticity: physiological role and possible implications in autism spectrum disorders. *Front. Cell. Neurosci.* 8:250. doi: 10.3389/fncel.2014.00250 IF 6.1.
- 30) D'Antoni, S., Spatuzza, M., Bonaccorso, C.M., Musumeci, S.A., Ciranna, L., Nicoletti, F., Huber, K.M. and Catania, M.V.* (2014). Dysregulation of group-I metabotropic glutamate (mGlu) receptor mediated signalling in disorders associated with Intellectual Disability and Autism. *Neurosci Biobehav Rev.* 46P2, 228-241, IF 9.0
- 29) Gitto R*, De Luca L.; Ferro S., Russo E., De Sarro G., Chisari M., Ciranna L., Alvarez-Builla, Alajarin R., Buemi M., and Chimirri A. (2014) Synthesis, modelling and biological characterization of 3-substituted-1H-indoles as ligands of GluN2B-containing N-methyl-D-aspartate receptors. *Bioorganic & Medicinal Chemistry* 22: 1040–1048. IF 3.4
- 28) Costa L., Spatuzza M., D'Antoni S., Bonaccorso C.M., ,Trovato C., Musumeci S.A., Leopoldo M., Lacivita E., Catania M.V. and Ciranna L.* (2012) Activation of 5-HT₇ serotonin receptors reverses metabotropic glutamate receptor-mediated synaptic plasticity in wild-type and *Fmr1* knockout mice, a model of Fragile X Syndrome. *Biological Psychiatry* 72(11):924-933. I.F. 12.8.
- 27) Costa L, Trovato C., Musumeci S. A. , Catania M. V. and Ciranna L.* (2012) 5-HT_{1A} and 5-HT₇ receptors differently modulate AMPA receptor-mediated hippocampal synaptic transmission. *Hippocampus* 22(4):790-801. IF 3.7
- 26) Gitto R.*, De Luca L.; Ferro S., Buemi M., Russo E., De Sarro G., Chisari M., Ciranna L., Chimirri A. (2012) Synthesis and Biological Characterization of 3-Substituted-1H-indoles as Ligands of GluN2B-containing N-Methyl-D-Aspartate Receptors. Part. 2. *J. Med. Chem.* 55(23):10532-9. I.F. 8.0
- 25) Gitto R., De Luca L., Ferro S., Buemi M.R., Russo E., De Sarro G., Costa L., Ciranna L., Prezzavento O., Arena E., Ronsisvalle S., Bruno G., and Chimirri A.* (2011) Synthesis and Biological Characterization of 3-Substituted-1H-indole Derivatives as Ligands

- of NR2B-containing N-Methyl-D-Aspartate (NMDA) Receptors. *J. Med. Chem.* 54(24):8702-6. [IF 8.0.](#)
- 24) Costa L., Santangelo F., Li Volsi G. and Ciranna L.*** (2009) Modulation of AMPA receptor-mediated ion current by pituitary adenylate cyclase-activating polypeptide (PACAP) in CA1 pyramidal neurons from rat hippocampus. *Hippocampus* 19 (1):99-109. [IF 3.7](#)
- 23) Chimirri A.*, De Luca L., Ferro S., De Sarro G., Ciranna L. and Gitto R.** (2009) Combined strategies for the discovery of ionotropic glutamate receptor antagonists. *Chem. Med. Chem.* 4, 917-922. [IF 3.4](#)
- 22) Gitto R., De Luca L., Ferro S., Citraro R., De Sarro G., Costa L., Ciranna L. and Chimirri A.*** (2009) Development of 3-Substituted-1H-indole Derivatives as NR2B/NMDA Receptor Antagonists. *Bioorganic & Medicinal Chemistry* 17, 1640-1647. [IF 3.4](#)
- 21) Gitto R., De Luca L., Ferro S., Occhiuto F., Samperi S., De Sarro G., Ciranna L., Costa L. and Chimirri A.*** (2008) Computational studies to discover a new NR2B/NMDA receptor antagonist and evaluation of pharmacological profile. *Chem Med. Chem.* 3 (10), 1539-1548. [IF 3.5](#)
- 20) Gitto R., De Luca L., Pagano B., Citraro R., De Sarro G., Costa L., Ciranna L. and Chimirri A.*** (2008) Synthesis and anticonvulsant evaluation of N-substituted isoquinoline AMPA receptor antagonists. *Bioorganic & Medicinal Chemistry* 16, 2379-2384. [IF 3.4](#)
- 19) Ciranna L.*** (2006) Serotonin as a modulator of glutamate- and GABA-mediated neurotransmission: implications in physiological functions and in pathology. *Current Neuropharmacology* 4 (2), 101-114. [IF 7.7.](#)
- 18) Grasso C., Li Volsi G., Licata F.*, Ciranna L. and Santangelo F.** (2006) Aminergic control of neuronal firing rate in thalamic motor nuclei of the rat. *Archives Italiennes de Biologie* 144, 173-196. [IF 1.6](#)
- 17) Barresi M., Li Volsi G.*, Licata F., Ciranna L. and Santangelo F.** (2005) Effects of 5-hydroxytryptamine on the neuronal firing rate of bulbar reticular neurons. *Archives Italiennes de Biologie* 143, 13-27. [IF 1.6](#)
- 16) Ciranna L.*, Licata F., Li Volsi G. and Santangelo F.** (2004) Alpha2- and beta-adrenoceptors differentially modulate GABAA- and GABAB-mediated inhibition of red nucleus neuronal firing. *Exp. Neurol.* 185, 297-304. [IF 5.6.](#)
- 15) Ciranna L.* and Cavallaro S.** (2003) Opposing effects by pituitary adenylate cyclase-activating polypeptide and vasoactive intestinal peptide on hippocampal synaptic transmission. *Exp. Neurol.* 184, 778-784. [IF 5.6](#)
- 14) Di Mauro M., Cavallaro S. and Ciranna L.*** (2003) Pituitary adenylate cyclase-activating polypeptide modifies the electrical activity of CA1 hippocampal neurons in the rat. *Neurosci. Lett.* 337, 97-100. [IF 3.1](#)
- 13) Di Mauro M., Fretto G., Caldera M., Li Volsi G., Licata F., Ciranna L. and Santangelo F.** (2003) Noradrenaline and 5-hydroxytryptamine in cerebellar nuclei of the rat: functional effects on neuronal firing. *Neurosci. Lett.* 347, 101-105. [IF 3.1](#)
- 12) Ciranna L.*, Licata F., Li Volsi G. and Santangelo F.** (2003) Role of GABAA and GABAB receptors in GABA-induced inhibition of rat red nucleus neurons. *Neurosci. Lett.* 341, 221-224. [IF 3.1](#)
- 11) Licata F., Li Volsi G., Di Mauro M., Fretto G., Ciranna L. and Santangelo F.** (2001) Serotonin modifies the neuronal inhibitory responses to γ -aminobutyric acid in the red nucleus: a microiontophoretic study in the rat. *Exp. Neurol.* 167, 95-107. [IF 5.6](#)
- 10) Ciranna L.*, Licata F., Li Volsi G. and Santangelo F.** (2000) Neurotransmitter-mediated control of neuronal firing in the red nucleus of the rat: reciprocal modulation between noradrenaline and GABA. *Exp. Neurol.* 163, 253-263. [IF 5.6](#)
- 9) Li Volsi G.*, Licata F., Ciranna L., Caserta, C. and Santangelo F.** (1998) Electromyographic effects of serotonin application into the lateral vestibular nucleus. *Neuroreport* 9, 2539-2543. [IF 1.7](#)

- 8) **Licata F.*, Li Volsi G., Ciranna L., Maugeri G. and Santangelo F.** (1998). 5-Hydroxytryptamine modifies neuronal responses to glutamate in the red nucleus of the rat. *Exp. Brain. Res.* **118**, 61-70. IF 2.0
- 7) **Ciranna L.*, Licata F., Li Volsi G. and Santangelo F.** (1996) Noradrenaline modifies the spontaneous spiking activity of red nucleus neurons in the rat by activation of α_2 - and β -adrenoceptors. *Brain. Res.* **743**, 284-294. IF 3.6
- 6) **Ciranna L., Feltz P. and Schlichter R.*** (1996). Selective inhibition of high voltage-activated L-type and Q-type Ca^{2+} currents by serotonin in rat melanotrophs. *J. Physiol. (Lond.)* **490.3**, 595-609. IF 6.2
- 5) **Schlichter R.*, Mouginit D., Ciranna L. and Feltz P.** (1993). Modulation of GABA_A receptor channels and calcium currents in cultured porcine melanotrophs. *Annals of the N.Y. Acad. of Sci.* **680**, 199-211. IF 6.4
- 4) **Ciranna L., Mouginit D., Feltz P. and Schlichter R.*** (1993). Serotonin inhibits Ca^{2+} currents in porcine melanotrophs by activating 5-HT_{1C} and 5-HT_{1A} receptors. *J. Physiol. (Lond.)* **463**, 17-38. IF 6.2
- 3) **Licata F.*, Li Volsi G., Maugeri G., Ciranna L. and Santangelo F.** (1993). Effects of noradrenaline on the firing rate of vestibular neurons. *Neuroscience* **53**, 149-158. IF 3.7
- 2) **Licata F.*, Li Volsi G., Maugeri G., Ciranna L. and Santangelo F.** (1993). Serotonin-evoked modification of the neuronal firing rate in the superior vestibular nucleus: a microiontophoretic study in the rat. *Neuroscience* **52**, 941-949. IF 3.7
- 1) **Licata F.*, Li Volsi G., Maugeri G., Ciranna L. and Santangelo F.** (1990). Effects of glutamate on the serotonin-induced responses of vestibular neurons. *Boll. SIBS* vol.LXVI (8,779-786).

* Corresponding author

BOOK CHAPTERS

- 1) **Catania M.V. and Ciranna L.** La mente flessibile: il punto di vista delle Neuroscienze. In: “FlessIBILMENTE: un modello sistemico di approccio al tema della flessibilità”, Ed. Pensa MultiMedia (2014).
- 2) **Cicirata F., Parenti R. and Ciranna L.,** Motor control. Cap.14, pp 203-236. Fisiologia: dalle molecole ai sistemi integrati. Ed. EdiSES (2009).
- 3) **Ciranna L.,** Autonomic nervous system. Cap.15, pp 238-247. Fisiologia: dalle molecole ai sistemi integrati. Ed. EdiSES (2009).

ORAL PRESENTATIONS

- 22) **Ciranna L.** (2024) “The brain serotonin system: role on endocrine functions, learning and gratefulness (to mentors)”, *Invited seminar*, INCI, Université Louis Pasteur, Strasbourg (France), 22nd march 2024.
- 21) **Ciranna L.** (2022) “5-HT₇ serotonin receptors modulate synaptic plasticity, cognition and behavior: physiological role and perspectives for a possible therapy of Fragile X Syndrome”. *Invited seminar*, University of Helsinki (Finland), 18th may 2022.
- 20) **Ciranna L.** (2017) Nuove prospettive terapeutiche per la Sindrome del Cromosoma X Fragile basate sull’attivazione di recettori per la serotonina: il progetto Telethon GGP13145”. Annual Meeting of Associazione Italiana Sindrome X-fragile: “X Fragile: la strada verso la cura”, october 21st 2017, Torre Biologica, Università di Catania, Italia.
- 19) **Ciranna L.** (2017) 5-HT₇ serotonin receptors modulate synaptic plasticity, cognition and behavior: physiological role and implications for treatment of Autism Spectrum Disorders. *Invited seminar*, Institute of Pharmacology, University of Krakov (Poland), 1st september 2017.

- 18) Ciranna L.** (2017) Activation of 5-HT₇ receptors for serotonin modulates hippocampal synaptic plasticity in physiological conditions and in a mouse model of Fragile X Syndrome: involvement of cyclic AMP, intracellular kinases and protein synthesis. *13th International Congress of the Polish Neuroscience Society*, Warsaw (Poland), 28-31 august 2017.
- 17) Ciranna L.,** (2016) “Telethon: La sindrome del cromosoma X fragile”, RAI con Telethon, UnoMattina, RAI 1, Roma, 18 dicembre 2016.
- 16) Ciranna L.** (2016) Activation of serotonin 5-HT₇ receptors rescues hippocampal synaptic plasticity in a mouse model of Fragile X Syndrome through a cyclic AMP-mediated mechanism. *67° Congresso Nazionale della Società Italiana di Fisiologia*, Catania (Italy), 21-23 settembre 2016
- 15) Ciranna L.,** (2016) Serotonin type 7 (5-HT₇) receptors as a novel therapeutic target in Fragile X Syndrome. "10th Conference on electrophysiological techniques in bioelectricity research: from ion channels to neural networks", Krakow (Poland), 3rd- 4th June 2016.
- 14) Ciranna L.,** (2016) “Neuromodulazione: ruolo della serotonina implicazioni nei disordini dello spettro dell’Autismo”. Corso di Educazione Continua in Medicina (ECM): “Disfunzioni sinaptiche nel Disturbo dello spettro dell’Autismo”, IRCCS Oasi Maria Santissima, Troina (EN, Italy), 5th may 2016.
- 13) Ciranna L.** (2016) “Attivazione di recettori 5-HT₇ per la serotonina: una nuova strategia terapeutica per la Sindrome del Cromosoma X Fragile” *Invited seminar* “Pillole di ricerca”, Scuola Superiore Catania, Catania (Italy), 25th february 2016.
- 12) Ciranna L.,** (2015) “Attivazione di recettori 5-HT₇ per la serotonina: una nuova strategia terapeutica per la Sindrome del Cromosoma X Fragile”. *Giornata Europea della sindrome X Fragile*, “La Sindrome dell’X Fragile dalla diagnosi all’intervento”, University of Napoli “Federico II”, Napoli (Italy), 10th october 2015.
- 11) Ciranna L.,** (2015) “Activation of serotonin 5-HT₇ receptors rescues synaptic plasticity and learning in a mouse model of Fragile X Syndrome”. *Spring Hippocampal Research Conference*, Taormina (Italy) 7-11th june 2015.
- 10) Ciranna L.,** (2015) “Activation of serotonin type 7 (5-HT₇) receptors rescues metabotropic glutamate receptor-mediated synaptic plasticity and learning in a mouse model of Fragile X Syndrome”. *Invited seminar*, Institut de Pharmacologie Moléculaire et Cellulaire, CNRS, Sophia Antipolis, Nice (France), 10th february 2015.
- 9) Ciranna L.,** (2015) “Telethon: La sindrome del cromosoma X fragile”, RAI con Telethon: nessuno si arrende, UnoMattina, RAI 1, Roma, 14 dicembre 2015.
- 8) Ciranna L.,** (2014) “The serotonin receptor subtype 7 (5-HT₇) modulates hippocampal synaptic transmission and plasticity: a possible novel therapeutic target in cognitive diseases”. *65th National Meeting of the Società Italiana di Fisiologia*, Anacapri (NA), Italy, 28-30 September 2014.
- 7) Ciranna L.,** (2014) “La sindrome del cromosoma X fragile: descrizione del progetto GGP13145 e profilo dei ricercatori coinvolti”, RAI con Telethon, UnoMattina, RAI 1, Roma, 14 dicembre 2014.
- 6) Ciranna L.** (2013) “The 5-HT₇ receptor for serotonin: a possible novel therapeutic target in Fragile X Syndrome”. *FRAXA Investigators meeting* “Treatment Strategies for Fragile X”, Southbridge (MA), U.S.A., 29 sept.-2 oct. 2013
- 5) Ciranna L.** (2013) “Selective activation of 5-HT₇ receptors as a new therapeutic strategy for Fragile X Syndrome”. *International workshop of the European Mind and Metabolism Association (EMMA)*: “Moody Amnesia? Further Understanding of Serotonin 7 Receptors' Neuro-Psycho-pharmacology”, Roma (Italy), 23 september 2013.
- 4) Ciranna L.** (2013) Serotonin modulates synaptic transmission and metabotropic glutamate receptor-mediated synaptic plasticity in the hippocampus of wild-type and Fmr1 KO mice, a model of Fragile X Syndrome: implications for novel therapeutic strategies. *Spring Hippocampal Research Conference*, Taormina (Italy) 9-14 june 2013.

- 3) **Ciranna L.** (2013) “Modulazione della trasmissione e della plasticità sinaptica da parte dei recettori 5-HT₇ per la serotonina: una nuova strategia terapeutica per la Sindrome del Cromosoma X Fragile”, *invited seminar*, Università degli Studi Aldo Moro di Bari, Bari 4th march 2013.
- 2) **Ciranna L., Costa L. and Santangelo F.** (2005). Modulation of synaptic transmission by PACAP in the CA1 region of hippocampus: involvement of pre- and post-synaptic mechanisms. *56° Congresso Nazionale della Società Italiana di Fisiologia*, Palermo (Italy), 27-30 september 2005, *Acta Physiol.* 188.
- 1) **Ciranna L.** (1995). Norepinephrine modulates the spiking activity of red nucleus neurones in the rat: opposite effects mediated by α_2 and β adrenoceptors. *Meeting of the European Neuroscience Association*, Amsterdam (The Netherlands), 3-5 september 1995.

ABSTRACTS

- 36) **Ciranna L., Costa L., Spatuzza M., Bonaccorso C.M., D’Antoni S., Gulisano W., Tropea M.R., Leopoldo M., Lacivita E., Puzzo D., Catania M.V.** (2018). *In vivo* treatment with a 5-HT₇ receptor agonist rescues synaptic plasticity, dendritic spine morphology, learning and behavior in a mouse model of Fragile X Syndrome. *11th FENS Forum of Neuroscience*, Berlin (Germany), 7-11 July 2018.
- 35) **Chisari M., Ciranna L. and Sortino M.** (2017). Modulation of astrocyte processes by GPCR: functional changes in cellular activity. *38° Congresso Nazionale della Società Italiana di Farmacologia*, Rimini (Italy), 25-28 October 2017.
- 34) **Costa L., Sardone L.M., Spatuzza M., Bonaccorso C.M., D’Antoni S., Leopoldo M., Lacivita E., Catania M.V. and Ciranna L.** (2016) Activation of 5-HT₇ receptors for serotonin rescues hippocampal synaptic plasticity in a mouse model of Fragile X Syndrome through a cyclic AMP-mediated mechanism involving Cyclin-dependent Kinase 5 and protein synthesis. *Society for Neuroscience meeting*, Program No. 696.04. 2016 Neuroscience Meeting Planner. San Diego, CA, (USA): Society for Neuroscience, 2016. Online.
- 33) **Costa L., Sardone L.M., Spatuzza M., Bonaccorso C.M., D’Antoni S., Leopoldo M., Lacivita E., Catania M.V. and Ciranna L.** (2016) Activation of serotonin 5-HT₇ receptors rescues hippocampal synaptic plasticity in a mouse model of Fragile X Syndrome through a cyclic AMP-mediated mechanism. *67° Congresso Nazionale della Società Italiana di Fisiologia*, Catania (Italy), 21-23 september 2016.
- 32) **Leopoldo M.; Lacivita E.; Niso M.; Costa L.; Sardone L.M.; Perrone R. and Ciranna L.** (2016) 5-HT₇ Receptors activation as a novel therapeutic strategy in Fragile X Syndrome: new arylpiperazine-based agonists with optimized pharmacokinetic properties. *XXIV National Meeting in Medicinal Chemistry*, Perugia (Italy), 11-14 September 2016.
- 31) **Spatuzza M., D’Antoni S., La Quatra G., Bonaccorso C.M., Leopoldo M., Ciranna L. and Catania M.V.** (2015) Effect of 5-HT₇ receptor activation on dendritic spines in wild-type and *Fmr1* KO mice. *Society for Neuroscience meeting*, Program No. 491.18/E36, 2015 Neuroscience Meeting Planner. Chicago, Illinois, (USA): Society for Neuroscience, 2015. Online.
- 30) **Costa L., Sardone L.M., Spatuzza M., Bonaccorso C.M., D’Antoni S., Puzzo D., Gulisano W., Leopoldo M., Lacivita E., Catania M.V. and Ciranna L.** (2015). Activation of serotonin type 7 (5-HT₇) receptors as a novel therapeutic strategy in Fragile X Syndrome. *XVIII Telethon Scientific Convention*, Riva del Garda (Italy) 9-11 March 2015.
- 29) **Costa L., Sardone L.M., Spatuzza M., Bonaccorso C.M., D’Antoni S., Puzzo D., Leopoldo M., Lacivita E., Catania M.V. and Ciranna L.** (2014). Potential role of novel 5-HT₇ receptor agonists as pharmacological tools in Fragile X Syndrome. *Society for Neuroscience meeting*, Program No. 699.01. 2014 Neuroscience Meeting Planner. Washington, DC (USA): Society for Neuroscience, 2014. Online.

- 28) Aloisi E., Dupuis J. P., Costa L., Haberl M. G., Ginger M., Ladepeche L., Drago F., Piazza P. V., Ciranna L., Groc L., Catania M. V. and Frick A.** (2014) Altered mGlu5 Receptor Surface Dynamics are Linked to Abnormal NMDA Receptor Function and Plasticity in Fragile X Syndrome. *Current Neuropharmacology*, 12 Suppl. 1, 1-2. 8th International Meeting on Metabotropic Glutamate Receptors, Taormina (Italy) 28th september -3rd october 2014.
- 27) Catania, M.V., Spatuzza M., Aloisi E., D'Antoni S., Dupuis, J.P., Costa L., Bonaccorso C.M., Molinaro G., Battaglia G., Musumeci S.A., Davidovic L., Bardoni B., Ciranna L., Nicoletti F., Groc L and Frick A.** (2014) Dysfunctions of Metabotropic Glutamate Receptor Subtype 5 (mGlu5) Receptors in a Mouse Model of Fragile X Syndrome. *Current Neuropharmacology*, 12 Suppl. 1, 7-8. 8th International Meeting on Metabotropic Glutamate Receptors, Taormina (Italy) 28th september -3rd october 2014.
- 26) Spatuzza M., Aloisi E., D'Antoni S., Bonaccorso C.M., Molinaro G., Battaglia G., Musumeci S.A., Davidovic L., Bardoni B., Ciranna L., Nicoletti F., Frick A. and Catania, M.V.,** (2014) Dysfunctions of Metabotropic Glutamate Receptor Subtype 5 (mGlu5) Receptors in a Mouse Model of Fragile X Syndrome. *Current Neuropharmacology*, 12 Suppl. 1, 57. 8th International Meeting on Metabotropic Glutamate Receptors, Taormina (Italy) 28th september -3rd october 2014.
- 25) Costa L., Bonaccorso C.M., Musumeci S.A., Catania M., and Ciranna L.** (2013) Intracellular mechanisms responsible for serotonin-mediated reversal of metabotropic glutamate receptor-mediated long-term depression (mGluR-LTD) in wild-type and Fmr1 KO mouse hippocampus, *Society for Neuroscience meeting*, Program No. 518.13, 2013 Neuroscience Meeting Planner. San Diego, CA, (USA): Society for Neuroscience, 2013. Online.
- 24) Costa L., Licata F., Li Volsi G. and Ciranna L.** (2012) Pituitary Adenylate Cyclase Activating Polypeptide (PACAP) PAC1 receptor activation modulates CA3-CA1 transmission in the rat hippocampus interacting with acetylcholine. *XIV Congress of the Italian Society of Neuroscience and 1st Joint Meeting with the Israel Society for Neuroscience*, Catania april 19-22 2012.
- 23) Costa L., Spatuzza M., Trovato C., Bonaccorso C.M., Musumeci S.A., Catania M.V. and Ciranna L.** (2011) 5-HT₇ receptor activation reverses mGluR-LTD in the hippocampus of wild-type and Fmr1 knockout mice. *8th IBRO World Congress of Neuroscience*, Firenze 14-18 june 2011.
- 22) Costa L., Spatuzza M., Trovato C., Bonaccorso C.M., Musumeci S. A., Catania M.V. and Ciranna L.** (2010) Serotonin 5-HT₇ receptor activation rescues CA1 pyramidal neurons from mGluR-LTD in wild type and in Fmr1 knockout mice. *40th Annual meeting of the Society for Neuroscience*, San Diego U.S.A., 13-17 novembre. 757.25/M18 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2010. Online.
- 21) Cardile V., Pannuzzo G., Alvares E., Caggia S., Ciranna L. and Perciavalle V.** (2010) Delayed onset of symptoms of Krabbe disease in twitcher mice treated with a galactose-free diet enriched in soy isoflavones and antioxidants. *40th Annual meeting of the Society for Neuroscience*, San Diego, CA, U.S.A., 13-17 novembre. 866.12/W8. 2010 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2010. Online.
- 20) Costa L, Trovato C., Musumeci S., Catania M. V. and Ciranna L.** (2009) Age-dependent modulation by serotonin of AMPA receptor-mediated synaptic transmission in rat and mouse hippocampus. *39th Annual meeting of the Society for Neuroscience*, Chicago (U.S.A.) 316.4, october 17-21.
- 19) Costa L, Trovato C., Musumeci S., Catania M. V. and Ciranna L.** (2009) Effects of serotonin on AMPA receptor-mediated synaptic transmission in rat and mouse hippocampus: different roles of 5-HT_{1A} and 5-HT₇ receptors during development. *60° Congresso Nazionale della Società Italiana di Fisiologia*, Siena 23-25 settembre 2009. *Acta Physiologica* 2009, Vol. 197, suppl. 672: P47, pp. 53-54.

- 18) Costa L., Ciranna L. and Santangelo F.** (2008) Endogenous pituitary adenylate cyclase-activating polypeptide (PACAP) regulates synaptic transmission in rat hippocampus: opposite effects mediated by PAC1 and VPAC2 receptors and additional modulation of glutamate re-uptake. *59° Congresso Nazionale della Società Italiana di Fisiologia*, Cagliari (Italy) 17-19 september 2008. *Acta Physiologica* Vol. 194, suppl. 665 : P39.
- 17) Chimirri A., De Luca L., Ferro S., De Sarro G., Ciranna L. and Gitto R.** (2008) Combined strategies for the discovery of ionotropic glutamate receptors antagonists. *XIX National meeting on Medicinal Chemistry*, Verona (Italy) 14-18 september 2008.
- 16) Ferro S., Gitto, R., De Luca L., De Sarro G., Russo E., Ciranna L., Costa L. and Chimirri A.** (2008) New indole derivatives as NMDA/NR2B receptor antagonists: design, synthesis and pharmacological properties. *XIII meeting Strutture eterocicliche nella ricerca farmaceutica*, Palermo (Italy) 18-21 may 2008.
- 15) Gitto, R., De Luca L., Ferro S., Occhiuto F., Samperi S., De Sarro G., Citraro R., Ciranna L., Costa L., and Chimirri A.** (2007) Rational design, synthesis and biological profile of new potent and selective NMDA-NR2B receptor antagonists. *Frontiers in CNS and oncology medicinal chemistry*, Siena (Italy) 7-9 October 2007.
- 14) Costa L., Ciranna L. and Santangelo F.** (2007) Modulation of AMPA-mediated synaptic transmission by PACAP in rat hippocampus. *58° Congresso Nazionale della Società Italiana di Fisiologia*, Lecce (Italy) 19-21 September 2007, *Acta Physiol.* Vol. 191, suppl. 657, P40, p.59.
- 13) Gitto, R., De Luca L., Pagano B., Ferro S., De Sarro G., Citraro R., Ciranna L., Costa L. and Chimirri A.** (2007). AMPA receptor antagonists: synthesis and pharmacological evaluation. *5th Joint Meeting on Medicinal Chemistry*, June 17-21 2007, Portoroz (Slovenia); *Farmaceutski Vestnik* Vol. 58; 21-24.
- 12) Costa L., Laureanti F., Castiglione M., Ciranna L. and Santangelo F.** (2006) Localization of pre-synaptic PAC₁ receptors for PACAP (Pituitary Adenylate Cyclase Activating Peptide) in the CA1 region of rat hippocampus. *57 Congresso Nazionale della Società Italiana di Fisiologia*, Ravenna (Italy), 25-27 september 2006, *Acta Physiol.* P49, pp. 36-37.
- 11) Ciranna L. and Cavallaro S.** (2001) PACAP and VIP modulate synaptic transmission in the CA1 region of rat hippocampus. *31st Annual Meeting Society for Neuroscience*, San Diego, CA (U.S.A.), 477.4, November 10-15.
- 10) Licata F., Li Volsi G., Ciranna L. and Santangelo F.** (1997) Serotonin-GABA interaction in the red nucleus of rats. *27th Annual Meeting Society for Neuroscience*, New Orleans, LA (U.S.A.), October 25-30.
- 9) Li Volsi G., Licata F., Ciranna L. and Santangelo F.** (1996) 5-HT modifies glutamate-evoked activation of second-order vestibular neurones. *The 2nd Meeting of European Neuroscience*, Palais de la Musique et des Congrès, Strasbourg (France), 24-28 September.
- 8) Ciranna L., Licata F., Li Volsi G. and Santangelo F.** (1996) Neurotransmitter-mediated control of the firing activity of rubral neurones in the rat: interactions between noradrenaline and GABA. *The 2nd Meeting of European Neuroscience*, Palais de la Musique et des Congrès, Strasbourg (France), 24-28 September.
- 7) Ciranna L., Licata F., Li Volsi G., Maugeri G. and Santangelo F.** (1995). Norepinephrine modulates the spiking activity of red nucleus neurones in the rat: opposite effects mediated by α_2 and β adrenoceptors. *Meeting of the European Neuroscience Association*, Amsterdam (Netherlands), 3-5 september 1995, *European Journal of Neuroscience*, Suppl. No.8.
- 6) Licata F., Li Volsi G., Maugeri G., Ciranna L. and Santangelo F.** (1995). Coinvolgimento di recettori NMDA nella modulazione serotoninergica dell'input motorio al Nucleo Rosso. *VI Congresso della Società Italiana di Neuroscienze*, Milano (Italy), 25-28 june, *Ricerca Scientifica ed Educazione Permanente*, suppl. 99: 252, 1995.

- 5) **Ciranna L., Feltz P. and Schlichter R.** (1993). G-protein mediated inhibition of calcium currents by serotonin in cultured rat melanotrophs. *5th joint meeting between the British and Italian Societies of Pharmacology*, Roma (Italy), sept. 13th-16th.
- 4) **Ciranna L., Mougnot D., Feltz P. and Schlichter R.** (1992). Serotonin inhibits L-type calcium currents in porcine pituitary intermediate lobe cells. *International symposium on: "The role of serotonin in psychiatric disorders"*, Castres (France), june 24-26.
- 3) **Ciranna L., Mougnot D., Feltz P. and Schlichter R.** (1992). Modulation of GABA and Ca²⁺ currents in the pituitary intermediate lobe. *5th REGIO NEUREX meeting*, Freiburg (Germany).
- 2) **Licata F., Li Volsi G., Maugeri G., Ciranna L. and Santangelo F.** (1990). Noradrenergic responses of vestibular neurons. *Eur. J. Neurosci.*, Suppl.3, 158.
- 1) **Licata F., Li Volsi G., Maugeri G., Ciranna L. and Santangelo F.** (1989). 5-Hydroxy-tryptamine modulates the neuronal firing rate in the superior vestibular nucleus. *Eur. J. Neurosci.*, Suppl. 2, 13.8.