CURRICULUM VITAE

Daniela Puzzo

INFORMAZIONI PERSONALI

Nome: Daniela Puzzo
Luogo e data di nascita: Catania, 14 Novembre 1973
Indirizzo: Dipartimento di Scienze Biomediche e Biotecnologiche, Sezione di Fisiologia, Via Santa Sofia 89 - Torre Biologica, 95123 Catania (ITA)
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FORMAZIONE

- 2007: specializzazione in Biochimica Clinica (70/70 e lode), Facoltà di Medicina e Chirurgia, Università di Catania
- 2002: Dottorato in "Scienze Biomediche Applicate", Università di Catania
- I Sessione 2000: Abilitazione alla professione di Medico Chirurgo
- 1999: Laurea in Medicina e Chirurgia (110/110 e lode), Facoltà di Medicina e Chirurgia, Università di Catania
- 1993: Diploma di Pianoforte, Istituto Musicale V. Bellini, Caltanissetta
- 1992: Licenza Liceale, Liceo Scientifico E. Majorana, Caltagirone (CT)

ESPERIENZE PROFESSIONALI

- 2022-oggi: Professore Ordinario di Fisiologia, Dipartimento di Scienze Biomediche e Biotecnologiche, Università di Catania
- 2018-2022: Professore Associato di Fisiologia, Dipartimento di Scienze Biomediche e Biotecnologiche, Università di Catania
- 2018-oggi: Ricercatore Associato, Unità Operativa Neurofarmacologia e Neuroscienze Traslazionali, IRCCS Oasi Maria SS. di Troina (EN)
- 2015-2018: Visiting Professor, Taub Institute for Research on Alzheimer's Disease and the Aging Brain, Columbia University, New York, NY, USA
- 2008-2017: Ricercatore, Dipartimento di Scienze Fisiologiche, Università di Catania
- 2007-2008: Associate Researcher, Neuropathology, Dept. of Pathology, Taub Institute for Research on Alzheimer's Disease and the Aging Brain, Columbia University, New York, NY, USA
- 2006: Fellow, Italian Academy for the Advanced Studies in America at Columbia University, New York, NY, USA
- 2005: Post-doctoral Research Scientist, Neuropathology, Dept. of Pathology, Taub Institute for Research on Alzheimer's Disease and the Aging Brain, Columbia University, New York, NY, USA
- 2002-2003: Post-doctoral Research Scientist, Neurophysiology, Center of Dementia Research, Nathan Kline Institute/NYU School of Medicine, Orangeburg, NY, USA
- 1999-2002: Dottorando, Dipartimento di Scienze Fisiologiche, Università di Catania

ATTIVITÀ DIDATTICA

- 2022-oggi: Fisiologia, Master in Psiconeuroendocrinoimmunologia
- 2018-oggi: Fisiologia, CdL in Terapia Occupazionale
- 2022-oggi: Fisiologia, Scuola di Specializzazione in Urologia
- 2017-oggi: Fisiologia, Scuola di Specializzazione in Neuropsichiatria Infantile
- 2015-oggi: Fisiologia, Scuola di Specializzazione in Chirurgia Vascolare
- 2015-2016: Fisiologia, CdL in Dietistica
- 2011-2015: Fisiologia, CdL in Scienze Motorie
- 2011-2015: Fisiologia, Scuola di Specializzazione in Tossicologia Clinica
- 2011-2012: Fisiologia, CdL in Tecnico di Laboratorio Biomedico
- 2011-2012: Demoetnoantropologia, CdLM in Scienze Infermieristiche e Ostetriche
- 2010-oggi: Fisiologia I e II, CdLM in Medicina e Chirurgia

- 2009-oggi: Biofisica e Fisiologia, CdLM in Medicina e Chirurgia
- 2009-2011: Fisiologia Applicata, CdL in Scienze Motorie

COORDINAMENTO LABORATORIO DI RICERCA
Principal Investigator *Laboratory Neurophysiology of Learning and Memory, Aging and Alzheimer's Disease*
Dipartimento di Scienze Biomediche e Biotecnologiche, Università di Catania

Membri attuali:
Walter Gulisano (MD, PhD), assegnista
Maria Rosaria Tropea (MD, PhD), assegnista
Roberta Trovato (Neurobiologist), borsista
Valeria Vacanti (MD), dottoranda in Neuroscienze
Giulia Scudellà: studentessa CdLM in Medicina e Chirurgia, allieva Scuola Superiore di Catania
Carlo Uccellatore: studente CdLM in Medicina e Chirurgia, allievo Scuola Superiore di Catania
Arianna Zanetti: studentessa CdLM in Medicina e Chirurgia

Ex membri: Alessandro Centaro, Elia Chiavetta, Valentina Davì, Federico Giannino, Tiziana Lombardo, Alessandra Romano, Giulia Sanfilippo, Diego Spadaro, Alberto Torrisi (interni per tesi sperimentale CdLM Medicina e Chirurgia)

COLLEGIO DOCENTI DOTTORATO (UNIVERSITÀ DI CATANIA)
- 2019-oggi: Neuroscience
- 2017-2019: Basic and Applied Biomedical Sciences
- 2011-2012: Basic and Applied Biomedical Sciences
- 2009-2012: Neuroscienze

RELATORE TESI DI LAUREA E DI DOTTORATO
- 2014-oggi: relatore e correlatore tesi sperimentali studenti CdLM Medicina e Chirurgia, Univ. Catania
- 2014-2021: valutatore esterno tesi di dottorato (Univ. Firenze, Verona, Milano, Genova)
- 2012-13: relatore e correlatore tesi studenti CdL in Scienze Motorie, Univ. Catania
- 2011-oggi: relatore e correlatore tesi di dottorato, Univ. Catania
- 2008-oggi: membro commissioni di laurea per vari CdL della Scuola "Facoltà di Medicina", Univ. Catania
- 2023-oggi: Tutor neuroscience e tecniche di laboratorio (elettrofisiologia, imaging, studi comportamentali) per studenti di Medicina e di dottorato in Italia e all'estero

RESPONSABILE SCIENTIFICO PROGETTI DI RICERCA PER ASSEGNISTI E BORSISTI
- 2023-oggi: "Validation of a semi-immersive virtual reality system for the study of memory in murine models"
- 2023-oggi: "Mechanisms underlying in crosstalk between α7nAChRs and the glutamatergic system in Alzheimer's disease pathophysiology"
- 2022-23: "Role of dopamine D3 receptors in synaptic plasticity and memory in physiological conditions, during aging and neurodegenerative disorders"
- 2021-oggi: "Support for the infrastructure management and the development of the use cases for the 3DLab-Sicilia project"
- 2019-2021: "Interplay among amyloid-β peptide, tau and α7 nicotinic acetylcholine receptors at the synapse: from physiology to Alzheimer's disease"
- 2012-2013: "Role of adhesion molecule in hippocampal plasticity and memory"

PREMI E RICONOSCIMENTI SCIENTIFICI
- 2023-oggi: Member IUPS-Europhysiology Program Committee
- 2020-2022: Membro del Consiglio direttivo della Società Italiana di Fisiologia, Coordinatore Comitato per la Sperimentazione Animale
- 2018-2021: Society for Neuroscience Program Committee Member

- 2018-now: Membro del Comitato Scientific del Center for Advanced Preclinical in vivo Research (CAPiR), University di Catania
- 2013: Premio SIF, Società Italiana di Fisiologia
- 2007 e 2009: Contributo Facoltà per la pubblicazione "Puzzo et al, J Neurosci. 2005" e "Puzzo et al, J Neurosci. 2008"
- 2007: Awarded Faculty position of Associate Professor, Touro College of Pharmacy, New York (NY) USA
- 2006: Fellowship Program at the Italian Academy, Italian Academy for the Advanced Studies in America at Columbia University, New York (NY)
- 2004-2011: Travel Fellowships European Federation of Neurology, Alzheimer's Association

BREVETTI - FILING (The Trustees Of Columbia University In The City Of New York)
1. Phosphodiesterase inhibitors and uses thereof - PCT Patent WO/2009/124119; 2. Tau protein screening assay - PCT Patent WO/2009/033151; 3. Methods and compositions for enhancing memory United States Patent Application 20100081613-A1.

FINANZIAMENTI (RUOLO: PI)
- 2023-2025: Coordinatore Nazionale "Mechanisms underlying the role of dopamine D3 receptors at the hippocampal synapse: focus on aging and Alzheimer's disease". PRIN 2022.
- 2021-2024: Coordinatore Unità di Ricerca Università di Catania "Interaction between cholinergic and glutamatergic synaptic transmission at tripartite synapse in the pathophysiology of Alzheimer's disease". PRIN 2020.
- 2020-2022: Principal Investigator "Role of dopamine D3 receptors in aging and Alzheimer's disease" Piano Incentivi per la Ricerca di Ateneo, Linea di intervento 2 "Ricerca di Dipartimento".
- 2022-oggi: Responsabile scientifico Università di Catania per il progetto "Creazione di una rete regionale per l'erogazione di servizi innovativi basati su tecnologie avanzate di visualizzazione - 3dLab-Sicilia", PO-FESR 2014-2020 Linea 1.1.5
- 2021-2023: Coordinatore use case Dipartimento di Scienze Biomediche e Biotecnologiche per il progetto "VESPA 2.0 (Virtual Environment for a Superior neuro-PsychiAtry)", PO-FESR 2014-2020 Linea 1.1.5
- 2020-2023: Coordinatore use case ADnet Dipartimento di Scienze Biomediche e Biotecnologiche per il progetto "Creazione di una rete regionale per l'erogazione di servizi innovativi basati su tecnologie avanzate di visualizzazione - 3dLab-Sicilia", PO-FESR 2014-2020 Linea 1.1.5
- 2018-2019: Intranasal administration of Alprazolam for treatment of Anxiety: background and therapeutic focus (MDM Spa, Monza, Italy)
- 2010-2012: Principal Investigator for Initiated Investigator Research Grant Award Alzheimer's Association #IIRG-09-134220; "Amyloid-beta peptide is necessary for hippocampal synaptic plasticity and memory"
- 2009-2012: Coordinator Unit of Catania for Progetto Neuroscienze – Compagnia di San Paolo #2008.2363; "Molecular mechanisms and structural changes required for memory persistence: from invertebrates to mammals"
- 2007-2009: Principal Investigator for New Investigator Research Grant Alzheimer's Association #NIRG-07-59597; "Functional role of Beta-amyloid in synaptic plasticity and memory"

EDITORE
- 2017-oggi: Associate Editor in Frontiers, Clinical and Translational Physiology; Guest Associate Editor in Frontiers in Molecular Neuroscience, Review Editor in Cellular Neurophysiology, Review Editor in Integrative Physiology
- 2016-oggi: Scientific Board pH
- 2015-oggi: Editorial Board International Journal of Aging & Clinical Research
- 2015-oggi: Editorial Board Trends in Clinical Research
- 2013-oggi: Associate Editor Journal of Alzheimer's Disease

CAPITOLI LIBRI

INTERNAZIONALI:

- 2018: Special issue "Alzheimer's Disease: New Beginnings" (vol. 6 Advances in Alzheimer's Disease); editors J. Perry et al., by IOS Press
- 2016: "Genes, Environment and Alzheimer's Disease"; editors O. Lazarov and G. Tesco, by Academic Press
- 2012-2013: Special issue "Alzheimer's Disease: Advances for a New Century" (vol. 3 Advances in Alzheimer's Disease); editors J. Perry et al., by IOS Press

ITALIANO:

- 2018-2019: "Fisiologia umana: Fondamenti", Edi Ermes
- 2014-2015: "Fisiologia", EDRA Editore (traduttore)
- 2011-2012: "Fisiologia", Poletto Editore

SOCIETÀ SCIENTIFICHE: Società Italiana di Fisiologia, Società Italiana di Neuroscienze, Society for Neuroscience

ALTRE ATTIVITÀ SCIENTIFICHE

- 2017: Responsabile valutazione progetti per la French National research Agency (ANR)
- 2007-oggi: Reviewer International Journals (ACS Chemical Neuroscience, Alzheimer's & Dementia, Aging Cell, Behavioural Brain Research, Biochimica et Biophysica Acta – Molecular basis of disease, Brain Research, British Journal of Pharmacology, Current Pharmaceutical Design, Dose-Response, Experimental Brain Research, Frontiers in Integrative Physiology, Frontiers in Neuroscience, Future Medicinal chemistry, International Journal of Public Health and Epidemiology, Journal of Alzheimer's Disease, Journal of Neuroscience Research, Nature Communication, Neurobiology of Aging, Neurobiology of Disease, Neuromolecular Medicine, Neuropharmacology, Neuroscience, Neuroscience & Biobehavioral Reviews, PlosOne, Progress in Neurobiology, Regulatory Peptides, Scientific Reports, The Journal of Neuroscience, Trends in Molecular Medicine)
- 2004-oggi: Responsabile valutazione progetti per Alzheimer's Association (Chicago, IL, USA)

ATTIVITÀ ACCADEMICA (UNIVERSITÀ DI CATANIA)

- 2021-oggi: Delegato del Rettore per la Didattica in ambito Biomedico, Università di Catania
- 2021-oggi: Presidente CdLM in Medicina e Chirurgia
- 2019-2021: Delegato per la Qualità Dipartimento di Scienze Biomediche e Biotecnologiche
- 2018-2021: Presidente CdL in Terapia Occupazionale
- 2017-2019: Referente per le disabilità, Dipartimento di Scienze Biomediche e Biotecnologiche
- 2017-2020: Membro del tavolo tecnico per la medicina di genere, Ordine dei Medici di Catania
- 2016-2021: Vice-Presidente CdLM in Medicina e Chirurgia
- 2016-oggi: Coordinatore Tirocini CdLM in Medicina e Chirurgia
- 2013-2015: Referente per le disabilità, Dipartimento di Scienze Bio-mediche
- 2013-oggi: Membro Commissione AQ, CdLM Medicina e Chirurgia
- 2013-oggi: Membro Commissione medicina complementare Ordine dei Medici di Catania
- 2012-2014: Referente per l'internazionalizzazione e l'Erasmus, Dip. Scienze Bio-mediche
- 2010-2022: Membro Commissione di Garanzia Concorsi di ammissione in Medicina e Chirurgia e Professioni Sanitarie; 2023 Referente Ateneo TOLC-MED
- 2009-2021: Responsabile organizzazione e gestione Progress Test e TECO-M studenti CdLM Medicina e Chirurgia

PUBBLICAZIONI E INDICI BIBLIOMETRICI

h-index: 32 (da Scopus)
Citazioni: 4096 (da Scopus)
Articoli in riviste internazionali peer-reviewed: 58
Leadership: 39 (first, last, corresponding author)

PUBBLICAZIONI IN PEER-REVIEWED INTERNATIONAL JOURNALS

1. Tropea MR, Gulisano W, Vacanti V, Arancio O, **Puzzo D***, Palmeri A. Nitric oxide/cGMP/CREB pathway and amyloid-beta crosstalk: From physiology to Alzheimer's disease. Free Radic Biol Med. 2022 Nov 20;193(Pt 2):657-668. doi: 10.1016/j.freeradbiomed.2022.11.022.
2. Tropea MR, Torrisi A, Vacanti V, Pizzone D, **Puzzo D***, Gulisano W. Application of 3D Printing Technology to Produce Hippocampal Customized Guide Cannulas. eNeuro. 2022 Sep 13:ENEURO.0099-22.2022. doi: 10.1523/ENEURO.0099-22.2022.
3. Nichols RA, Gulisano W, **Puzzo D**. Editorial: Beta Amyloid: From Physiology to Pathogenesis. Front Mol Neurosci. 2022 Mar 14;15:876224. doi: 10.3389/fnmol.2022.876224.
4. Tropea MR, Sanfilippo G, Giannino F, Davì V, Gulisano W, **Puzzo D**. Innate Preferences Affect Results of Object Recognition Task in Wild Type and Alzheimer's Disease Mouse Models. J Alzheimers Dis. 2022;85(3):1343-1356. doi: 10.3233/JAD-215209.
5. Caruso G, Grasso M, Fidilio A, Torrisi SA, Musso N, Geraci F, Tropea MR, Privitera A, Tascedda F, **Puzzo D**, Salomone S, Drago F, Leggio GM, Caraci F. Antioxidant Activity of Fluoxetine and Vortioxetine in a Non-Transgenic Animal Model of Alzheimer's Disease. Front Pharmacol. 2021 Dec 24;12:809541. doi: 10.3389/fphar.2021.809541.
6. Tropea MR, Li Puma DD, Melone M, Gulisano W, Arancio O, Grassi C, Conti F, **Puzzo D.** Genetic deletion of α7 nicotinic acetylcholine receptors induces an age-dependent Alzheimer's disease-like pathology. Prog Neurobiol. 2021 Nov;206:102154. doi: 10.1016/j.pneurobio.2021.102154.
7. **Puzzo D**, Conti F. Conceptual and Methodological Pitfalls in Experimental Studies: An Overview, and the Case of Alzheimer's Disease. Front Mol Neurosci. 2021 Jun 15;14:684977. doi: 10.3389/fnmol.2021.684977.
8. Torrisi SA, Lavanco G, Maurela OM, Gulisano W, Laudani S, Geraci F, Grasso M, Barbagallo C, Caraci F, Bucolo C, Ragusa M, Papaleo F, Campolongo P, **Puzzo D**, Drago F, Salomone S, Leggio GM. A novel arousal-based individual screening reveals susceptibility and resilience to PTSD-like phenotypes in mice. Neurobiology of Stress 14 (2021) 100286 https://doi.org/10.1016/j.ynstr.2020.100286.
9. **Puzzo D**, Argyrousi EK, Staniszewski A, Zhang H, Calcagno E, Zuccarello E, Acquarone E, Fa' M, Li Puma DD, Grassi C, D'Adamio L, Kanaan NM, Fraser PE, Arancio O. Tau is not necessary for amyloid-β-induced synaptic and memory impairments. J Clin Invest. 2020 Sep 1;130(9):4831-4844. doi: 10.1172/JCI137040.
10. Torrisi SA, Geraci F, Tropea MR, Grasso M, Caruso G, Fidilio A, Musso N, Sanfilippo G, Tascedda F, Palmeri A, Salomone S, Drago F, **Puzzo D**, Leggio GM, Caraci F. Fluoxetine and Vortioxetine Reverse Depressive-Like Phenotype and Memory Deficits Induced by Aβ1-42 Oligomers in Mice: A Key Role of Transforming Growth Factor-β1. Front Pharmacol. 2019 Jun 21;10:693. doi: 10.3389/fphar.2019.00693.
11. Acquarone E, Argyrousi EK, van den Berg M, Gulisano W, Fà M, Staniszewski A, Calcagno E, Zuccarello E, D'Adamio L, Deng SX, **Puzzo D**, Arancio O, Fiorito J. Synaptic and memory dysfunction induced by tau oligomers is rescued by up-regulation of the nitric oxide cascade. Mol Neurodegener. 2019 Jun 27;14(1):26. doi: 10.1186/s13024-019-0326-4.
12. van Goethem NP, Paes D, **Puzzo D***, Fedele E, Rebosio C, Gulisano W, Palmeri A, Wennogle LP, Peng Y, Bertrand D, Prickaerts J. Antagonizing α7 nicotinic receptors with methyllycaconitine (MLA) potentiates receptor activity and memory acquisition. Cell Signal. 2019 Oct;62:109338. doi: 10.1016/j.cellsig.2019.06.003.
13. Gulisano W, Melone M, Ripoli C, Tropea MR, Li Puma DD, Giunta S, Cocco S, Marcotullli D, Origlia N, Palmeri A, Arancio O, Conti F, Grassi G, **Puzzo D**. Neuromodulatory action of picomolar extracellular Aβ42 oligomers on pre- and postsynaptic mechanisms underlying synaptic function and memory. J Neurosci. 2019 May 24. pii: 0163-19. doi: 10.1523/JNEUROSCI.0163-19.2019
14. **Puzzo D**. Aβ oligomers: role at the synapse. Aging (Albany NY). 2019 Feb 8. doi: 10.18632/aging.101818.
15. Leggio GM, Di Marco R, Gulisano W, D'Ascenzo M, Torrisi SA, Geraci F, Lavanco G, Dahl K, Giurdanella G, Castorina A, Aitta-Aho T, Aceto G, Bucolo C, **Puzzo D**, Grassi C, Korpi ER, Drago F, Salomone S. Dopaminergic-GABAergic interplay and alcohol binge drinking. Pharmacol Res. 2019 Jan 12;141:384-391. doi: 10.1016/j.phrs.2019.01.022.
16. Costa L, Sardone LM, Bonaccorso CM, D'Antoni S, Spatuzza M, Gulisano W, Tropea MR, **Puzzo D**, Leopoldo M, Lacivita E, Catania MV, Ciranna L. 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. 2018 Oct 2;11:353. doi: 10.3389/fnmol.2018.00353.
17. Gulisano W, Melone M, Li Puma DD, Tropea MR, Palmeri A, Arancio O, Grassi C, Conti F, **Puzzo D**. The effect of amyloid-β peptide on synaptic plasticity and memory is influenced by different isoforms, concentrations, and aggregation status. Neurobiol Aging. 2018 Nov;71:51-60. doi: 10.1016/j.neurobiolaging.2018.06.025.
18. Gulisano W, Tropea MR, Arancio O, Palmeri A, **Puzzo D**. Sub-efficacious doses of phosphodiesterase 4 and 5 inhibitors improve memory in a mouse model of Alzheimer's disease. Neuropharmacology. 2018 Aug;138:151-159. doi: 10.1016/j.neuropharm.2018.06.002.
19. Gulisano W, Maugeri D, Baltrons MA, Fà M, Amato A, Palmeri A, D'Adamio L, Grassi C, Devanand DP, Honig LS, **Puzzo D***, Arancio O*. Role of Amyloid-β and Tau Proteins in Alzheimer's Disease: Confuting the Amyloid Cascade. J Alzheimers Dis. 2018;64(s1):S611-S631. doi: 10.3233/JAD-179935.

20. **Puzzo D**, Piacentini R, Fá M, Gulisano W, Li Puma DD, Staniszewski A, Zhang H, Tropea MR, Cocco S, Palmeri A, Fraser P, D'Adamio L, Grassi C, Arancio O. LTP and memory impairment caused by extracellular Aβ and Tau oligomers is APP-dependent. Elife. 2017 Jul 11;6. pii: e26991. doi: 10.7554/eLife.26991.
21. Palmeri A, Ricciarelli R, Gulisano W, Rivera D, Rebosio C, Calcagno E, Tropea MR, Conti S, Das U, Roy S, Pronzato MA, Arancio O, Fedele E, **Puzzo D**. Amyloid-β Peptide Is Needed for cGMP-Induced Long-Term Potentiation and Memory. J Neurosci. 2017 Jul 19;37(29):6926-6937. doi: 10.1523/JNEUROSCI.3607-16.2017.
22. Prickaerts J, Van Goethem NP, Gulisano W, Argyrousi EK, Palmeri A, **Puzzo D**. Physiological and pathological processes of synaptic plasticity and memory in drug discovery: Do not forget the dose-response curve. Eur J Pharmacol. 2017 May 31. pii: S0014-2999(17)30390-4. doi: 10.1016/j.ejphar.2017.05.058.
23. Gulisano W, Bizzoca A, Gennarini G, Palmeri A, **Puzzo D**. Role of the adhesion molecule F3/Contactin in synaptic plasticity and memory. Mol Cell Neurosci. 2017 Jun;81:64-71. doi: 10.1016/j.mcn.2016.12.003.
24. Gennarini G, Bizzoca A, Picocci S, **Puzzo D**, Corsi P, Furley AJW. The role of Gpi-anchored axonal glycoproteins in neural development and neurological disorders. Mol Cell Neurosci. 2017 Jun;81:49-63. doi: 10.1016/j.mcn.2016.11.006.
25. **Puzzo D**, Raiteri R, Castaldo C, Capasso R, Pagano E, Tedesco M, Gulisano W, Drozd L, Lippiello P, Palmeri A, Scotto P, Miniaci MC. CL316,243, a β3-adrenergic receptor agonist, induces muscle hypertrophy and increased strength. Sci Rep. 2016 Nov 22;5:37504. doi: 10.1038/srep37504.
26. Koppensteiner P, Trinchese F, Fà M, **Puzzo D**, Gulisano W, Yan S, Poussin A, Liu S, Orozco I, Dale E, Teich AF, Palmeri A, Ninan I, Boehm S, Arancio O. Time-dependent reversal of synaptic plasticity induced by physiological concentrations of oligomeric Aβ42: an early index of Alzheimer's disease. Sci Rep. 2016 Sep 1;6:32553. doi: 10.1038/srep32553.
27. Palmeri A, Mammana L, Tropea MR, Gulisano W, **Puzzo D.** Salidroside, a bioactive compound of Rhodiola Rosea, ameliorates memory and emotional behavior in adult mice. J Alzh Dis, 2016 52:65-75.
28. Leggio GM, Catania MV, **Puzzo D**, Spatuzza M, Pellitteri R, Gulisano W, Torrisi SA, Giurdanella G, Piazza C, Impellizzeri AR, Gozzo L, Navarria A, Bucolo C, Nicoletti F, Palmeri A, Salomone S, Copani A, Caraci F, Drago F. The antineoplastic drug flavopiridol reverses memory impairment induced by Amyloid-ß1-42 oligomers in mice. Pharmacol Res. 2016 Apr;106:10-20. doi: 10.1016/j.phrs.2016.02.007. Epub 2016 Feb 10.
29. Fa M*, **Puzzo D***, Piacentini R, Staniszewski A, Zhang H, Baltrons MA, et al. Extracellular Tau oligomers produce an immediate impairment of LTP and memory. Sci Rep. 2016 Jan 20;6:19393.
30. **Puzzo D**, Gulisano W, Arancio O, Palmeri A. The keystone of Alzheimer pathogenesis might be sought in Aβ physiology. Neuroscience. 2015 Oct 29;307:26-36.
31. Caraci F, Gulisano W, Guida CA, Impellizzeri AA, Drago F, **Puzzo D***, Palmeri A*. A key role for TGF-β1 in hippocampal synaptic plasticity and memory. Sci Rep. 2015 Jun 10;5:11252.
32. **Puzzo D**, Gulisano W, Palmeri A, Arancio O. Rodent models for Alzheimer's disease drug discovery. Expert Opin Drug Discov. 2015 Apr 30:1-9.
33. Bollen E, Akkerman S, **Puzzo D**, Gulisano W, Palmeri A, D'Hooge R, Balschun D, Steinbusch HW, Blokland A, Prickaerts J. Object memory enhancement by combining sub-efficacious doses of specific phosphodiesterase inhibitors. Neuropharmacology. 2015 Aug;95:361-6.
34. **Puzzo D**, Bizzoca A, Loreto C, Guida CA, Gulisano W, Frasca G, Bellomo M, Castorina S, Gennarini G, Palmeri A. Role of F3/contactin expression profile in synaptic plasticity and memory in aged mice. Neurobiol Aging. 2015 Apr;36(4):1702-15.
35. Teich AF, Nicholls RE, **Puzzo D**, Fiorito J, Purgatorio R, Fa' M, Arancio O. Synaptic therapy in Alzheimer's disease: a CREB-centric approach. Neurotherapeutics. 2015 Jan;12(1):29-41.
36. Cantarella G, Di Benedetto G, **Puzzo D**, Privitera L, Loreto C, Saccone S, Giunta S, Palmeri A, Bernardini R. Neutralization of TNFSF10 ameliorates functional outcome in a murine model of Alzheimer's disease. Brain. 2015 Jan;138(Pt 1):203-16.
37. Ripoli C, Cocco S, Li Puma DD, Piacentini R, Mastrodonato A, Scala F, **Puzzo D**, D'Ascenzo M, Grassi C. Intracellular accumulation of amyloid-β (Aβ) protein plays a major role in Aβ-induced alterations of glutamatergic synaptic transmission and plasticity. J Neurosci. 2014 Sep 17;34(38):12893-903.
38. Bollen E*, **Puzzo D***, Rutten K, Privitera L, De Vry J, Vanmierlo T, Kenis G, Palmeri A, D'Hooge R, Balschun D, Steinbusch HM, Blokland A, Prickaerts J. Improved long-term memory via enhancing cGMP-PKG signaling requires cAMP-PKA signaling. Neuropsychopharmacology. 2014 Oct;39(11):2497-505.
39. Ricciarelli R*, **Puzzo D***, Bruno O, Canepa E, Gardella E, Rivera D, Privitera L, Domenicotti C, Marengo B, Marinari UM, Palmeri A, Pronzato MA, Arancio O, Fedele E. A novel mechanism for cyclic adenosine monophosphate-mediated memory formation: Role of amyloid beta. Ann Neurol. 2014 Apr;75(4):602-7.
40. **Puzzo D**, Lee L, Palmeri A, Calabrese G, Arancio O. Behavioral assays with mouse models of Alzheimer's disease: practical considerations and guidelines. Biochem Pharmacol. 2014 Apr 15;88(4):450-67.
41. **Puzzo D**, Loreto C, Giunta S, Musumeci G, Frasca G, Podda MV, Arancio O, Palmeri A. Effect of phosphodiesterase-5 inhibition on apoptosis and beta amyloid load in aged mice. Neurobiol Aging. 2014 Mar;35(3):520-31.
42. Podda MV, Piacentini R, Barbati SA, Mastrodonato A, **Puzzo D**, D'Ascenzo M, Leone L, Grassi C. Role of cyclic nucleotide-gated channels in the modulation of mouse hippocampal neurogenesis. PLoS One. 2013 Aug 22;8(8):e73246.

43. **Puzzo D**, Bizzoca A, Privitera L, Furnari D, Giunta S, Girolamo F, Pinto M, Gennarini G, Palmeri A. F3/Contactin promotes hippocampal neurogenesis, synaptic plasticity, and memory in adult mice. Hippocampus. 2013 Dec;23(12):1367-82.
44. Palmeri A, Privitera L, Giunta S, Loreto C, **Puzzo D**. Inhibition of phosphodiesterase-5 rescues age-related impairment of synaptic plasticity and memory. Behav Brain Res. 2013 Mar 1;240:11-20.
45. **Puzzo D**, Arancio O. Amyloid-β peptide: Dr. Jekyll or Mr. Hyde? J Alzheimers Dis. 2013;33 Suppl 1:S111-20.
46. **Puzzo D**, Privitera L, Palmeri A. Hormetic effect of amyloid-β peptide in synaptic plasticity and memory. Neurobiol Aging. 2012 Jul;33(7):1484.e15-24.
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52. **Puzzo D**, Palmeri A, Arancio O. Involvement of the nitric oxide pathway in synaptic dysfunction following amyloid elevation in Alzheimer's disease. Rev Neurosci. 2006;17(5):497-523.
53. **Puzzo D**, Arancio O. Fibrillar beta-amyloid impairs the late phase of long term potentiation. Curr Alzheimer Res. 2006 Jul;3(3):179-83.
54. **Puzzo D**, Vitolo O, Trinchese F, Jacob JP, Palmeri A, Arancio O. Amyloid-beta peptide inhibits activation of the nitric oxide/cGMP/cAMP-responsive element-binding protein pathway during hippocampal synaptic plasticity. J Neurosci. 2005 Jul 20;25(29):6887-97.
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57. Restivo DA, Lanza S, Giuffrida S, Le Pira F, Drago MT, Di Mauro R, Palmeri A, **Puzzo D**, Di Bella P, Sessa E, Rifici C, D'Aleo G, Muscarà N, Bramanti P. Cortical silent period prolongation in spinocerebellar ataxia type 2 (SCA2). Funct Neurol. 2004 Jan-Mar;19(1):37-41.
58. Di Rosa G, **Puzzo D**, Sant'angelo A, Trinchese F, Arancio O. Alpha-synuclein: between synaptic function and dysfunction. Histol Histopathol. 2003 Oct;18(4):1257-66.

COMUNICAZIONI ORALI E SU INVITO

1. 2023, Jun 9,10,16. Organizer and speaker "Innovation 3D: New Challenges for a Future in Virtual Reality". Final event 3DLab-Sicilia Project. Catania - Palermo (Italy).
2. 2022, Nov 9. Invited Speaker Pathology and Cell Biology Basic Science Seminar Series. "Role of amyloid-beta peptide in hippocampal synaptic plasticity and memory: from physiology to Alzheimer's disease". Columbia University Events, New York (NY), USA.
3. 2022, Jul 8. Invited Speaker Meeting The crucial balance of NO signalling from Synapse to Disease. "Role of the NO/cGMP pathway in learning and memory: from physiology to Alzheimer's disease". FENS Satellite Symposium, Paris (France)
4. 2019, Sept 26-29. Speaker Symposium: Early cognitive deficits in ageing and Alzheimer' disease: from identification of disease' mechanisms to implementation of rescuing strategies. "Phosphodiesterase inhibitors as a possible therapeutic target in aging and Alzheimer's disease". National Congress of the Italian Society of Neuroscience (SINS), Perugia (Italy)
5. 2018, Dec 5-9. Invited speaker "Role of amyloid-beta peptide in synaptic plasticity and memory: from physiology to Alzheimer's disease". The International Medical Students' Congress of Bucharest. Bucharest (Romania)
6. 2018, Apr 27-29. Invited speaker "Sex differences in learning and memory". XVIII National Congress AIDM (Italian Association Medical Women) and MWIA (Medical Women International Association) Southern Europe Regional Meeting. Palermo (Italy).
7. 2018, Apr 5. Invited speaker PhD Programs Università Politecnica delle Marche "Amyloid-beta peptide: from physiology to Alzheimer's disease". Ancona (Italy)
8. 2017, Nov 11-15. Chair and speaker Nanosymposium: Synaptic Signaling Deficits in Alzheimer's Disease. "Oligomers of amyloid-beta and tau impair synaptic plasticity and memory in an APP-dependent fashion". Neuroscience 2017. Washington DC (USA)

9. 2017, Oct 1-4. Chair and speaker Symposium: Shaping glutamatergic transmission by intrinsic mechanisms and cross-talking neurotransmitters: from synaptic function to synaptic dysfunction. "cGMP and Aβ crosstalk: relevance of physiological synaptic mechanisms for Alzheimer's disease". National Congress of the Italian Society of Neuroscience (SINS), Ischia (Italy)
10. 2017, Jun 16. Invited speaker PhD Program Research Training group GRK1715 "Relevance of hormesis in learning and memory: from physiology to Alzheimer's disease". Friedrich Schiller University of Jena, Jena (Germany)
11. 2016, Nov 12-16. Nanosymposium: Alzheimer's Synaptic Dysfunction. "Amyloid-beta peptide is required for the cGMP-induced long-term potentiation and memory". Neuroscience 2016. San Diego (CA, USA)
12. 2016, Oct 11-14. Invited Speaker for the Symposium: Lo stato preclinico della malattia di Alzheimer: dalle evidenze neurobiologiche alle nuove strategie di diagnosi e trattamento farmacologico. "Lo stato preclinico della malattia di Alzheimer: come studiarlo nei modelli animali?". XIX Congresso Nazionale della Società Italiana di Neuropsicofarmacologia. Acireale (Italy)
13. 2016, Sept 21-23. Speaker for the Symposium: New insights on hippocampal plasticity: from development to age-related neurodegenerative diseases. "Amyloid-β peptide and cGMP crosstalk: relevance in hippocampal synaptic plasticity". 67° Annual Meeting Italian Society of Physiology (SIF). Catania (Italy)
14. 2016, Feb 18. Invited speaker PhD School in Neuroscience "Dr. Jekyll or Mr. Hyde? The strange case of amyloid-beta peptide from physiology to Alzheimer's disease". Università di Verona, Verona (Italy)
15. 2015, Jul 11-17. Invited speaker "Cognitive processing: the role of phosphodiesterase-5 as new target". 13th Summer School of Neuroscience: Cognition the target. Catania (Italy)
16. 2015, Jun 7-11. Invited speaker and chair for the Symposium: Hippocampal synaptic plasticity in physiological conditions and in cognitive dysfunction. "Amyloid-beta peptide between physiology and patholog". Spring Hippocampal Research Conference. Taormina (Italy)
17. 2015, Mar 17. Invited speaker "Dr. Jekyll e Mr. Hyde: lo strano caso della proteina beta-amiloide, tra sinapsi, invecchiamento e Malattia di Alzheimer". The Brain Week - INRCA Lecture on Brain Aging 2015. Ancona (Italy)
18. 2015, Mar 12. Invited speaker PhD Schools in Biophysics and in Neuroscience "Role of cAMP/cGMP signaling in synaptic plasticity and memory: from physiology to Alzheimer's disease". Institute of Physiology, Università Cattolica del Sacro Cuore. Roma (Italy)
19. 2014, Sept 28-30. "Role of the cell adhesion molecule F3/contactin in synaptic plasticity and memory in aged mice." 65° Annual Meeting Italian Society of Physiology (SIF). Anacapri (Italy)
20. 2013, Oct 24-25. Invited speaker "Physiological role of Amyloid-beta peptide and its implication in Alzheimer Disease". 86° Congress Italian Society of Experimental Biology (SIBS). Palermo (Italy)
21. 2012, Apr 19-22. Speaker for the Symposium: Physiological role of amyloid-beta peptide. "Physiological and hormetic role of amyloid-beta peptide in synaptic plasticity and memory" and Chair for the Symposium: Mechanisms underlying synaptic dysfunction in Alzheimer's disease. XIV Congress of the Italian Society for Neuroscience (SINS). Catania (Italy).
22. 2011, Sept 25-28. Oral communication "Hormetic effect of Amyloid-beta peptide in synaptic plasticity and memory". 62° Annual Meeting Italian Society of Physiology (SIF). Sorrento (Italy)
23. 2011, Aug 28-Sept 2. Invited speaker and Chair for the Symposium: Cyclic GMP-Phosphodiesterase Inhibitors as Therapeutic Agents in Nervous System Disorders. "Phosphodiesterase 5 inhibitors as therapeutic agents in Alzheimer's disease". International Society of Neurochemistry and European Society of Neurochemistry (ISN-ESN) Meeting. Athens (Greece)
24. 2010, Apr 28-May 1. Invited speaker "Amyloid-beta peptide in synaptic plasticity and memory: a bridge between physiology and pathology". First Workshop on synaptic plasticity: from bench to bed side. Messina (Italy)
25. 2010, Apr 10. Organizer and speaker National Congress Is it just Water? "Hormetic effect of Amyloid-beta peptide in synaptic plasticity and memory". Catania (Italy)
26. 2009, Nov 10-11. "Role of amyloid-beta peptide in Alzheimer's disease: from synaptic dysfunction to therapy". 8° National Biotechnology Congress (Istituto Nazionale Biostrutture e Biosistemi - INBB). Roma (Italy)
27. 2009, Sept 23-25. Speaker for the Symposium: Cellular and molecular mechanisms underlying synaptic plasticity and memory. "Physiological role of Amyloid-beta peptide in synaptic plasticity and memory" 60° Annual Meeting Italian Society of Physiology (SIF). Siena (Italy)
28. 2009, Jul 11-16. "Amyloid- beta peptide is required for synaptic plasticity and memory". International Conference on Alzheimer's Disease (ICAD). Vienna (Austria)
29. 2008, Nov 15-19. "Amyloid-beta-peptide is critical for hippocampal LTP induction and memory acquisition". Neuroscience 2008. Washington DC (USA)
30. 2008, Jul 26-31. "Amyloid- beta peptide as a positive modulator of synaptic plasticity and memory". International Conference on Alzheimer's Disease (ICAD). Chicago (IL, USA)
31. 2007, Nov 3-7. "Functional role of Amyloid-beta peptide in synaptic plasticity and memory". Neuroscience 2007. San Diego (CA, USA)
32. 2007, Sept 19. Speaker Research Seminar Series Touro College of Pharmacy, Department of Pharmaceutical and Biomedical Sciences "Physiological aspects of memory and its impairment in Alzheimer's disease". New York (NY, USA)

33. 2007, Aug 25-28. “Functional role of Amyloid-beta peptide in synaptic plasticity and memory”. 11° Congress European Federation of Neurological Societies (EFNS). Brussels (Belgium)
34. 2005, Jul 1-2. “Amyloid-β-peptide impairs nitric oxide/cGMP/CREB pathway during hippocampal synaptic plasticity”. 78° Meeting Italian Society of Experimental Biology (SIBS). Torino (Italy)
35. 2004, Nov 23-25. “Nitric oxide and cGMP analogs reverse amyloid-β-peptide impairment of long-term potentiation”. International symposium on Nitric Oxide - cyclic GMP signal transduction in brain. Valencia (Spain)
36. 2004, Sept 4-8. “Nitric oxide and cGMP analogs reverse amyloid-beta-peptide impairment of hippocampal long-term potentiation”. 8° Congress European Federation of Neurological Societies (EFNS). Paris (France)
37. 2003, Sept 29-Oct 2. “cGMP analogs reverse amyloid-β-peptide-induced impairment of long-term potentiation in hippocampal slices”. 54° Annual Meeting Italian Society of Physiology (SIF). Chieti (Italy)

CAPACITÀ E COMPETENZE

PERSONALI
Coordinatore scientifico attività di ricerca, Coordinatore gruppi e Commissioni per la didattica in Medicina, Collaborazioni nazionali e internazionali, Organizzazione di eventi scientifici, didattici e divulgativi

LINGUISTICHE
Madre lingua: italiano
Altre lingue: inglese (ottima capacità di scrittura, lettura ed espressione orale)

TECNICHE
INFORMATICHE
Mac Os, Microsoft Windows, Microsoft Office, Open Office, Pspad, Corel Draw, Adobe Collection (Photoshop, In Design, Illustrator, Bridge), Firefox, Internet Explorer, Safari, Total Commander, Web Creation (Html), Web Mastering, Multimedia (Steinberg Cubase, Cool Edit Pro, Note Worthy Composer, I-Movie), pClamp, Sigma Plot, Systat, Graphpad Prism, Mendeley, Scion Image, Image J, Hvs Image, Freezeframe

SCIENTIFICHE
Registrazioni elettrofisiologiche in vitro, impianto di cannule intraippocampali, studi comportamentali su modelli animali (Morris Water Maze, Radial Arm Water Maze, Object Recognition, Object Location, Open Field, Fear Conditioning, Elevated Plus Maze, Forced Swim Test, Murble Burying, Grip Strenght test), Biologia Molecolare (Western Blot, ELISA, Genotipizzazione), Immunocitochimica, Realtà virtuale (oculus quest) per la diagnosi e la riabilitazione

ARTISTICHE
- 2010: Pubblicazione “Ricettario di Nonna Maria. Un distillato di saggezza millenaria”. Nuova Ipsa Editore, Palermo
- 2009: Associazione Artistica “Medici in Vena”
- 2007: Organizzazione spettacolo “Music and Fencing”, New York Premiere opera lirica “Selenal” (composizione ed esecuzione). Italian Academy for Advanced Studies in America, New York (NY), USA
- 2006: Duo “Riveduti e Corretti”, pianoforte e percussioni arabe
- 2004: Membro SIAE, Musicista e compositore
- 2004: Autore dell’opera lirica contemporanea “Nikael” (ASA “Selenal”)
- 2006-oggi: Autore di raccolte musicali per solo piano, quartetto d’archi, voce
- Pittura e disegno con diverse tecniche (olio e acrilico su tela, carboncino), Pirografia, Creazione gioielli

La sottoscritta Daniela Puzzo, consapevole che le dichiarazioni false comportano l’applicazione delle sanzioni penali previste dall’art. 76 del D.P.R. 445/2000, dichiara che le suindicate informazioni corrispondono a verità. La sottoscritta Daniela Puzzo autorizza il trattamento dei dati personali ai sensi del D. lgs. 196/03.

F.to Daniela Puzzo
(Firma autografa omessa ai sensi dell’art. 3 del D. Lgs. n. 39/1993)

Catania, 25/07/2023