



Unit of
Molecular Neuroscience
Prof. Marcello D'Amelio

CURRICULUM VITAE

Name: **Marcello** Surname: **D'Amelio**
Date of birth: **17/11/1974** Place of birth: **Montemilone (PZ)**
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Position: **Full Professor in Physiology**
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EDUCATION

2008 Master in Human Clinical Trials (post-graduate degree)
Dept. Experimental Medicine, University of Rome "La Sapienza", Italy
2007 Neuroscience PhD
Dept. Neurology, Medical School University of Rome Tor Vergata
2000 Master (Italian Laurea) MSc, *Graduated cum Laude*
Department of Pharmaco-Biology, University of Bari, Italy

CURRENT POSITIONS

2019-present **Full Professor in Human Physiology**
Dept. Medicine and Surgery, University Campus Bio-medico, Rome, Italy
2015-present **Director of Molecular Neuroscience Unit**
Dept. Medicine and Surgery, University Campus Bio-medico, Rome, Italy
Director of Laboratory of Molecular Neuroscience
Dept. Experimental Neuroscience, European Center for Brain Research, IRCCS Santa Lucia Foundation, Rome, Italy

PREVIOUS POSITIONS

2015-2018 **Associate Professor in Human Physiology**
Dept. Medicine and Surgery, University Campus Bio-medico, Rome, Italy
2010-2014 **Assistant Professor**



- 2008-2010 Dept. Medicine and Surgery, University Campus Bio-medico, Rome, Italy
Post-doc
Telethon Fellowship, Dulbecco Telethon Institute, Tor Vergata University, Rome (I);
Dulbecco Telethon Institute recruits brilliant and promising researchers, providing a salary and research funds so that they can work in Italian Institutes of their choosing (see “contribution of science” paragraph for scientific production).
Visiting Scientist
- 2005 Dept. of Pharmacology, Vanderbilt University Medical Center, Nashville (TN, USA).
2004 Dept. of Genome Sciences, University of Washington School of Medicine, Seattle (WA, USA).
2004 Laboratory of Biochemistry of the Regional University Hospital of Tours (France).
Fellowships
- 2004-2007 PhD fellowship, Laboratory of Molecular Psychiatry, University Campus Bio-medico (see “contribution of science” paragraph for scientific production); He was **selected among 120 participants of the Neuroscience PhD course**.
Pre-doctoral Fellowship
- 2001- 2003 Telethon Fellowship, Telethon Institute of Genetics and Medicine, Napoli, Italy
08-2001-2002 Carrier **Break**: Military Service

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

2011-present: 3 Postdocs; 4 PhD students; 5 Master Students (medical; Dept. Medicine and Surgery, University Campus Bio-medico, Rome, Italy). One Postdoc (**V. Cavallucci**), who worked with Dr. D’Amelio for many years, continued her career in research at Catholic University (Rome); **Cavallucci** has been awarded a competitive grant (for under-40 researchers) funded by Italian Ministry of Health; 2 Postdocs are currently Dr D’Amelio’s collaborators: 1 former PhD student (now Postdoc, **Nobili A.**) produced key papers in AD field (including a recent Nature Communications); another Postdoc (**Krashia P.**) has been awarded a very competitive postdoc fellowship by U. Veronesi Foundation. 2 PhD Students (now Postdocs) continued their career research at Pharmaceutical Industry and at University of Lausanne, Switzerland (with Prof. A. Volterra). All medical students supervised by Dr. D’Amelio are currently in Neurology (3) and Psychiatry (2) Residency training programs.

TEACHING ACTIVITIES

- 2015-present Neurobiology of Aging, Medical School, Tor Vergata University, Rome
2015-present Neurophysiology of feeding, Medical School, University Campus Bio-medico, Rome
2015-present Human Physiology & Neurophysiology, Medical School, University Campus Bio-medico, Rome
2011-2014 Physiology and Physiology of human nutrition, University Campus Bio-medico, Rome

INSTITUTIONAL RESPONSIBILITIES

- 2019-present Rector's delegate for the Translational Research
2015-present Medicine and Surgery Faculty member, University Campus Bio-medico, Rome
2011-present Graduate medical Student Advisor, University Campus Bio-medico, Rome
2015-present Member of the Master Science Committee, *Integrated diagnosis and treatment of AD and other dementia*, Medical School, Tor Vergata University, Rome
2015-present Member of the Doctoral School Committee, *Bioengineering and Bioscience*, University Campus Bio-medico, Rome
2010-2015 Member of the Doctoral School Committee, *Neuroscience*, Medical School, Tor Vergata University, Rome

COMMISSIONS OF TRUST

- 2011-present Member of Editorial Board, *Neuromolecular Medicine*
2012-present Member of Editorial Board, *Neuroscience Section, Scientific Reports*
2012-present Member of Editorial Board, *Molecular Neurobiology*



- 2013 Guest Editor of Current Pharmaceutical Design; Thematic Issue: Targeting Synaptic Dysfunction and Neural Connectivity in Neurological and Psychiatric Disorders
- 2012-present Evaluator, Alzheimer's Association, USA
- 2012-2016 Evaluator, Neurological Foundation of New Zealand

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

- 2008-present Member, **Society of Neuroscience**
- 2011-present Member, **Italian Society of Physiology**
- 2010-2015 Member, **Italian Society of Pharmacology**

Contribution to science

Marcello D'Amelio obtained his Degree in Biological Sciences in February 2000, under the supervision of **Ferdinando Palmieri**, Dept. of Pharmaco-Biology, University of Bari (Italy); Master thesis: *Identification of the yeast mitochondrial transporter for oxaloacetate and sulphate*.

Between 2000 and 2003 he was awarded a number of fellowships from Telethon Foundation, to work as a junior scientist at *Telethon Institute of Genetics and Medicine*, Napoli in **Paolo Gasparini**'s Laboratory. There he gained expertise in genetics and developmental neuroembryology (1 publication, *J.Mol.Med*; 80:124-31, 2003).

Then, in 2007 he obtained a PhD in Neuroscience (Department of Neurology, Medical School University of Rome Tor Vergata), working on the association of paraoxonase gene variants with autism in North America, in the laboratory and under the supervision of **Antonio Maria Persico**, (*D'Amelio,...Persico, Mol Psychiatry 10:100, 2005 and other works in the field of neurodevelopmental disorders*).

During his PhD, he was awarded a number of short-term fellowships to work as visiting scientist at 1) *University of Washington School of Medicine*, Seattle (WA, USA): Tutor: **Clement Furlong**; 2) *Vanderbilt University Medical Center*, Nashville (TN, USA): Tutor: **Pat Levitt**; 3) *Laboratory of Biochemistry of the Regional University Hospital of Tours* (France): Tutor: **Christian R. Andres**.

In January 2008, he obtained a Telethon post-doc position in the laboratory directed by **Francesco Cecconi**, at the Department of Biology, University of Tor Vergata. His main scientific interest in this period was the link between the apoptosome and cell death, in neurodegeneration.

In January 2015, he was appointed as **Director of the Laboratory of Molecular Neuroscience** at European Centre for Brain Research, Santa Lucia Foundation, Rome, Italy. Since January 2015, he serves as **Director of the Molecular Neuroscience Unit** at Medical School University Campus Bio-medico in Rome, where he was appointed as Associate Professor. In April 2017, he gained the national qualification as **full professor** in Human Physiology.

In January 2011, he published a Nature Neuroscience paper focusing on the non-apoptotic role of caspase-3 in early AD. This paper has been published few months after the Cell paper by Morgan Sheng (Li et al, *Cell*. 2010;141:859-71). His paper, together with Sheng's work, identified a novel role of caspase-3 in synaptic plasticity, unrelated to classical apoptotic pathway. The non-apoptotic role of caspase-3 in AD was the object of a number of News&Views, Commentaries and Interview Articles by prominent scientists (*Nat. Neurosc.* doi:10.1038/nn0111-5; *Sci. Signal.* doi: 10.1126/scisignal.4154ec2; *Nat. Rev. Drug Discov.* doi:10.1038/nrd3381).

After his seminal work on the role of caspase-3 in dendritic spine degeneration in Tg2576 mouse, he produced several parallel key papers (including *Molecular Cell*; *Nature Cell Biology*; *Journal Cell Biology*) on the role played by apoptotic and autophagy molecules in synaptic degeneration and cell death in neurodegeneration diseases and cancer. He also edited a book on apoptosome's functions with **Francesco Cecconi**. During this period he collaborated with **Guido Kroemer** (F), **Helene Marie** (F), **Morgan Sheng** (USA), **Francesco Cecconi** (I), **Nicola Mercuri** (I), **Marco Molinari** (I), **Paolo Calabresi** (I), **Martine Ammassari-Teule** (I), **Stoykova A** (D).

His most recent major contribution in AD research is the *Nat. Commun.* paper (Nobili et al. 2017, doi:10.1038/ncomms14727). This work focused on an oft-ignored brain area in early AD: the VTA, showing an involvement in AD pathology. This discovery offers the possibility to reappraise the



pathological cascade in AD and reinterpret several previous works, including papers previously published by the D'Amelio group. Almost immediately after publication, D'Amelio received collaboration requests by neurologists and AD scientists; one neuroimaging paper has just been published and several collaborations are ongoing. This work is currently scored in the 98th percentile of tracked articles of a similar age in all journals; and in the 90th percentile in Nat. Commun. (ANSA: Italian study finds Alzheimer's origins - Findings could revolutionize approach to disease).

Publications

La Barbera L, Vedele F, Nobili A, Krashia P, Spoleti E, Latagliata EC, Cutuli D, Cauzzi E, Marino R, Viscomi MT, Petrosini L, Puglisi-Allegra S, Melone M, Keller F, Mercuri NB, Conti F, **D'Amelio M**. Nilotinib restores memory function by preventing dopaminergic neuron degeneration in a mouse model of Alzheimer's Disease. *Prog Neurobiol*. 2021 Jul;202:102031.

Serra L, **D'Amelio M**, Esposito S, Domenico CD, Koch G, Marra C, Mercuri NB, Caltagirone C, Artusi CA, Lopiano L, Cercignani M, Bozzali M. Ventral Tegmental Area Disconnection Contributes Two Years Early to Correctly Classify Patients Converted to Alzheimer's Disease: Implications for Treatment. *J Alzheimers Dis*. 2021 Jun 9;

Nobili A, La Barbera L, **D'Amelio M**. Targeting autophagy as a therapeutic strategy to prevent dopamine neuron loss in early stages of Alzheimer disease. *Autophagy*. 2021 May;17(5):1278-1280. doi: 10.1080/15548627.2021.1909409

De Paola E, Forcina L, Pelosi L, Pisu S, La Rosa P, Cesari E, Nicoletti C, Madaro L, Mercatelli N, Biamonte F, Nobili A, **D'Amelio M**, De Bardi M, Volpe E, Caporossi D, Sette C, Musarò A, Paronetto MP. Sam68 splicing regulation contributes to motor unit establishment in the postnatal skeletal muscle. *Life Sci Alliance*. 2020 Oct;3(10)

Serra L, Scocchia M, Meola G, **D'Amelio M**, Bruschini M, Silvestri G, Petrucci A, Di Domenico C, Caltagirone C, Koch G, Cercignani M, Petrosini L, Bozzali M. Ventral tegmental area dysfunction affects decision-making in patients with myotonic dystrophy type-1. *Cortex*. 2020 Jul;128:192-202.

Borra A, Valeri F, De Luca M, Ernst L, Russo A, Nobili A, Cordella A, Corsetti V, Amadoro G, Mercuri NB, **D'Amelio M**, Ammassari-Teule M. Transient upregulation of translational efficiency in prodromal and early symptomatic Tg2576 mice contributes to A β pathology. *Neurobiol Dis*. 2020 Jun;139:104787.

Nobili A, Krashia P, **D'Amelio M**. Cisd2: a promising new target in Alzheimer's disease *J Pathol*. 2020 Jun;251(2):113-116. doi: 10.1002/path.5436.

Borra A, Valeri F, De Luca M, Ernst L, Russo A, Nobili A, Cordella A, Corsetti V, Amadoro G, Mercuri NB, **D'Amelio M**, Ammassari-Teule M. Transient upregulation of translational efficiency in prodromal and early symptomatic Tg2576 mice contributes to A β pathology. *Neurobiol Dis*. 2020 Jun;139:104787. doi: 10.1016/j.nbd.2020.104787.

Cutuli D, Landolfo E, Decandia D, Nobili A, Viscomi MT, La Barbera L, Sacchetti S, De Bartolo P, Curci A, **D'Amelio M**, Farioli-Vecchioli S, Petrosini L. Neuroprotective Role of Dietary Supplementation with Omega-3 Fatty Acids in the Presence of Basal Forebrain Cholinergic Neurons Degeneration in Aged Mice. *Int J Mol Sci*. 2020 Mar 4;21(5):1741. doi: 10.3390/ijms21051741.

Caligiore D, Silveti M, **D'Amelio M**, Puglisi-Allegra S, Baldassarre G. Computational Modeling of Catecholamines Dysfunction in Alzheimer's Disease at Pre-Plaque Stage.



J Alzheimers Dis. 2020;77(1):275-290.

Corsetti V, Borreca A, Latina V, Giacobuzzo G, Pignataro A, Krashia P, Natale F, Cocco S, Rinaudo M, Malerba F, Florio R, Ciarapica R, Coccurello R, **D'Amelio M**, Ammassari-Teule M, Grassi C, Calissano P, Amadoro G. Passive immunotherapy for N-truncated tau ameliorates the cognitive deficits in two mouse Alzheimer's disease models. *Brain Commun.* 2020 Apr 6;2(1):fcaa039. doi: 10.1093/braincomms/fcaa039.

Romoli M, Krashia P, Sen A, Franciotta D, Gastaldi M, Nobili A, Mancini A, Nardi Cesarini E, Nigro P, Tambasco N, Mercuri NB, Parnetti L, Di Filippo M, **D'Amelio M**, Irani SR, Costa C, Calabresi P. Hippocampal epileptogenesis in autoimmune encephalitis. *Ann Clin Transl Neurol.* 2019 Nov;6(11):2261-2269.

Krashia P, Cordella A, Nobili A, La Barbera L, Federici M, Leuti A, Campanelli F, Natale G, Marino G, Calabrese V, Vedele F, Ghiglieri V, Picconi B, Di Lazzaro G, Schirinzi T, Sancesario G, Casadei N, Riess O, Bernardini S, Pisani A, Calabresi P, Viscomi MT, Serhan CN, Chiurchiù V, **D'Amelio M***, Mercuri NB*. Blunting neuroinflammation with resolvin D1 prevents early pathology in a rat model of Parkinson's disease. *Nat Commun.* 2019 Sep 2;10(1):3945. doi: 10.1038/s41467-019-11928-w. Erratum in: *Nat Commun.* 2019 Oct 14;10(1):4725.

* Equal Contribution

Krashia P, Nobili A, **D'Amelio M**. Unifying Hypothesis of Dopamine Neuron Loss in Neurodegenerative Diseases: Focusing on Alzheimer's Disease. *Front Mol Neurosci.* 2019 May 17;12:123.

La Barbera L, Vedele F, Nobili A, **D'Amelio M**, Krashia P. Neurodevelopmental Disorders: Functional Role of Ambra1 in Autism and Schizophrenia. *Mol Neurobiol.* 2019 Oct;56(10):6716-6724.

Bozzali M, **D'Amelio M**, Serra L. Ventral tegmental area disruption in Alzheimer's disease. *Aging (Albany NY).* 2019 Mar 9;11(5):1325-1326.

Bonsi P, Ponterio G, Vanni V, Tassone A, Sciamanna G, Migliarini S, Martella G, Meringolo M, Dehay B, Doudnikoff E, Zachariou V, Goodchild RE, Mercuri NB, **D'Amelio M**, Pasqualetti M, Bezdard E, Pisani A. RGS9-2 rescues dopamine D2 receptor levels and signaling in DYT1 dystonia mouse models. *EMBO Mol Med.* 2019; 11(1). pii: e9283.

Becher J, Simula L, Volpe E, Procaccini C, La Rocca C, D'Acunzo P, Cianfanelli V, Strappazon F, Caruana I, Nazio F, Weber G, Gigantino V, Botti G, Ciccocanti F, Borsellino G, Campello S, Mandolesi G, De Bardi M, Fimia GM, **D'Amelio M**, Ruffini F, Furlan R, Centonze D, Martino G, Braghetta P, Chrisam M, Bonaldo P, Matarese G, Locatelli F, Battistini L, Ceconi F. AMBRA1 Controls Regulatory T-Cell Differentiation and Homeostasis Upstream of the FOXO3-FOXP3 Axis. *Dev Cell.* 2018;47(5):592-607.e6.

Nobili A, Krashia P, Cordella A, La Barbera L, Dell'Acqua MC, Caruso A, Pignataro A, Marino R, Sciarra F, Biamonte F, Scattoni ML, Ammassari-Teule M, Ceconi F, Berretta N, Keller F, Mercuri NB, **D'Amelio M**. Ambra1 Shapes Hippocampal Inhibition/Excitation Balance: Role in Neurodevelopmental Disorders. *Molecular Neurobiology.* 2018; 55(10):7921-7940.

Serra L*, **D'Amelio M***, Di Domenico C, Dipasquale O, Marra C, Mercuri NB, Caltagirone C, Cercignani M, Bozzali M. In vivo mapping of brainstem nuclei functional connectivity disruption in Alzheimer's disease. *Neurobiology of Aging.* 2018; 72:72-82.

* Equal Contribution

Cordella A, Krashia P, Nobili A, Pignataro A, La Barbera L, Viscomi MT, Valzania A, Keller F, Ammassari-Teule M, Mercuri NB, Berretta N, **D'Amelio M**. Dopamine loss alters the hippocampus-nucleus



accumbens synaptic transmission in the Tg2576 mouse model of Alzheimer's disease. *Neurobiology of Disease*. 2018; 116:142-154.

D'Amelio M, Puglisi-Allegra S, Mercuri N. The role of dopaminergic midbrain in Alzheimer's disease: Translating basic science into clinical practice. *Pharmacological Research*. 2018; 130:414-419.

Ledonne A, Mango D, Latagliata EC, Chiacchierini G, Nobili A, Nisticò R, **D'Amelio M**, Puglisi-Allegra S, Mercuri NB. Neuregulin 1/ErbB signalling modulates hippocampal mGluRI-dependent LTD and object recognition memory. *Pharmacological Research*. 2018; 130:12-24.

D'Amelio M, Nisticò R. Unlocking the secrets of dopamine in Alzheimer's Disease. *Pharmacological Research*. 2018; 128:399.

Landrock KK, Sullivan P, Martini-Stoica H, Goldstein DS, Graham BH, Yamamoto S, Bellen HJ, Gibbs RA, Chen R, **D'Amelio M**, Stoica G. Pleiotropic neuropathological and biochemical alterations associated with Myo5a mutation in a rat Model. *Brain Research*. 2018; 1679:155-170.

D'Amelio M, Serra L, Bozzali M. Ventral Tegmental Area in Prodromal Alzheimer's Disease: Bridging the Gap between Mice and Humans. *Journal of Alzheimer's Disease*. 2018; 63(1):181-183.

Bisicchia E, Latini L, Cavallucci V, Sasso V, Nicolini V, Molinari M, **D'Amelio M***, Viscomi MT*. Autophagy Inhibition Favors Survival of Rubrospinal Neurons After Spinal Cord Hemisection. *Molecular Neurobiology*. 2017; 54(7):4896-4907.

*Co-last contributors

Nobili A, Latagliata EC, Viscomi MT, Cavallucci V, Cutuli D, Giacobuzzo G, Krashia P, Rizzo FR, Marino R, Federici M, De Bartolo P, Aversa D, Dell'Acqua MC, Cordella A, Sancandi M, Keller F, Petrosini L, Puglisi-Allegra S, Mercuri NB, Coccurello R, Berretta N, **D'Amelio M**. Dopamine neuronal loss contributes to memory and reward dysfunction in a model of Alzheimer's disease. *Nature Communications*. 2017; 8:14727.

Krashia P, Martini A, Nobili A, Aversa D, **D'Amelio M**, Berretta N, Guatteo E, Mercuri NB. On the properties of identified dopaminergic neurons in the mouse substantia nigra and ventral tegmental area. *The European Journal of Neuroscience*. 2017; 45(1):92-105.

Guatteo E, Rizzo FR, Federici M, Cordella A, Ledonne A, Latini L, Nobili A, Viscomi MT, Biamonte F, Landrock KK, Martini A, Aversa D, Schepisi C, **D'Amelio M**, Berretta N, Mercuri NB. Functional alterations of the dopaminergic and glutamatergic systems in spontaneous α -synuclein overexpressing rats. *Experimental Neurology*. 2017; 287(Pt 1):21-33.

Gelfo F, Cutuli D, Nobili A, De Bartolo P, **D'Amelio M**, Petrosini L, Caltagirone C. Chronic Lithium Treatment in a Rat Model of Basal Forebrain Cholinergic Depletion: Effects on Memory Impairment and Neurodegeneration. *Journal of Alzheimer's disease*. 2017; 56(4):1505-1518

Costa C, Parnetti L, **D'Amelio M**, Tozzi A, Tantucci M, Romigi A, Siliquini S, Cavallucci V, Di Filippo M, Mazzocchetti P, Liguori C, Nobili A, Eusebi P, Mercuri NB, Calabresi P. Epilepsy, amyloid- β , and D1 dopamine receptors: a possible pathogenetic link? *Neurobiology of Aging*. 2016; 48:161-171

Laricchiuta D, Cavallucci V, Cutuli D, De Bartolo P, Caporali P, Foti F, Finke C, **D'Amelio M**, Manto M, Petrosini L. Effects of Anti-NMDA Antibodies on Functional Recovery and Synaptic Rearrangement Following Hemicerebellectomy. *Neuromolecular Medicine*. 2016; 18(2):190-202.



Krashia P, Ledonne A, Nobili A, Cordella A, Errico F, Usiello A, **D'Amelio M**, Mercuri NB, Guatteo E, Carunchio I. Persistent elevation of D-Aspartate enhances NMDA receptor-mediated responses in mouse substantia nigra pars compacta dopamine neurons. *Neuropharmacology*. 2016; 103:69-78.

Cervetto C, Vergani L, Passalacqua M, Ragazzoni M, Venturini A, Cecconi F, Berretta N, Mercuri N, **D'Amelio M**, Maura G, Mariottini P, Voci A, Marcoli M, Cervelli M. Astrocyte-Dependent Vulnerability to Excitotoxicity in Spermine Oxidase-Overexpressing Mouse. *Neuromolecular Medicine*. 2016; 18(1):50-68.

Klionsky DJ,... **D'Amelio M** et al., Guidelines for the use and interpretation of assays for monitoring autophagy (3rd edition). *Autophagy*. 2016; 12(1):1-222.

Pagliarini V, Pelosi L, Bustamante MB, Nobili A, Berardinelli MG, **D'Amelio M**, Musarò A, Sette C. SAM68 is a physiological regulator of SMN2 splicing in spinal muscular atrophy. *The Journal of Cell Biology*. 2015; 211(1):77-90.

Ledonne A, Nobili A, Latagliata EC, Cavallucci V, Guatteo E, Puglisi-Allegra S, **D'Amelio M***, Mercuri NB*. Neuregulin 1 signalling modulates mGluR1 function in mesencephalic dopaminergic neurons. *Molecular Psychiatry*. 2015; 20(8):959-73.

* Co-corresponding

Nisticò R, Florenzano F, Mango D, Ferraina C, Grilli M, Di Prisco S, Nobili A, Saccucci S, **D'Amelio M**, Morbin M, Marchi M, Mercuri NB, Davis RJ, Pittaluga A, Feligioni M. Presynaptic c-Jun N-terminal Kinase 2 regulates NMDA receptor-dependent glutamate release. *Scientific Reports*. 2015; 5:9035.

Cavallucci V, Bisicchia E, Cencioni MT, Ferri A, Latini L, Nobili A, Biamonte F, Nazio F, Fanelli F, Moreno S, Molinari M, Viscomi MT, **D'Amelio M**. Acute focal brain damage alters mitochondrial dynamics and autophagy in axotomized neurons. *Cell Death & Disease*. 2014; 5:e1545.

Marinelli S, Nazio F, Tinari A, Ciarlo L, **D'Amelio M**, Pieroni L, Vacca V, Urbani A, Cecconi F, Malorni W, Pavone F. Schwann cell autophagy counteracts the onset and chronification of neuropathic pain. *Pain*. 2014; 155(1):93-107.

Cutuli D, De Bartolo P, Caporali P, Tartaglione AM, Oddi D, D'Amato FR, Nobili A, **D'Amelio M***, Petrosini L*. Neuroprotective effects of donepezil against cholinergic depletion. *Alzheimer's Research & Therapy*. 2013; 5(5):50.

* Co-corresponding

Cavallucci V, Berretta N, Nobili A, Nisticò R, Mercuri NB, **D'Amelio M**. Calcineurin inhibition rescues early synaptic plasticity deficits in a mouse model of Alzheimer's disease. *Neuromolecular Medicine*. 2013; 15(3):541-8

Cervelli M, Bellavia G, **D'Amelio M**, Cavallucci V, Moreno S, Berger J, Nardacci R, Marcoli M, Maura G, Piacentini M, Amendola R, Cecconi F, Mariottini P. A New Transgenic Mouse Model for Studying the Neurotoxicity of Spermine Oxidase Dosage in the Response to Excitotoxic Injury. *PloS One*. 2013; 8(6):e64810.

Middei S, Houeland G, Cavallucci V, Ammassari-Teule M, **D'Amelio M**, Marie H. CREB is necessary for synaptic maintenance and learning-induced changes of the AMPA receptor GluA1 subunit. *Hippocampus*. 2013; 23(6):488-99.

Cavallucci V, Nobili A, **D'Amelio M**. Emerging role of mitochondria dysfunction in the onset of neurodegenerative diseases. *Journal of Biological Regulators and Homeostatic Agents*. 2013; 27(2 Suppl):1-9.



Fanelli F, Sepe S, **D'Amelio M**, Bernardi C, Cristiano L, Cimini A, Cecconi F, Ceru' MP, Moreno S. Age-dependent roles of peroxisomes in the hippocampus of a transgenic mouse model of Alzheimer's disease. *Molecular Neurodegeneration*. 2013; 8:8.

D'Amelio M, Nisticò R. Editorial: targeting synaptic dysfunction and neural connectivity in neurological and psychiatric disorders. *Current Pharmaceutical Design*. 2013; 19(36):6391-2.

Cavallucci V, Ferraina C, **D'Amelio M**. Key role of mitochondria in Alzheimer's disease synaptic dysfunction. *Current Pharmaceutical Design*. 2013; 19(36):6440-50.

La Rosa LR, Matrone C, Ferraina C, Panico MB, Piccirilli S, Di Certo MG, Strimpakos G, Mercuri NB, Calissano P, **D'Amelio M**, Nisticò R. Age-related changes of hippocampal synaptic plasticity in A β PP-null mice are restored by NGF through p75NTR. *Journal of Alzheimer's Disease*. 2013; 33(1):265-72.

Nisticò R, Cavallucci V, Piccinin S, Macrì S, Pignatelli M, Mehdawy B, Blandini F, Laviola G, Lauro D, Mercuri NB, **D'Amelio M**. Insulin receptor β -subunit haploinsufficiency impairs hippocampal late-phase LTP and recognition memory. *Neuromolecular Medicine*. 2012; 14(4):262-9

D'Amelio M, Sheng M, Cecconi F. Caspase-3 in the central nervous system: beyond apoptosis. *Trends in Neurosciences*. 2012; 35(11):700-9.

Viscomi MT, **D'Amelio M**. The "Janus-faced role" of autophagy in neuronal sickness: focus on neurodegeneration. *Molecular Neurobiology*. 2012; 46(2):513-21.

D'Amelio M, Rossini PM. Brain excitability and connectivity of neuronal assemblies in Alzheimer's disease: from animal models to human findings. *Progress in Neurobiology*. 2012; 99(1):42-60.

Cavallucci V, **D'Amelio M**, Cecconi F. A β toxicity in Alzheimer's disease. *Molecular Neurobiology*. 2012; 45(2):366-78.

Klionsky DJ, **D'Amelio M**, et al., Guidelines for the use and interpretation of assays for monitoring autophagy. *Autophagy*. 2012; 8(4):445-544.

Viscomi MT*, **D'Amelio M***, Cavallucci V, Latini L, Bisicchia E, Nazio F, Fanelli F, Maccarrone M, Moreno S, Cecconi F, Molinari M. Stimulation of autophagy by rapamycin protects neurons from remote degeneration after acute focal brain damage. *Autophagy*. 2012; 8(2):222-35.

* Equal Contribution

Cavallucci V, **D'Amelio M**. Matter of life and death: the pharmacological approaches targeting apoptosis in brain diseases. *Current Pharmaceutical Design*. 2011; 17(3):215-29.

D'Amelio M, Cavallucci V, Middei S, Marchetti C, Pacioni S, Ferri A, Diamantini A, De Zio D, Carrara P, Battistini L, Moreno S, Bacci A, Ammassari-Teule M, Marie H, Cecconi F. Caspase-3 triggers early synaptic dysfunction in a mouse model of Alzheimer's disease. *Nature Neuroscience*. 2011; 14(1):69-76

Di Bartolomeo S, Corazzari M, Nazio F, Oliverio S, Lisi G, Antonioli M, Pagliarini V, Matteoni S, Fuoco C, Giunta L, **D'Amelio M**, Nardacci R, Romagnoli A, Piacentini M, Cecconi F, Fimia GM. The dynamic interaction of AMBRA1 with the dynein motor complex regulates mammalian autophagy. *The Journal of Cell Biology*. 2010; 191(1):155-68.

D'Amelio M, Cavallucci V, Cecconi F. Neuronal caspase-3 signaling: not only cell death. *Cell Death and Differentiation*. 2010; 17(7):1104-14.



Biamonte F, Assenza G, Marino R, **D'Amelio M**, Panteri R, Caruso D, Scurati S, Yague JG, Garcia-Segura LM, Cesa R, Strata P, Melcangi RC, Keller F. Interactions between neuroactive steroids and reelin haploinsufficiency in Purkinje cell survival. *Neurobiology of Disease*. 2009; 36(1):103-15.

D'Amelio M, Cecconi F. A novel player in the p53-mediated autophagy: Sestrin2. *Cell Cycle*. 2009; 8(10):1467.

Centonze D, Muzio L, Rossi S, Cavasinni F, De Chiara V, Bergami A, Musella A, **D'Amelio M**, Cavallucci V, Martorana A, Bergamaschi A, Cencioni MT, Diamantini A, Butti E, Comi G, Bernardi G, Cecconi F, Battistini L, Furlan R, Martino G. Inflammation triggers synaptic alteration and degeneration in experimental autoimmune encephalomyelitis. *The Journal of Neuroscience*. 2009; 29(11):3442-52

Cimini A, Moreno S, **D'Amelio M**, Cristiano L, D'Angelo B, Falone S, Benedetti E, Carrara P, Fanelli F, Cecconi F, Amicarelli F, Cerù MP. Early biochemical and morphological modifications in the brain of a transgenic mouse model of Alzheimer's disease: a role for peroxisomes. *Journal of Alzheimer's Disease*. 2009; 18(4):935-52.

Tasdemir E, Chiara Maiuri M, Morselli E, Criollo A, **D'Amelio M**, Djavaheri-Mergny M, Cecconi F, Tavernarakis N, Kroemer G. A dual role of p53 in the control of autophagy. *Autophagy*. 2008; 4(6):810-4.

De Zio D, Ferraro E, **D'Amelio M**, Simoni V, Bordi M, Soroldoni D, Berghella L, Meyer BI, Cecconi F. Faf1 is expressed during neurodevelopment and is involved in Apaf1-dependent caspase-3 activation in proneural cells. *Cellular and Molecular Life Sciences*. 2008; 65(11):1780-90.

Tasdemir E, Maiuri MC, Galluzzi L, Vitale I, Djavaheri-Mergny M, **D'Amelio M**, Criollo A, Morselli E, Zhu C, Harper F, Nannmark U, Samara C, Pinton P, Vicencio JM, Carnuccio R, Moll UM, Madeo F, Paterlini-Brechot P, Rizzuto R, Szabadkai G, Pierron G, Blomgren K, Tavernarakis N, Codogno P, Cecconi F, Kroemer G. Regulation of autophagy by cytoplasmic p53. *Nature Cell Biology*. 2008;10(6):676-87.

D'Amelio M, Tino E, Cecconi F. The apoptosome: emerging insights and new potential targets for drug design. *Pharmaceutical Research*. 2008; 25(4):740-51.

D'Amelio M, Cavallucci V, Diamantini A, Cecconi F. Analysis of neuronal cell death in mammals. *Methods in Enzymology*. 2008; 446:259-76.

Martin I, Gauthier J, **D'Amelio M**, Védrine S, Vourc'h P, Rouleau GA, Persico AM, Andres CR. Transmission disequilibrium study of an oligodendrocyte and myelin glycoprotein gene allele in 431 families with an autistic proband. *Neuroscience Research*. 2007; 59(4):426-30

Zermati Y, Mouhamad S, Stergiou L, Besse B, Galluzzi L, Bohrer S, Pauleau AL, Rosselli F, **D'Amelio M**, Amendola R, Castedo M, Hengartner M, Soria JC, Cecconi F, Kroemer G. Nonapoptotic role for Apaf-1 in the DNA damage checkpoint. *Molecular cell*. 2007; 28(4):624-37.

Berger J, Berger S, Tuoc TC, **D'Amelio M**, Cecconi F, Gorski JA, Jones KR, Gruss P, Stoykova A. Conditional activation of Pax6 in the developing cortex of transgenic mice causes progenitor apoptosis. *Development*. 2007; 134(7):1311-22.

D'Amelio M, Ricci I, Sacco R, Liu X, D'Agruma L, Muscarella LA, Guarnieri V, Militerni R, Bravaccio C, Elia M, Schneider C, Melmed R, Trillo S, Pascucci T, Puglisi-Allegra S, Reichelt KL, Macciardi F, Holden JJ, Persico AM. Paraoxonase gene variants are associated with autism in North America, but not in Italy: possible regional specificity in gene-environment interactions. *Molecular Psychiatry*. 2005; 10(11):1006-16.



Wattenhofer M, Di Iorio MV, Rabionet R, Dougherty L, Pampanos A, Schwede T, Montserrat-Sentis B, Arbones ML, Iliades T, Pasquadibisceglie A, **D'Amelio M**, Alwan S, Rossier C, Dahl HH, Petersen MB, Estivill X, Gasparini P, Scott HS, Antonarakis SE. Mutations in the TMPRSS3 gene are a rare cause of childhood nonsyndromic deafness in Caucasian patients. *Journal of Molecular Medicine*. 2002; 80(2):124-31.

Invited review articles

1. **D'Amelio M*** et al. **Pharmacol. Res**, 130:414-419, 2018
2. **D'Amelio M***, Sheng M. **Trends Neuroscience**, 35:700-9, 2012 [IF: 11.1; Citations: 125]
3. **D'Amelio M*** and Rossini PM. **Progress in Neurobiology**, 99:42-60, 2012 [IF: 13.2; Citations: 64]
4. **D'Amelio M*** et al. **Cell Death and Differentiation**, 17:1104-14, 2010 [IF: 8.3; Citations: 241]

Books

Apoptosome: An up-and-coming therapeutical tool, ISBN 978-90-481-3415-1, Editors: Francesco Ceconi, **Marcello D'Amelio**

Fisiologia medica, ISBN: 8821444570, Editors: Walter Boron, Emile Boulpaep, Italian Edition

Prizes

- 2010 Neuroscience Research Prize by Telethon Foundation
- 2013 Bioeconomy Rome, International Prize for "outstanding contributions of young Italian scientist in the field of translational research in neurodegeneration"
- 2014 *Raffaele Giuliano* Prize for " the quality and originality of the scientific production"
- 2017 Awarded by Italian Minister of Health, Beatrice Lorenzin, for scientific merits

Patent

Autophagy enhancing compounds, peptides and peptidomimetic compounds for use in the treatment of neuronal diseases - PCT Patent 2012/076555.

Meetings (D'Amelio gave 42 lectures at national and international meetings. Below is a selected list)

- 2008 Cold Spring Harbor Meeting (USA)
- 2009 Cold Spring Harbor Laboratory Meeting (USA)
- 2009 Neurology School Advanced Studies, organized by Society of Neurology (Italy)
- 2010 European Neurodegenerative Diseases, Oxford (UK)
- 2013 Molecular Basis of hippocampal dysfunction in AD, International Meeting, Pisa (Italy)
- 2014 International Meeting organized by Italian Society of Physiology, Anacapri (Italy).
- 2015 Alzheimer as disconnection syndrome, international meeting, Perugia (Italy)

Reviewer for the following International Journals

EMBO Mol. Med. Journal; Cell Death and Diff.; FEBS Letters; Apoptosis; Autophagy; Neurobiology of Diseases; Journal of Neuroscience; Journal of Neurochemistry; Neuroscience; Cell death and disease; Neuron.

Completed Research supports

- **Alzheimer's Association (USA):** NIRG-11-204588 (2011-2013); Role (PI); Title: Preventing and monitoring onset of synaptic degeneration in early AD
- **Italian Ministry of Research:** 2009P9CE2R_00, PRIN-2009: (2011-2013); Role: PI of Unit; Title:



Silencing of Reelin Pathway in adult mouse hippocampus

- **International Research on Paraplegia (IRP Foundation)**, Switzerland (2012-2014): Role: Co-PI Title: The autophagy machinery as therapeutic target to counteract remote degeneration after spinal cord injury, PI: Maria Teresa Viscomi (Santa Lucia Foundation, Rome)
- **Italian Ministry of Health, Italy (2014-2018)**: Role: PI, Title: Unravelling the mystery of Alzheimer's Disease-related synaptic degeneration.

Ongoing Research supports

- **Italian Ministry of Health, Italy (2019-2022)**: Role: PI, Title: Ventral Tegmental Area dopaminergic midbrain: new therapeutic target in early Alzheimer's Disease;
- **Alzheimer's Association (USA)**: AARG-18-566270 (2018-2021); Role (PI); Title: Targeting dopamine neuronal loss in a model of Alzheimer's Disease;
- **Fondazione Roma, Italy (2020-2023)**: Role PI, Title: Beyond Amyloid Hypothesis: a novel approach to fight Alzheimer's Disease;

In compliance with the Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorize the recipient of this document to use and process my personal details for the purpose of recruiting and selecting staff and I confirm to be informed of my rights in accordance to art. 7 of the above mentioned decree.

Rome, 22-07-2021

Prof. Marcello D'Amelio
