

**BIOGRAPHICAL SKETCH**

<b>NAME</b>		<b>POSITION TITLE</b>	
<b>Marcello D'Amelio</b> Orcid id: 0000-0001-6526-1832		<b>Associate Professor in Neurophysiology / Team Leader</b>	
<i>EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
<b>INSTITUTION AND LOCATION</b>	<b>DEGREE (if applicable)</b>	<b>YEAR(s)</b>	<b>FIELD OF STUDY</b>
University of Bari, Italy	M.S.	2000	Biochemistry and Molecular Biology
University of Rome, "Tor Vergata"	Ph.D.	2008	Neurosciences
University of Rome, "La Sapienza"	Master of Sciences	2008	Clinical Research

**A. Positions and Honors.**

<p>- <b>1998-2000</b> Undergraduate student, University of Bari, (Bari, Italy) Dept. Pharmaco-Biology headed by Prof. Ferdinando Palmieri. Field of study: Identification and characterization of mitochondrial carriers. Tutor: Prof. Luigi Palmieri.</p> <p>- <b>2000- 2001</b> Research Fellow, Medical Genetics at IRCCS "Casa Sollievo della Sofferenza", San Giovanni Rotondo (FG); Field of study: Molecular Genetics of Nonsyndromic Recessive Deafness and Juvenile Hereditary Hemochromatosis . Tutor: Prof. Paolo Gasparini.</p> <p>- <b>2001-2003</b> Research Fellow, Telethon Institute of Genetics and Medicine (Napoli, Italy) headed by Prof. Andrea Ballabio. Field of study: Identification of genes involved in complex diseases. Tutor: Prof. Paolo Gasparini.</p> <p>- <b>2003-2005</b> Research Fellow, Laboratory of Molecular Psychiatry, University of Rome, "Campus-Biomedico", Rome, Italy. Field of study: Molecular Genetics of neuropsychiatry disorders (Autism and Schizophrenia). Tutor: Prof. Antonio Persico.</p> <p>- <b>December 2003</b>, Laboratory of Biochemistry of the Regional University Hospital of Tours (France). Field of study: Genetics of autism. Tutor: Prof. Christian Andres.</p> <p>- <b>July 2004</b>, Department of Genome Sciences, University of Washington School of Medicine, Seattle (WA, USA). Field of study: Paraoxonase enzymes involved in autism disorder. Tutor: Prof. Clement Furlong.</p> <p>- <b>June 2004-June 2005</b>, Department of Pharmacology, Vanderbilt University Medical Center, Nashville (TN, USA). Field of study: Neurodevelopmental Disorders: Genetics and Biochemistry. Tutor: Prof. Pat Levitt.</p> <p>- <b>January 2007-December 2007</b>, Department of Experimental Medicine and Pathology and Research Centre for Clinical Investigation (CRISC), La Sapienza University of Rome, Rome, Italy. Field of study: Clinical Experimentation. Tutor: Prof. R.Verna.</p> <p>- <b>2005-present</b>, Department Experimental Neurosciences, IRCCS "Santa Lucia Foundation", (Rome, Italy). Field of study: Analysis of synaptic degeneration in mouse model of human disease (Alzheimer's Disease and Multiple Sclerosis); Apoptosis and Autophagy applied to neuroscience field; Neurodevelopmental Disorders (Autism).</p> <p>- <b>02/2010-present</b>, Associate Professor in Human Neurophysiology and Head of Molecular Neuroscience Laboratory</p> <p><b>Reviewer for the following International Journals</b> Apoptosis Journal of Neuroscience</p>
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Marcello D'Amelio, PhD

Neuroscience  
Cell Death and Differentiation  
Cell Death and Disease

**Editorial Board Member of**

Neuromolecular Medicine  
Scientific Reports section of Neuroscience (Nature group)  
Current Pharmaceutical Design, Special Guest Editor

**Member of International PhD School in Neurosciences (University of Tor Vergata, Rome, Italy)**

**PROFESSIONAL SOCIETY MEMBERSHIP**

Since 2003 Member of the Italian Society of Biochemistry and Molecular Biology (SIB)  
Since 2004 Member of the Society of Neuroscience (SFN)  
Since 2010 Member of the Italian Society of Pharmacology  
Since 2013 Member of Italia the Society of Physiology

**Scientific Prize**

Bioeconomy Rome 2013, Prize for outstanding contributions of young Italian scientists in the field of translational research in neurodegeneration.

**Patents**

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

**B. Selected peer-reviewed publications (in chronological order).**

**Scientific indicators of productivity**

Official H index: 23  
Total citations: 3959  
n. of peer reviewed papers: 50

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Nobili A, Latagliata C, Viscomi MT, Cavallucci V, Cutuli D, Giacobazzo 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 N, 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, in press, DOI: 10.1038/ncomms14727

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. J Alzheimers Dis. 2017 Feb 7. doi: 10.3233/JAD-160892.

Costa C, Parnetti L, **D'Amelio M**, Tozzi A, Tantucci M, et al. Epilepsy, amyloid- $\beta$ , and D1 dopamine receptors: a possible pathogenetic link?. Neurobiol Aging. 2016 Dec;48:161-171. PubMed PMID: 27701029.

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. Eur J Neurosci. 2017 Jan;45(1):92-105. doi: 10.1111/ejn.13364.

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  $\alpha$ -synuclein overexpressing rats. *Exp Neurol*. 2017 Jan;287(Pt 1):21-33

Bisicchia E, Latini L, Cavallucci V, Sasso V, Nicolin V, Molinari M, **D'Amelio M**, Viscomi MT. Autophagy Inhibition Favors Survival of Rubrospinal Neurons After Spinal Cord Hemisection. *Mol Neurobiol*. 2016 Aug 11.

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. *Sci Rep*. 2015 Mar 12;5:9035. doi: 10.1038/srep09035.

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 Dis*. 2014 Nov 27;5:e1545. doi: 10.1038/cddis.2014.511.

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. *Mol Psychiatry*. 2015 Aug;20(8):959-73. doi: 10.1038/mp.2014.109. **\*Equal senior authors**

Cutuli D., De Bartolo P., Caporali P., Tartaglione A., Oddi D., D'Amato F.R., Nobili A., **D'Amelio M\***. and Petrosini L\*. Neuroprotective effects of donepezil against cholinergic depletion. *Alzheimer's Research & Therapy* 2013, 5:50, 2013. **\*Equal contribution**

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 Med*. 2013 Sep;15(3):541-8. doi: 10.1007/s12017-013-8241-2.

Middei S, Houeland G, Cavallucci V, Ammassari-Teule M, **D'Amelio M** and Marie H. CREB is necessary for synaptic maintenance and learning- induced changes of the AMPA receptor GluA1 subunit. *Hippocampus* 2013 (doi: 10.1002/hipo.22108).

Cavallucci V, Ferraina C, **D'Amelio M**. Key role of mitochondria in Alzheimer's Disease synaptic dysfunction. *Curr Pharm Des*. 2013.

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. *Mol Neurodegener*. 2013;8:8.

Klionsy DJ,...**D'Amelio M**., et al. Guidelines for the use and interpretation of assays for monitoring autophagy. *Autophagy*. 2012 8, 445-544.

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

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 $\beta$ PP-Null Mice are Restored by NGF through p75NTR. *J Alzheimers Dis*. 2012 Sep 6. **\*Equal Senior Authors**.

**D'Amelio M.**, Sheng M., Cecconi F., Caspase-3 in health and disease of the nervous system. Trends Neurosci. 2012 Jul 13.

**D'Amelio M** and Rossini PM. "Brain excitability and connectivity of neuronal assemblies in Alzheimer's Disease" Prog Neurobiol. 2012 ; 99:42-60.

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  $\beta$ -Subunit Haploinsufficiency Impairs Hippocampal Late-Phase LTP and Recognition Memory. Neuromolecular Med. 2012;14:262-9.

Viscomi MT\*, **D'Amelio M\***, Cavallucci V, Latini L, Moreno S., BisicchiaE, Nazio F, Cecconi F. & Marco Molinari M Autophagy activation protects neurons from remote degeneration after acute focal damage, Autophagy. 2012 ;8, 222-235.

\* Equal Contributions

**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 Jan;14:69-76

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. J Alzheimers Dis. 2009

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. J Neurosci. 2009;29:3442-52.

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

**D'Amelio M**, Tino E, Cecconi F. The apoptosome: emerging insights and new potential targets for drug design. Pharm Res. 2008 Apr;25:740-51.

### C. Research Support.

- Early career development grant (University Campus Biomedico, Rome) (2010-2013)
- Projects for Research of National Interest, Italy (2011-2014)
- Grant from the Alzheimer's Association (NIRG-11-204588)
- Grant from Italian Ministry of Health (2014-2017) Unraveling the mystery of Alzheimer's Disease-related synaptic degeneration (Project Code: GR-2011-02351457)
- Grant from International Research on Paraplegia (IRP Foundation), #P141, Switzerland (2013-2015); 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)