

ARIANNA SCUTERI

PERSONAL DETAILS

Date and place of birth: 27/04/1977, Milan - MI (Italy)

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Work address: Experimental Neurology Unit, School of Medicine and Surgery,
University of Milano-Bicocca, Via Cadore 48 – 20900 Monza (MB)
ITALY

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NATIONAL SCIENTIFIC QUALIFICATION (ASN2016): Associate Professor
Competition Sector **05/H1- ANATOMY** from 07/04/2017 to 07/04/2023

Scopus: H-index: 15
Citations: 770

Google Scholar: H-index (i10-index): 16 (19)
Citations: 1051

EDUCATION

January 2005

PhD in Neuroscience, Faculty of Medicine University of Milano-Bicocca, Italy.
Dissertation: “**Study of the molecular mechanisms involved in oxaliplatin neurotoxicity**”.

July 2001

Degree in Medical Biotechnology, Faculty of Medicine University of Milan, Italy
Dissertation: “**Study of the molecular mechanisms activated by Paclitaxel in nervous-like cells**”.
Vote 110/110 cum laude.

1996

Scientific High School Diploma
“G. Cardano”, Milan, Italy
Vote: 60/60.

ACTUAL POSITION

2017- to date Assistant Professor (RtdB, BIO/16 Anatomy), School of Medicine and Surgery, University of Milano-Bicocca, Italy

2019-to date Scientific Board Member of Milan Center for Neuroscience (NeuroMI), Molecular and Cellular Neuroscience Area

PROFESSIONAL EXPERIENCES

- 1999-2001 Research student, Anatomy Institute, Neuroanatomy Section, LITA Segrate, University of Milan, Italy.
- 2001-2004 PhD fellowship, Department of Neuroscience and Biomedical Technology, University of Milan-Bicocca, Italy.
- 2005- 2006 Research fellowship c/o Department of Neuroscience and Biomedical Technology, University of Milan-Bicocca, Italy.
- 2006-2010 Post doc fellowship at the Department of Neuroscience and Biomedical Technologies, Faculty of Medicine, University of Milano-Bicocca, Italy.
- 2010-2012 Scientific Coordinator of the project “Mechanisms of Mesenchymal Stem Cells positive action on the diseases of both central and peripheral nervous system” “Firb Futuro in Ricerca”.
- 2012-2017 Researcher (RtdA, BIO/16 Anatomy) at the Department of Surgery and Interdisciplinary Medicine, University of Milano-Bicocca, Italy.

GRANT ACHIEVED:

FIRB Futuro in Ricerca 2008 RBFR08VSVI_001. Principal Investigator and Scientific National Coordinator of the project “Mechanisms of Mesenchymal Stem Cells positive action on the diseases of both central and peripheral nervous system”, € 358,700.00. Funded by the Italian Minister for University and Research (Ministero Italiano per l’Università e la Ricerca -MIUR).

AWARD: Certificate of merit from the “Fondazione Marisa Bellisario”.

MEMBERSHIPS

Italian Society of Anatomy and Histology
Society for Neuroscience.
Milan Center for Neuroscience.

Ad Hoc Reviewer for Neuroscience, Neuroscience Letters, BioMed Research Central, Brain Research, Stem Cells.

EDITORIAL BOARD MEMBER

World Journal of Stem Cells
BioMed Research Central (Neuroscience area)
ISRN (International Scholarly Research Network) Neuroscience

GRANT EVALUATOR

2020: Israel Science Foundation (ISF)

TEACHING EXPERIENCES

2005-2012 Adjunct professor of Anatomy and Histology for Master Degree course

- of Dentistry, University Milano-Bicocca, and for BSc of Optometry, University Milano-Bicocca.
- 2015- to date Professor of Anatomy for Master Degree course of Dentistry, University Milano-Bicocca.
- 2015- to date Professor of Anatomy for BSc of Optometry, University Milano-Bicocca.
- 2015- to date Assistant professor of Anatomy for Master Degree of Medicine and Surgery, University Milano- Bicocca.
- 2015- to date Professor of the PhD Program in Neuroscience, University Milano-Bicocca.

RESEARCH ACTIVITY

Main topics of research:

- Set up of experimental in vitro and in vivo models of neurological diseases.
- Development of in vitro models to evaluate the antiproliferative and/or neurotoxic effects of different molecules and drugs.
- Real Time PCR techniques for the study of neurological diseases.
- In vitro and in vivo evaluation of Mesenchymal Stem Cells positive action on the diseases of both central and peripheral nervous system (i.e. Diabetic neuropathy and Multiple Sclerosis).
- Neuroprotective molecules screening.

PEER REVIEWED PUBLICATIONS

Fumagalli G, Monfrini M, Donzelli E, Rodriguez-Menendez V, Bonandrini B, Figliuzzi M, Remuzzi A, D'Amico G, Cavaletti G, **Scuteri A**. Protective Effect of Human Mesenchymal Stem Cells on the Survival of Pancreatic Islets. *Int J Stem Cells*. 2019 Dec 31;10.15283/ijsc19094. doi: 10.15283/ijsc19094.

Scuteri A., Monfrini M. Mesenchymal Stem Cells as New Therapeutic Approach for Diabetes and Pancreatic Disorders. *Int J Mol Sci*. 2018 Sep 16;19(9). pii: E2783. doi: 10.3390/ijms19092783.

Rui M, Rossino G, Coniglio S, Monteleone S, **Scuteri A.**, Malacrida A, Rossi D, Catenacci L, Sorrenti M, Paolillo M, Curti D, Venturini L, Schepmann D, Wunsch B, Liedl KR, Cavaletti G, Pace V, Urban E, Collina S. Identification of dual Sigma1 receptor modulators/acetylcholinesterase inhibitors with antioxidant and neurotrophic properties, as neuroprotective agents. *Eur J Med Chem*. 2018 Oct 5; 158:353-370. doi: 10.1016/j.ejmech.2018.09.010.

Monfrini M, Ravasi M, Maggioni D, Donzelli E, Tredici G, Cavaletti G, **Scuteri A.** Comparing the different response of PNS and CNS injured neurons to mesenchymal stem cell treatment. *Mol Cell Neurosci*. 2018; 86:16-24. doi:10.1016/j.mcn.2017.11.004

Collina S, Rui M, Stotani S, Bignardi E, Rossi D, Curti D, Giordanetto F, Malacrida A, **Scuteri A.** Cavaletti G. Are sigma receptor modulators a weapon against multiple sclerosis disease? *Future Med Chem*. 2017. doi: 10.4155/fmc-2017-0122.

Marmioli P, **Scuteri A**, Cornblath DR, Cavaletti G. Pain in chemotherapy-induced peripheral neurotoxicity. *J Peripher Nerv Syst*. 2017. doi: 10.1111/jns.12226.

Monfrini M, Fumagalli G, Donzelli E, Rodriguez-Menendez V, Ballarini E, Carozzi V, Chiorazzi A, Meregalli C, Canta A, Oggioni N, Crippa L, Avezza F, Silvani S, Bonandrini B, Figliuzzi M, Remuzzi A, Porretta-Serapiglia C, Bianchi R, Lauria G, Tredici G, Cavaletti G, **Scuteri A**. Therapeutic potential of Mesenchymal Stem Cells for the treatment of Diabetic Neuropathy. *Exp. Neurol*. 2017; 288:75-84. doi: 10.1016/j.expneurol.2016.11.006.

Bacigaluppi S, Donzelli E, De Cristofaro V, Bragazzi NL, D'Amico G, **Scuteri A**, Tredici G. Human endothelial progenitor cells rescue cortical neurons from oxygen-glucose deprivation induced death. *Neurosci Lett*. 2016; 631:50-55. doi: 10.1016/j.neulet.2016.08.014.

Scuteri A, Cavaletti G. How can neuroplasticity be utilized to improve neuropathy symptoms? *Expert Rev Neurother*. 2016, 16(11): 1235-1236. doi: 10.1080/14737175.2016.1221344.

Nicolini G, Monfrini M, **Scuteri A**. Axonal Transport Impairment in Chemotherapy-Induced Peripheral Neuropathy. *Toxics* 2015, 3: 322-341. doi:10.3390/toxics3030322.

Scuteri A, Ravasi M, Monfrini M, Milano A, D'Amico G, Miloso M, Tredici G. Human Mesenchymal Stem Cells Protect Dorsal Root Ganglia from the Neurotoxic Effect of Cisplatin. *Anticancer Res*. 2015; 35:5383-5390.

Scuteri A, Donzelli E, Rigolio R, Ballarini E, Monfrini M, et al. Therapeutic Administration of Mesenchymal Stem Cells Abrogates the Relapse Phase in Chronic Relapsing-Remitting EAE. *J Stem Cell Res Ther*. 2015; 5:262. doi: 10.4172/2157-7633.1000262.

Maggioni D, Monfrini M, Ravasi M, Tredici G, **Scuteri A**. Neurobasal medium toxicity on mature cortical neurons. *Neuroreport*. 2015; 26: 320-324. doi:10.1097/WNR.0000000000000343.

Scuteri A, Donzelli E, Foudah D, Caldara C, Redondo J, D'Amico G, Tredici G, Miloso M. Mesengenic differentiation: comparison of human and rat bone marrow mesenchymal stem cells. *Int J Stem Cells*. 2014; 7: 127-134. doi:10.15283/ijsc.2014.7.2.127.

Scuteri A, Donzelli E, Rodriguez-Menendez V, Ravasi M, Monfrini M, Bonandrini B, Figliuzzi M, Remuzzi A, Tredici G. A double mechanism for the mesenchymal stem cells' positive effect on pancreatic islets. *PLoS One*. 2014; 9: e84309. doi:10.1371/journal.pone.0084309.

Ravasi M, **Scuteri A**, Pasini S, Bossi M, Menendez VR, Maggioni D, Tredici G. Undifferentiated MSCs are able to myelinate DRG neuron processes through p75. *Exp Cell Res*. 2013; 319: 2989-2999. doi: 10.1016/j.yexcr.2013.08.016.

Marmioli P, Nicolini G, Miloso M, **Scuteri A**, Cavaletti G. The fundamental role of morphology in experimental neurotoxicology: the example of chemotherapy-induced peripheral neurotoxicity. *Ital J Anat Embryol.* 2012; 117: 75-97.

Scuteri A, Ravasi M, Pasini S, Bossi M, Tredici G. Mesenchymal stem cells support dorsal root ganglion neurons survival by inhibiting the metalloproteinase pathway. *Neuroscience.* 2011; 172:12-19. doi: 10.1016/j.neuroscience.2010.10.065.

Donzelli E, Lucchini C, Ballarini E, **Scuteri A**, Carini F, Tredici G, Miloso M. ERK1 and ERK2 are involved in recruitment and maturation of human mesenchymal stem cells induced to adipogenic differentiation. *J Mol Cell Biol.* 2011; 3: 123-131. doi: 10.1093/jmcb/mjq050.

Scuteri A, Miloso M, Foudah D, Orciani M, Cavaletti G, Tredici G. MSC neuronal differentiation ability: a real perspective for Nervous System repair? *Curr Stem Cell Res Ther.* 2011; 6: 82-92.

Scuteri A, Galimberti A, Ravasi M, Pasini S, Donzelli E, Cavaletti G, Tredici G. NGF protects Dorsal Root Ganglion neurons from oxaliplatin by modulating JNK/Sapk and ERK1/2. *Neurosci Lett.* 2010; 486: 141-145. doi: 10.1016/j.neulet.2010.09.028.

Scuteri A, Galimberti A, Maggioni D, Ravasi M, Pasini S, Nicolini G, Bossi M, Miloso M, Cavaletti G, Tredici G. Role of MAPKs in platinum-induced neuronal apoptosis. *Neurotoxicology* 2009; 30: 312- 319. doi: 10.1016/j.neuro.2009.01.003.

Miloso M, **Scuteri A**, Foudah D, Tredici G. MAPKs as mediators of cell fate determination: an approach to neurodegenerative diseases. *Curr Med Chem.* 2008; 15: 538-548.

Scuteri A, Donzelli E, Ravasi M, Tredici G. Adult mesenchymal stem cells support cisplatin-treated dorsal root ganglion survival. *Neurosci Lett.* 2008; 445: 68-72. doi: 10.1016/j.neulet.2008.08.056.

Cavaletti G, Miloso M, Nicolini G, **Scuteri A**, Tredici G. Emerging role of mitogen-activated protein kinases in peripheral neuropathies. *J Peripher Nerv Syst.* 2007; 12: 175-194.

Scuteri A, Nicolini G, Miloso M, Bossi M, Cavaletti G, Windebank AJ, Tredici G. Paclitaxel toxicity in post-mitotic dorsal root ganglion (DRG) cells. *Anticancer Res.* 2006; 26: 1065-1070.

Scuteri A, Cassetti A, Tredici G. Adult mesenchymal stem cells rescue dorsal root ganglia neurons from dying. *Brain Res.* 2006; 1116: 75-81. doi:10.1016/j.brainres.2006.07.127.

Rigolio R, Miloso M, Nicolini G, Villa D, **Scuteri A**, Simone M, Tredici G. Resveratrol interference with the cell cycle protects human neuroblastoma SH-SY5Y

cell from paclitaxel-induced apoptosis. *Neurochem. Int.* 2005; 46: 205-211. doi:10.1016/j.neuint.2004.11.001.

Persohn E, Canta A, Schoepfer S, Traebert M, Mueller L, Gilardini A, Galbiati S, Nicolini G, **Scuteri A.** Lanzani F, Giussani G, Cavaletti G. Morphological and morphometric analysis of paclitaxel and docetaxel-induced peripheral neuropathy in rats. *Eur J Cancer.* 2005; 41:1460-1466. doi: 10.1016/j.ejca.2005.04.006.

Nicolini G, Rigolio R, **Scuteri A.** Miloso M, Saccomanno D, Cavaletti G, Tredici G. Effect of trans-resveratrol on signal transduction pathways involved in paclitaxel-induced apoptosis in human neuroblastoma SH-SY5Y cells. *Neurochem. Int.* 2003; 42: 419-429. doi.org/10.1016/S0197-0186(02)00132-8.

Editor del libro “Effect of Chemotherapeutic Drugs on the Peripheral Nervous System of Human and Animal Experimental Models” 2011. ISBN: 978-81-308-0456-9. Research Signpost 37/661 (2), Fort P.O. Trivandrum-695 023 Kerala, India.”

BOOK CHAPTERS

Treatment of Neurodegenerative Pathologies Using Undifferentiated Mesenchymal Stem Cells.

Scuteri A. in “Stem Cells and Cancer Stem Cells, Volume 6”

DOI 10.1007/978-94-007-2993-3_16 © Springer Science+Business Media B.V. 2012.

Vinka Alkaloid-induced peripheral neuropathy.

Maggioni D. and **Scuteri A.** in “Effect of Chemotherapeutic Drugs on the Peripheral Nervous System of Human and Animal Experimental Models” 2011. ISBN: 978-81-308-0456-9. Research Signpost 37/661 (2), Fort P.O. Trivandrum-695 023 Kerala, India.

ORAL COMMUNICATIONS

Scuteri A. (invited speaker) “Mesenchymal Stem Cells and Neuroprotection”, “Update in Neuroscienze di base: Morfologia e dintorni”. Palermo, 21-22 January 2019, Italy.

Scuteri A. (selected speaker), Donzelli E., Rigolio R., Ballarini E., Monfrini M., Chiorazzi A., Meregalli C., Cavaletti G. Mesenchymal Stem Cells: a promising approach for the treatment of Multiple Sclerosis. NeuroMI 2017, International Symposium: Personalised Medicine in Multiple Sclerosis, 13-15 September 2017, Milano, Italy.

Scuteri A. (invited speaker) Therapeutic potential of mesenchymal stem cells co-transplanted with pancreatic islets for the treatment of type-1diabetes. 3th International Conference and Exhibition on Cell & Gene Therapy 2014, 27-29 October, Las Vegas.

Scuteri A. (selected speaker) “Differentiation of Mesenchymal Stem Cells towards an insulin-releasing phenotype after co-culture with Pancreatic Islets “66° Congresso della Società Italiana di Anatomia e Istologia, 2012 September, Pistoia, Italy.

Scuteri A. (selected speaker) “Bone marrow derived mesenchymal stem cells: biological characteristics and perspectives in clinical applications”. Workshop on Adult Stem Cells: therapeutics applications and research perspectives”. Giornata di studio dell’edizione 2008 del Premio Sapio. 21 November 2008. Milano.

Scuteri A. (selected speaker), Ravasi M., Pasini S., Rigolio R., Bossi M., Tredici G. MSCs allow DRG dissociated neurons long lasting survival by inhibiting metalloproteases. LXII Congresso Società Italiana di Anatomia.14-16 September 2008. Verona, Italy.

Scuteri A., (selected speaker) Nicolini G., Avezza F., Tredici G. Adult mesenchymal stem cells promote neuronal survival and differentiation. LIX Congresso Società Italiana di Anatomia. 18-21 September 2005. Sorrento, Italy.