

BIOGRAPHICAL SKETCH

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NAME Antonio Pisani eRA COMMONS USER NAME: PISANIA	POSITION TITLE Associate Professor of Neurology		
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
University of Catania, Italy	MD	1991	Medicine
University of Catania, Italy	Fellow	1990-1991	Pharmacology
University of Rome, Italy	Residency	1995	Neurology
Ciba-Geigy Laboratories for Neuroscience, Basel, Switzerland	Fellow	1993-1994	Physiology
Dept. of Physiology, New York Medical College, Valhalla, NY	Fellow	1997	Physiology
----- University of Perugia, Italy	PhD	2012	Neuroscience

Personal Statement

Dr. Pisani is a physician-scientist with a long standing interest in the basic and clinical aspects of basal ganglia dysfunction, with a specific interest in dystonia and Parkinson's disease. As Head of the Neurophysiology and Plasticity laboratory at Fondazione Santa Lucia, in Rome, he provides guidance in the planning and execution of the experiments. Since 2003-2004, he has been deeply involved in research on dystonia, focusing on the role of striatal function in the pathogenesis of this movement disorder. In detail, he focused on the functional interplay between striatal dopamine and acetylcholine, characterizing the alterations occurring in distinct rodent models of DYT1 dystonia. His long-term commitment to this field of research is witnessed by the number of peer-review publications as well as by the organization of four editions of an international workshop on dystonia (2007-2009-2011-2013-2015). As a neurologist involved full-time in clinical practice, his main scope has been to try to fill the gaps between basic neuroscience and clinical neurology, by working on animal models of human diseases, specifically movement disorders.

Since 2007 he is Associate Professor of Neurology, at Dept. Neuroscience, University Tor Vergata, Rome, Italy
And head of Neurophysiology and Plasticity laboratory at Fondazione Santa Lucia, Rome, Italy

Member of the Steering Committee for the European project COST on dystonia syndromes, and coordinator of the working group on animal models (http://www.cost.eu/domains_actions/bmbs/Actions/BM1101)

Author and co-author of >150 peer-reviewed publications (H-Index **49**, Thomson Reuters)

B. Positions and Honors.

Positions and Employment

1996 – 2006: Assistant Professor of Neurology, Dept. Neuroscience, University Tor Vergata, Rome, Italy

2007-: Associate Professor of Neurology;

2007- Head of Neurophysiology and Plasticity laboratory at Fondazione Santa Lucia, Rome, Italy

Other Experience and Professional Memberships

2006: Member PhD committee, University of Bordeaux2, France

2007- Member of AERES committee (Inserm Experts, Dept. de l'Evaluation Scientifique), France

2010-2013: Medical and Scientific Advisory Council, Dystonia Medical Research Foundation

2009-2012: Scientific Advisory Board, Bachmann Strauss Dystonia and Parkinson's Foundation

2010- Member Editorial Board *Frontiers in Psychopharmacology*
 2010- Member Editorial Board *Frontiers in Neuroanatomy*
 2009- Member Editorial Board *Parkinson's Disease*
 2010-present: Editorial Board, *Neurobiology of Disease*
 2011: Guest Editor, *Neurobiology of Disease*, Special Issue on Dystonia
 2011-present: Editorial Board, *Synapse*
 2011: Member PhD committee, University of Manchester, UK
 2011-present: Member of the Steering Committee for the European project COST on dystonia syndromes, and coordinator of the working group on animal models (http://www.cost.eu/domains_actions/bmbs/Actions/BM1101)
 2012- Member Editorial Board *Frontiers in Synaptic Neuroscience*
 2012- Member Editorial Board *Neural Plasticity*
 2014- Associate Editor, *Frontiers in Neurology*, Movement Disorders section

Honors

2012 Recipient of the "Stanley Fahn Award", Dystonia Medical Research Foundation, USA.
 1995: Award "Azione Parkinson" for best original basic science work on Parkinson's disease
 1990: Glaxo Prize for Neuropharmacology

C. Selected peer-reviewed publications (15 selected from >150)

1. Sciamanna G, Ponterio G, Mandolesi G, Bonsi P, Pisani A. Optogenetic stimulation reveals distinct modulatory properties of thalamostriatal vs corticostriatal glutamatergic inputs to fast-spiking interneurons. *Sci Rep*. 2015 Nov 17;5:16742. doi: 10.1038/srep16742.
2. Madeo G, Schirinzi T, Maltese M, Martella G, Rapino C, Fezza F, Mastrangelo N, Bonsi P, Maccarrone M, Pisani A. Dopamine-dependent CB₁ receptor dysfunction at corticostriatal synapses in homozygous PINK1 knockout mice. *Neuropharmacology*. 2015 Oct 20;101:460-470.
3. Madeo G, Schirinzi T, Natoli S, Pierantozzi M, Stefani A, Dauri M, Pisani A. Efficacy and safety profile of prolonged release oxycodone in combination with naloxone (OXN PR) in Parkinson's disease patients with chronic pain. *J Neurol*. 2015 Sep;262(9):2164-70. doi: 10.1007/s00415-015-7823-3.
4. Eskow Jaunarajs KL, Bonsi P, Chesselet MF, Standaert DG, Pisani A. Striatal cholinergic dysfunction as a unifying theme in the pathophysiology of dystonia. *Prog Neurobiol*. 2015 Apr;127-128:91-107. doi: 10.1016/j.pneurobio.2015.02.002.
5. Engeln M, Bastide MF, Toulmé E, Dehay B, Bourdenx M, Doudnikoff E, Li Q, Gross CE, Boué-Grabot E, Pisani A, Bezard E, Fernagut PO. Selective Inactivation of Striatal FosB/ Δ FosB-Expressing Neurons Alleviates L-Dopa-Induced Dyskinesia. *Biol Psychiatry*. 2014 Jul 15. pii: S0006-3223(14)00506-X. doi: 10.1016/j.biopsych.2014.07.007
6. Maltese M, Martella G, Madeo G, Fagiolo I, Tassone A, Ponterio G, Sciamanna G, Burbaud P, Conn PJ, Bonsi P, Pisani A. Anticholinergic drugs rescue synaptic plasticity in DYT1 dystonia: role of M1 muscarinic receptors. *Mov Disord*. 2014 Nov;29(13):1655-65.
7. Sciamanna G, Ponterio G, Tassone A, Maltese M, Madeo G, Martella G, Poli S, Schirinzi T, Bonsi P, Pisani A. Negative allosteric modulation of mGlu5 receptor rescues striatal D2 dopamine receptor dysfunction in rodent models of DYT1 dystonia. *Neuropharmacology*. 2014 Oct;85:440-50.
8. Goodchild RE, Grundmann K, Pisani A. New genetic insights highlight 'old' ideas on motor dysfunction in dystonia. *Trends Neurosci*. 2013 Dec;36(12):717-25. doi: 10.1016/j.tins.2013.09.003.
9. Sciamanna G, Tassone A, Mandolesi G, Puglisi F, Ponterio G, Martella G, Madeo G, Bernardi G, Standaert DG, Bonsi P, Pisani A. Cholinergic dysfunction alters synaptic integration between thalamostriatal and corticostriatal inputs in DYT1 dystonia. *J Neurosci*. 2012 Aug 29;32(35):11991-2004
10. Martella G, Tassone A, Sciamanna G, Platania P, Cuomo D, Viscomi MT, Bonsi P, Cacci E, Biagioni S, Usiello A, Bernardi G, Sharma N, Standaert DG, Pisani A. Impairment of bidirectional synaptic plasticity in the striatum of a mouse model of DYT1 dystonia: role of endogenous acetylcholine. *Brain*. 2009 Sep;132(Pt 9):2336-49
11. Sciamanna G, Tassone A, Martella G, Mandolesi G, Puglisi F, Cuomo D, Madeo G, Ponterio G, Standaert DG, Bonsi P, Pisani A. Developmental Profile of the Aberrant Dopamine D2 Receptor Response in Striatal Cholinergic Interneurons in DYT1 Dystonia *PlosONE* 2011;6(9):e24261.

12. Sciamanna G, Hollis R, Ball C, Martella G, Tassone A, Marshall A, Parsons D, Li X, Yokoi F, Zhang L, Li Y, Pisani A, Standaert DG. Cholinergic dysregulation produced by selective inactivation of the dystonia-associated protein torsinA. *Neurobiol Dis.* 2012 Sep;47(3):416-27
13. Napolitano F, Pasqualetti M, Usiello A, Santini E, Pacini G, Sciamanna G, Errico F, Tassone A, Di Dato V, Martella G, Cuomo D, Fisone G, Bernardi G, Mandolesi G, Mercuri NB, Standaert DG, Pisani A. Dopamine D2 receptor dysfunction is rescued by adenosine A2A receptor antagonism in a model of DYT1 dystonia. *Neurobiol Dis.* 2010 Jun;38(3):434-45.
14. Bonsi P, Martella G, Cuomo D, Platania P, Sciamanna G, Bernardi G, Wess J, Pisani A. Loss of muscarinic autoreceptor function impairs long-term depression but not long-term potentiation in the striatum. *J Neurosci.* 2008 Jun 11;28(24):6258-63.
15. Pisani A, Bernardi G, Ding J, Surmeier DJ. Re-emergence of striatal cholinergic interneurons in movement disorders. *Trends Neurosci.* 2007. Oct;30(10):545-53.

D. Research Support

Ongoing Research Support

COST project (European Cooperation in Science and Technology)- Action BM1101 2011-2015
European network for the study of dystonia syndromes
 Role: Working group coordinator

Progetto Finalizzato (Italian Ministry of Health, *RF10.018*) 2012-2015
 Recovery of cholinergic neurotransmission dysfunction in DYT1 dystonia
 The goal is to identify novel pharmacological agents able to counteract cholinergic dysfunction in a model of DYT1 dystonia
 Role: PI

“Stanley Fahn Award”, Dystonia Medical Research Foundation, 2011-2014
 D2 dopamine receptor signalling alteration in a mouse model of DYT1 dystonia.
 The goal is to characterize the dopamine D2 receptor signalling alterations in DYT1 dystonia and find a restorative approach, by means of viral-vector mediated delivery of specific molecules in a model of DYT1 dystonia
 Role: PI

Completed Research Support

Progetto Giovani Ricercatori Italian Ministry of Health 2011-2014
In pursuit of novel neuroprotective strategies for Parkinson's disease: understanding the role of PINK1 in regulating autophagy and apoptosis
 Role: Co-Investigator

PRIN 2010 (Italian Ministry of Education) 2011-2014
 L-DOPA-induced dyskinesia in Parkinson's disease: novel molecular targets.
 The goal is to identify novel molecular targets for therapeutic intervention in a model of L-dopa-induced dyskinesia
 Role: Co-Investigator

BACHMANN STRAUSS DYSTONIA AND PARKINSON FOUNDATION (USA) 2011

Impact of cholinergic signaling on thalamostriatal synaptic activity in a mouse model of DYT1 d