BIOGRAPHICAL SKETCH

NAME: Angelo ANTONINI, MD, PhD - Email: angelo.antonini@unipd.it

POSITION TITLE: Professor of Neurology, Director Parkinson and Movement Disorders Unit, Department of Neuroscience, University of Padua, Padua, Italy

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	Completion Date	FIELD OF STUDY
University of Rome "La Sapienza", Rome, Italy	MD	10/1986	Medicine, with honors
University of Rome "La Sapienza", Rome, Italy	MD	11/1990	Medicine, Neurology
University of Zurich, Switzerland	Ph.D.	12/1994	Medicine, Parkinson

A. Personal Statement

Angelo Antonini is director of the Parkinson Unit at the Neurology Clinic in Padua. He earned his medical degree from the Università degli Studi di Roma 'La Sapienza', Rome. In November 1990 he completed his neurology training with honors and then undertook a visiting fellowship at the PET Department Paul Scherrer Institute, Villigen, Switzerland before starting in 1991 his PhD in neuroradiology under the supervision of Professor Klaus Leenders. In 1995 he started as Assistant Professor of Neurology at the North Shore Hospital/ New York University hospital where he continued his research on definition of imaging biomarkers of the dopamine system and associated neurodegenerative processes. He also focused his research on characterization of brain networks in PD using FDG-PET. He received the first award from the National Parkinson Foundation for 'young researchers in Parkinson's disease'. In 1996 he was awarded the Junior Faculty Award and in 1996/97 from United Parkinson Foundation and Parkinson's Disease Foundation for his research in the field of Parkinson's disease. From November 1997 to end 2009 he worked at the Parkinson Institute in Milan where he coordinated Clinical Research at the Department of Neuroscience and had his academic affiliation at the 2nd University of Milan (Bicocca). In 2010 he became Director of the Parkinson and Movement Disorders unit at the research institute for neurorehabilitation San Camillo in Venice and since 2011 also of the Movement Disorders section at the Neurology Clinic in Padua. In 2013 became Professor of Neurology of the University of Padua.

His research focuses on pharmacology of dopaminergic medications, neuroimaging as well as cognitive and behavioral aspects of Parkinson's disease. In addition he is actively involved in the use of continuous infusion of levodopa and apomorphine infusion as well as subthalamic nucleus deep brain stimulus (STN-DBS) for the treatment of motor fluctuations and dyskinesia of complicated Parkinson patients.

During his academic career, Angelo Antonini has published 368 indexed peer-reviewed manuscripts and several book chapters. His H-Index is 66 and has 14430 citations (Scopus). He serves as reviewer for the main medical and neurology journals.

B. Positions and Honors

Positions and honors:

1986 – 1990: Resident, Neurology, dept. of Neuroscience, University of Rome "La Sapienza", Italy
1987 – 1988: Clinical Assistant, Neurology, dept. of Neuroscience, University of Rome "La Sapienza", Italy
1990: Visiting Fellow, PET dept, Paul Scherrer Institute, Switzerland
1990 – 1995: Medical Research Assistant, PET dept, Paul Scherrer Institute, Switzerland
1995: 'young researchers in Parkinson's disease' from the National Parkinson Foundation
1995 – 1997: Assistant Professor, New York University, NY USA
1996: Junior Faculty Award 1996/97 from United Parkinson Foundation and Parkinson's Disease Foundation
1997 – 2010: Parkinson Institute Milan,2nd University of Milan, Italy

2010 – current: Head of Parkinson and Movement Disorders Unit, Professor of Neurology Padua University, Padua, Italy

Current memberships and international activities:
Chair Elect of the International Parkinson and Movement Disorders society European Section
Scientific panel member of the European Academy of Neurology - Movement Disorders section
Honorary Member of the French Neurological Society
Honorary Member of the Neurological Society of Romania
Board Member of the Italian Parkinson Academy and Foundation
Member of Parkinson's Disease Non-Motor Study Group
Member of the Multiple System Atrophy study group

C. Contribution to Science

I have five main research interests related to Parkinson and other movement disorders.
The first is neuroimaging with particular focus on the definition of specific brain neurochemical and network changes associated with neurodegeneration. I started detailing the characteristics of dopamine nerve terminal loss and post-synaptic receptor changes and later in my career I used first fluorodeoxyglucose PET and now MRI to understand alterations in brain networks and connectivity
1) Ceravolo R, Antonini A, Frosini D, De Iuliis A, Weis L, Cecchin D, Tosetti M, Bonuccelli U, Cosottini M. Nigral anatomy and striatal denervation in genetic Parkinsonism: A family report.
Mov Disord. 2015 Jul;30(8):1148-9
2) Franciotti R, Delli Pizzi S, Perfetti B, Tartaro A, Bonanni L, Thomas A, Weis L, Biundo R, Antonini A, Onofrj M. Default mode network links to visual hallucinations: A comparison between Parkinson's disease and multiple system atrophy. Mov Disord. 2015 Aug;30(9):1237-47
3) Antonini A, Biundo R. Parkinson disease: Can dopamine transporter imaging define early PD? Nat Rev Neurol. 2014 Aug;10(8):432-3
4) Cognitive and MRI correlates of orthostatic hypotension in Parkinson's disease. Pilleri M, Facchini S, Gasparoli E, Biundo R, Bernardi L, Marchetti M, Formento P, Antonini A. J Neurol. 2013 Jan;260(1):253-9
5) Biundo R, Formento-Dojot P, Facchini S, Vallelunga A, Ghezzo L, Foscolo L, Meneghello F, Antonini A. Brain volume changes in Parkinson's disease and their relationship with cognitive and behavioural abnormalities. J Neurol Sci. 2011 Nov 15;310(1-2):64-9

The second is to understand and define cognitive and behavioral changes in Parkinson disease and their clinical predictors
1) Biundo R, Weis L, Bostantjopoulou S, Stefanova E, Falup-Pecurariu C, Kramberger MG, Geurtsen GJ, Antonini A, Weintraub D, Aarsland D. MMSE and MoCA in Parkinson's disease and dementia with Lewy bodies: a multicenter 1-year follow-up study. J Neural Transm (Vienna). 2016 Feb 6
2) Biundo R, Weis L, Facchini S, Formento-Dojot P, Vallelunga A, Pilleri M, Weintraub D, Antonini A. Patterns of cortical thicknes s associated with impulse control disorders in Parkinson's disease. Mov Disord. 2015 Apr 15;30(5):688-95
3) Samuel M, Rodriguez-Oroz M, Antonini A, Brotchie JM, Ray Chaudhuri K, Brown RG, Galpern WR, Nirenberg MJ, Okun MS, Lang AE. Management of impulse control disorders in Parkinson's disease: Controversies and future approaches. Mov Disord. 2015 Feb;30(2):150-9
4) Cognitive profiling of Parkinson disease patients with mild cognitive impairment and dementia. Biundo R, Weis L, Facchini S, Formento-Dojot P, Vallelunga A, Pilleri M, Antonini A. Parkinsonism Relat Disord. 2014 Apr;20(4):394-9

The third is neuropharmacology of the dopamine system with particular focus on continuous drug delivery (partiularly novel infusion systems) and development of innovative therapeutic strategies:
1) Antonini A, Fung VS, Boyd JT, Slevin JT, Hall C, Chatamra K, Eaton S, Benesh JA.
Effect of levodopa-carbidopa intestinal gel on dyskinesia in advanced Parkinson's disease patients. Mov Disord. 2016 Jan 28
2) Antonini A, Bauer L, Dohin E, Oertel WH, Rascol O, Reichmann H, Schmid M, Singh P, Tolosa E, Chaudhuri KR. Effects of rotigotine transdermal patch in patients with Parkinson's disease presenting with non-motor symptoms - results of a double-blind, randomized, placebo-controlled trial. Eur J Neurol. 2015 Oct;22(10):1400-7

3) Antonini A, Yegin A, Preda C, Bergmann L, Poewe W Global long-term study on motor and non-motor symptoms and safety of levodopa-carbidopa intestinal gel in routine care of advanced Parkinson's disease patients; 12-month interim outcomes. Parkinsonism Relat Disord. 2015 Mar;21(3):231-235
4) Antonini A, Poewe W. Adenosine A2A receptor antagonists in Parkinson's disease: still in the running. Lancet Neurol. 2014 Aug;13(8):748-9

The fourth is neuromodulation by deep brain stimulation and transcranial magnetic stimulation.
1) Beneficial Effects of Bilateral Subthalamic Stimulation on Non-Motor Symptoms in Parkinson's Disease Dafsari HS, Reddy P, Herchenbach C, Wawro S, Petry-Schmelzer JN, Visser-Vandewalle V, Rizos A, Silverdale M, Ashkan K, Samuel M, Evans J, Huber CA, Fink GR, Antonini A, Chaudhuri KR, Martinez-Martin P, Timmermann L Brain Stimul. 2016 Jan-Feb;9(1):78-85
2) Biundo R, Weis L, Fiorenzato E, Gentile G, Giglio M, Schifano R, Campo MC, Marcon V, Martinez-Martin P, Bisiacchi P, Antonini A. Double-blind Randomized Trial of tDCS Versus Sham in Parkinson Patients With Mild Cognitive Impairment Receiving Cognitive Training. Brain Stimul. 2015;8(6):1223-5
3) Volkmann J, Albanese A, Antonini A, et al.. Selecting deep brain stimulation or infusion therapies in advanced Parkinson's disease: an evidence-based review. J Neurol. 2013 Nov;260(11):2701-14.
4) Landi A, Trezza A, Pirillo D, Vimercati A, Antonini A, Sganzerla EP. Spinal cord stimulation for the treatment of sensory symptoms in advanced Parkinson's disease. Neuromodulation. 2013 May-Jun;16(3):276-9

The fifth is development of innovative rehabilitation strategies and home monitoring. This effort has been recently awarded by an Horizon2020 research grant:
1) Tsiouris KM, Gatsios D, Rigas G, Miljkovic D, Koroušić Seljak B, Bohanec M, Arredondo MT, Antonini A, Konitsiotis S, Koutsouris DD, Fotiadis DI. PD_Manager: an mHealth platform for Parkinson's disease patient management. Healthc Technol Lett. 2017 May 23;4(3):102-108.
2) Araújo R, Ferreira JJ, Antonini A, Bloem BR. "Gunslinger's gait": a new cause of unilaterally reduced arm swing. BMJ. 2015 Dec 14;351:h6141
3) Pilleri M, Weis L, Zabeo L, Koutsikos K, Biundo R, Facchini S, Rossi S, Masiero S, Antonini A. Overground robot assisted gait trainer for the treatment of drug-resistant freezing of gait in Parkinson disease. J Neurol Sci. 2015 Aug 15;355(1-2):75-8
4) Amboni M, Stocchi F, Abbruzzese G, Morgante L, Onofrj M, Ruggieri S, Tinazzi M, Zappia M, Attar M, Colombo D, Simoni L, Ori A, Barone P, Antonini A Prevalence and associated features of self-reported freezing of gait in Parkinson disease: The DEEP FOG study. Parkinsonism Relat Disord. 2015 Jun;21(6):644-9
5) Ossig C, Antonini A, Buhmann C, Classen J, Csoti I, Falkenburger B, Schwarz M, Winkler J, Storch A. Wearable sensor-based objective assessment of motor symptoms in Parkinson's disease. J Neural Transm (Vienna). 2016 Jan;123(1):57-64

D. Research Support

- Neureca Foundation Research Grant for cognitive rehabilitation in Parkinson disease (Principal Investigator)
- Italian Ministry Research Grant N RF-2010-1530177 for the definition of genetic, imaging and cognitive predictors of behavioral disorders in Parkinson patients (Principal Investigator)
- Italian Ministry Research Grant N RF-2012-2319551 for the definition of an Italian database of patients treated with deep brain stimulation (co-applicant)
- Gossweiler Foundation: Research grant for the development of new rehabilitation strategies in Parkinson patients with lateral spine deviation and camptocormia (Principal Investigator)
- Horizon 2020 Program Grant N: 643706 for the development of m_health platform for Parkinson disease management (Principal Investigator)

D. Clinical trials in the last 5 years:

Total of 16 Clinical Trials: Phase II: 7; Phase III: 8; Phase IV: 1