

PERSONAL INFORMATION

Marcella Canton

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Sex Female | Date of birth 17/06/1966 | Nationality Italian

WORK EXPERIENCE

- (2006 - present) Assistant Professor of Biochemistry, Dept of Biomedical Sciences, University of Padova, Italy
- 1997-2006 Post-doctoral researcher, Dept. Biological Chemistry, University of Padova (supervisor Prof. Di Lisa);
- 1999 Post-doctoral researcher, Dept. Physiology, Queen's University, Kingston, Canada (Dr. J. Van Eyk)
- 1996 Junior Researcher in the Laboratory of Biochemical Microbiology at GlaxoWellcome-Verona (Dr. E. Domenici)

EDUCATION AND TRAINING

- 1996-2006 Post-doc student, Dept Biochemistry, University of Padova, Italy
- 1991-1996 PhD in Molecular and Cellular Biology and Pathology, University of Padova, Italy
- 1985-1991 Master Degree in Pharmaceutical Chemistry, University of Padova, Italy
- 1989 E.C. Erasmus Project fellowship at the Dept. of Organic Chemistry, University of Newcastle upon Tyne (UK)

PERSONAL STATEMENT

▪ During my PhD training, I began my research on mitochondrial physiology and ion transport under the supervision of G.F. Azzone, one of the founding Fathers of Bioenergetics. My education in Cellular and Molecular Biology was completed with a long-term stay under the supervision of F. Di Lisa, where I characterized mitochondrial function in intact cells in anoxic conditions. I provided evidence of the mechanisms underlying the PUVA therapy (psoralen +UVA) and highlighted the central role of mitochondria. In parallel, my research interest has been focused on the study of the oxidative modifications of myofibrillar proteins. I demonstrated that the oxidation of myofibrillar proteins correlates linearly with contractile dysfunction. This study has been extended to the oxidative modifications of skeletal muscle in muscular dystrophy. I provided evidence that the excess of reactive oxygen species (ROS) observed in two different murine models of muscular dystrophy and in myoblasts from patients affected by collagen VI myopathies is mainly due to monoamine oxidase (MAO) over-activation. Moreover, I highlighted a causal link between MAO-dependent ROS production and contractile impairment thereby providing the rationale for a translational study of MAO inhibitors for treatment of muscle dystrophy. To this aim, I was funded and I coordinated my own group within Di Lisa's group. Recently, I joined Antonella Viola's group, aiming at characterizing the role of MAO in the immunity system.

ADDITIONAL INFORMATION

Publications	<ul style="list-style-type: none"> ▪ Author of 38 papers published in international journals and 4 chapters in books.
Research support	<p>2006-08: Responsible of the Ateneo Projects (Padova University).</p> <p>2009-10: Responsible of a research grant from the Association française contre les myopathies</p> <p>2009-11: Coordinator of the PRIN project: Role of monoamine oxidases and mitochondrial oxidative stress in the pathogenesis of muscular dystrophies and cardiac injury</p> <p>2011-13: Responsible of a Junior fellowship (assegno di ricerca, Padova University).</p> <p>2013-15: Research agreement with a Pharmaceutical company ZambonGroup, Italy</p> <p>2017: Research agreement with a Pharmaceutical company Pharmaxis, Australia</p>
Honours and awards	<p>1998: Travel Grant from International Society for Heart Research for participation to the XVI World Congress of the International Society for Heart Research, Rhodes, Greece</p> <p>1994: Travel Grant for participation to the VIII Bioenergetic European Conference (EBEC) Valencia, Spain.</p> <p>1992: Travel Grant for participation to the VII Bioenergetic European Conference (EBEC) Helsinki, Finland.</p>
Patents	<p>Treatment of Muscular Dystrophies and Associated Conditions by Administration of Monoamine Oxidase Inhibitors” Inventors: Paolo Bonaldo, Marcella Canton, Fabio Di Lisa, Sara Menazza Patent n: US 8,487,008 B2, Date of Patent: Jul. 16, 2013</p>
Invited speaker to international congresses	<p>Canton M., Castegna A., Menabò R., Spera I., Palmieri E M., Di Lisa F. Metabolomic identification of substrates for monoamine oxidases in hearts subjected to oxidative stress, ISHR-FCVB 32nd Meeting, Barcelona, Spain 3-6 July 2014</p> <p>Canton M. Contribution of mitochondrial ROS formation to myofibrillar protein oxidation in cardiac and muscle disease. 42nd European Muscle Conference, Amsterdam, Holland, 21-25 September 2013</p> <p>Canton M. Oxidation of myofibrillar proteins. XIX ISHR World Congress, Bologna, Italy, 22-26 June 2007</p> <p>Canton M, Aker S, Menabò R, Heusch G, Di Lisa F, Schulz R. The progression of contractile dysfunction correlates with the extent of myofibrillar protein oxidation in failing rabbit hearts. ISHR 26th European Section Meeting, Manchester, United Kingdom 14-17 June 2006</p> <p>Canton M. Oxidation of myofibrillar proteins ISHR-ES 23rd Meeting, Dresda, Germany 2-6 June 2004</p> <p>Canton M, Caffieri S, Dall'Acqua F, Di Lisa F. The pivotal role of mitochondria in psoralen-induced apoptosis. 10th congress of the European Society for Photobiology, Vienna, Austria 6-11 September 2003</p>
Reviewer	<p>I have done the review of several manuscripts for the following journals: Curr Chem Biol, Blood, Med Chem.</p>
Supervision of graduate students and postdoctoral fellows	<p>Tutor of two PhD student in the 28th and 29th cycle of the PhD program in Biochemistry and Biophysics (Dept. of Biomedical Sciences) at the University of Padova</p> <p>Tutor of two post-doc fellow (2011-2015)</p> <p>Tutor of more than 40 students for their master thesis in Pharmacy or Pharmaceutical Chemistry, University of Padova.</p>

Teaching activity

1999-2011: Co-responsible of Biochemistry MD Program for graduation, Course of Pharmacy and course of Pharmaceutical Chemistry, School of Medicine, University of Padova

2008-present: responsible of Biochemistry MD Program for graduation, Applied Pharmaceutical Science, School of Medicine, University of Padova

2004-2008: Co-responsible of the Laboratory of Molecular Biology MD Program for graduation, Course of Pharmaceutical Chemistry, School of Medicine University of Padova

2008-2013: Co-responsible of Clinical Biochemistry MD Program for graduation Course of Pharmacy, School of Medicine University of Padova

2014-present: responsible of Clinical Biochemistry MD Program for graduation, Course of Pharmacy, School of Medicine, University of Padova