March - July 2017

Postdoctoral Research Bursary

Laboratory of Physiology and Biophysics of sensory cells at the Department of Brain and Behavioural Sciences, University of Pavia - Supervisor Prof. Ivo Prigioni. Subject of the research: Biophysical properties of IK,L current in Type I vestibular hair cells.

November 2015 - May 2016

Postdoctoral Research Bursary

Laboratory of Physiology and Biophysics of the Vestibular System 2, Department of Brain and Behavioural Sciences, University of Pavia - Supervisor Prof. Masetto Sergio. My research studies aimed to characterize the functional role of Eps8 gene in the differentiation of vestibular hair cells in mice.

November 2013 - October 2015

Research fellow

Laboratory of Physiology and Biophysics of sensory cells at the University of Pavia - Supervisor Prof. Ivo Prigioni. The main topic of my research was the localization of GAD67 enzyme in vestibular epithelia of transgenic mouse strain expressing the recombinant protein GAD67-GFP.

November 2010 - October 2013

PhD Student with research bursary

Laboratory of Physiology and Biophysics of sensory cells at the University of Pavia - Supervisor Prof. Prigioni Ivo.

November 2007 - April 2010

Master's student training

Laboratory of genetics and genomics at the Institute of Molecular Genetics-CNR, Pavia. Supervisor Dr. Orioli Donata. My research master training was focused on Trichothiodystrophy (TTD), an autosomal recessive disorder related to defects in nucleotide excision repair (NER), the only system devoted to the removal of UV-induced DNA damage in human cells. By using chromatin immunoprecipitation assays and real-time PCR we demonstrated the over-expression of the *MMP1* gene in primary fibroblast from TTD patients.

November 2004 - March 2007

Internship for Bachelor's Degree in Biological Science

Laboratory of Toxicology, University of Pavia. Supervisor Prof. Pastoris Ornella. This thesis work was focused on the Crohn's disease, an inflammatory bowel disease (IBD) that causes inflammation of the intestinal tract with a substantial release of free radical oxygen species (ROS). Since mitochondria are the major producers of ROS, we evaluated the activity of the respiratory chain by using a spectrophotometer. Evidence indicated a significant reduction of SDH, COX and CCR enzyme concentrations in patients with Crohn's disease.

2012/2013 - 2016/2017

Lecture

"Registration of bioelectrical signals", for Master degree in Pharmacy and in Chemical and pharmaceutical technologies, University of Pavia, Italy.

2015/2016 - 2017/2018

Tutoring for students

Physiology and Cellular Physiology - Pharmacy Faculty - University of Pavia, Italy, Responsible: Prof. Prigioni Ivo.

2011/2012 - 2014/2015

Tutoring for students

Course of Human Anatomy and Cellular Physiology - Pharmacy Faculty - University of Pavia, Italy, Responsible: Dr. Russo Giancarlo.

2010/2011

Tutoring for students

Course of Genetic - Biologic Sciences Faculty - University of Pavia, Italy, Responsible: Prof. Semino Ornella.

EDUCATION AND TRAINING

From November 2010 to October 2013

Ph.D. in Physiology and Neuroscience

University of Pavia, Pavia (PV), 27100, Italy. Thesis title: "Electrophysiological evidence for K+ accumulation in the synaptic cleft of Type I vestibular hair cells". Tutor: Prof. Prigioni Ivo. Laboratory of Physiology and Biophysics of sensory cells, Department of Brain and Behavioural Sciences, University of Pavia – Italy. Date of dissertation: *7th February 2014*.

November 2010

Qualifying examination to be a professional biologist

University of Pavia, 27100 Pavia (PV), Italia.

26th April 2010

Master's Degree in Experimental and Applied Biology

University of Pavia, Pavia (PV), 27100, Italy. Thesis title: "Transcriptional dynamic of the MMP1 gene in primary fibroblasts from Trichothiodystrophy patients". Supervisor: Dr. Orioli Donata, Co-Supervisor: Dr. Stefanini Miria and Prof. Ranzani Nadia. Laboratory of Genetics and Genomics, Institute of Molecular Genetic (CNR) University of Pavia – Italy. Grade: 107/110

19th March 2007

Bachelor's Degree in Biological Science

Thesis title: "Mitochondrial dysfunction in Crohn's Disease: evaluation of biochemical parameters". Supervisor: Prof. Pastoris Ornella, Co-Supervisor: Dr. Verri Manuela. Laboratory of Toxicology, Department of SCMF Sciences, University of Pavia – Italy. Grade: 94/110

July 2002

High School Diploma

Liceo Scientifico Niccolò Copernico, Pavia (PV), 27100, Italy.

- Grade: 84/100

PERSONAL SKILLS

Mother tongue: Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B1	B1	B1	B1	B1
French	A1	A1	A1	A1	A1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Techincal skills

Good knowledge of laboratory instrumentations, software and techniques acquired during the training in the following disciplines:
Electrophysiology, Molecular Biology, Genetic and Biochemistry.

In-vivo expertise

-Surgical technics for dissection of semicircular canals, saccule and utricle of mice, rats and frogs

-Agar inclusion and fixation of vestibular organs and slicing for patch-clamp recordings and immunolabeling;

-Patch-clamp recordings in whole cell configuration in voltage- and current-clamp mode from vestibular hair cells isolated and *in situ* and in slices;

-Handling, Feeding, Breeding, Marking and Genotyping of transgenic mouse strains and rats.

-Organotypic cultures of semicircular canals and otholitic organs;

-Maintenance and propagation of primary cell cultures (human fibroblasts).

In-vitro expertise

-Mechanical and enzymatic dissociation of vestibular hair cells for patch-clamp recordings and conservation of the hair bundle;

-Immunohistochemistry and confocal microscopy;

-Extraction, purification and quantification of nucleic acids;

-Real time PCR and Real time RT-PCR;

-Western blot;

-Chromatin immunoprecipitation assay (ChIP);

-Evaluation of mitochondrial respiratory activity.

Software managed

-pClamp, to record and analyse data obtained from electro-physiological patch-clamp experiments;

-Origin, for graphing and data analysis;

-IonChannelLab, to simulate and create models of complex ion channel kinetics,

-QuantityOne (chemiluminescent digitalised images acquisition), for imaging and quantification of signals from electrophoretic gels;

-LightCycler480 SW 1.5 (Real Time PCR Light Cycler 480 Roche software), for gene expression analysis;

-cellSens Dimension, to acquire images of biological preparations and subsequent analysis;

-LAS AF to analyse photographs acquired by confocal microscopy;

-CorelDRAW, to edit graphs and, more generally, digital images;

-Microsoft Office™ suite & tools, for documentations draw up.

SCIENTIFIC ACTIVITY

Publication

An allosteric gating model recapitulates the biophysical properties of IK,L expressed in mouse vestibular Type I hair cells

Spaiardi P., Tavazzani E., Manca M., Milesi V., Russo G., Prigioni I., Marcotti W., Magistretti J and Masetto S. 2017 “The Journal of Physiology”.

Publication

Distinct roles of Eps8 in the maturation of cochlear and vestibular hair cells

Tavazzani E., Spaiardi P., Zampini V., Contini D., *Manca M.,* Russo G., Prigioni I., Marcotti W. and Masetto S. 2016 “Neuroscience”.

Publication **Glutamic acid decarboxylase 67 expression by distinct population of mouse vestibular supporting cells**
Tavazzani E., Tritto S., Spaiardi P., Botta L., Manca M., Prigioni I., Masetto S. and Russo G. 2014 "Frontiers in Cellular Neuroscience".

Publication **Intercellular K+ accumulation depolarizes Type I vestibular hair cells and their associated afferent nerve calyx**
Contini D*, Zampini V*, Tavazzani E, Magistretti J, Russo G, Prigioni I, Masetto S. 2012 Neuroscience

Publication **Acute effects of gentamicin on the ionic currents of semicircular canal hair cells in the frog**
Martini M, Canella R, Prigioni I, Russo G, Tavazzani E, Fesce R, Rossi ML. 2011 Hearing Research

Oral Presentation 53th Workshop on Inner Ear Biology 2016, Montpellier (France). 20th September 2016
"Eps8 regulates cochlear and vestibular hair cell development". Tavazzani E, Spaiardi P, Zampini V, Contini D, Manca M, Russo G, Prigioni I, Marcotti W, Masetto S.

Oral Presentation "School of Physiology and Biophysics 2015", 19th June – 2nd July 2015, Pavia (PV), Italy.
Molecular and Cellular Biophysics of Excitable Cells
Prigioni I., Russo G., Masetto S., Tavazzani E., Spaiardi P. and Manca M.

Abstract "Inner Ear Biology 2015", 12th – 15th September 2015, Rome (RM), Italy.
The Biophysical properties of $I_{K,L}$ in mammalian vestibular type I hair cells and how they are affected by the nerve calyx
Tavazzani E., Spaiardi P., Manca M., Magistretti J., Russo G., Prigioni I. and Masetto S.

Abstract "Inner Ear Biology 2015", 12th – 15th September 2015, Rome (RM), Italy.
***Eps8* regulates K^+ channel expression in mouse cochlear but not vestibular hair cells**
Spaiardi P., Tavazzani E., Zampini V., Manca M., Magistretti J., Russo G., Masetto S and Prigioni I.

Abstract "65° Congresso Nazionale SIF", 28th – 30th September 2014, Anacapri (NA), Italy.
***Eps8* regulates differently K+ currents in mouse cochlear and vestibular hair cells**
Prigioni I., Tavazzani E., Russo G., Spaiardi P., Manca M. and Masetto S.

Abstract "Inner Ear Biology 2014", 29th August – 2nd September 2014, Sheffield, UK.
Authentic Biophysical properties of $I_{K,L}$ in mammalian vestibular type I hair cells revealed after calyx removal
Spaiardi P., Tavazzani E., Manca M., Magistretti J., Russo G., Prigioni I. e Masetto S.

Abstract "Inner Ear Biology 2014", 29th August – 2nd September 2014, Sheffield, UK.
***Eps8* regulates K^+ currents expression in mouse cochlear inner but not outer hair cells nor in vestibular Type I and Type II hair cells**
Tavazzani E., Russo G., Spaiardi P., Manca M., Prigioni I. and Masetto S.

Honours and awards ***Winner of IEB Bursary Award (2014):*** 51st Workshop on Inner Ear Biology 2014, Sheffield (UK) awarded by Action on Hearing loss.

Honours and awards

Winner of Travel support for students (2013): 50th Workshop on Inner Ear Biology 2013, Alcalá de Henares (Spain) awarded by The Spanish Society of NeurosCience (SENC).

Date
17th October 2017

Signature
Elisa Tavazzani

Autorizzo il trattamento dei miei dati personali ai sensi del D.Lgs.196/2003.
Dichiaro che quanto riportato nel presente Curriculum Vitae corrisponde a verità ai sensi del D.P.R. 445/2000.