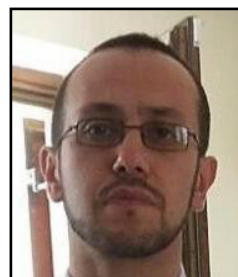


Curriculum Vitae ET Studiorum

Alessandro Leparulo

First Name: Alessandro;
Last Name: Leparulo;
Fiscal Code: LPRLSN79E07F257R;
Date of Birth: 07 May 1979
Nationality: Italian;
Drive License: B;
Tel.: (+39) 347 8393441;
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alessandro.leparulo@unipd.it



Work Experience

01/11/2016-31/10/2017: **Post Doctoral Research Fellow**

University of Padua, Department of Biomedical Sciences - DBS

Via Ugo Bassi 58/B, I-35131 Padova (PD), Italy

Web site: <http://www.biomed.unipd.it/?L=1>

Activity: **1)** Establish how, in mouse models of Alzheimer's disease based on the PS2-N141I, dysregulation of homeostasis of calcium in astrocytes level interferes with neuron-astrocyte communication and with the activity of the brain network. **2)** Highlight the role played by intracellular calcium in the initial stages and progression of the disease by defining the molecular and cellular mechanisms involved. **3)** Define if the level of calcium dysregulation of astrocytes has a role in amyloid-beta neurotoxicity.

01/09/2016-31/10/2016: **Post Doctoral Research Fellow**

University of Padua, Department of Physics and Astronomy "G. Galilei" - DFA

Via Marzolo 8, I-35131 Padua (PD) Italy

Venetian Institute of Molecular Medicine (V.I.M.M.)

Via Giuseppe Orus, 2, I-35129 Padua (PD), Italy

Web site: <http://www.dfa.unipd.it/>

<http://fondbiomed.it/vimm/>

Activity: Finalization of my Post Doctoral research project and participation in other laboratory activity and plans.

01/09/2013-31/08/2016: **Post Doctoral Research Fellow**

University of Padua, Department of Physics and Astronomy "G. Galilei" - DFA

Via Marzolo 8, I-35131 Padua (PD) Italy

Venetian Institute of Molecular Medicine (V.I.M.M.)

Via Giuseppe Orus, 2, I-35129 Padua (PD), Italy

Web site: <http://www.dfa.unipd.it/>

<http://fondbiomed.it/vimm/>

Activity: **1)** Biophysical analysis of Connexin32 and its mutated variants involved in Charcot-Marie-Tooth disease, using a combination of fluorescence microscopy (Calcium Imaging and FRET) and electrophysiological recordings (whole-cell patch-clamp) in single cells in real time. **2)** Development and characterization of neuronal and glial cells culture derived from iPSCs and human skin mesenchymal stem cells. **3)** Reconstruction of connexin32 channels distribution in mouse myelin using 2-Photon microscopy.

01/03/2010-31/05/2010: **University Scholarship**

University of Ferrara, Department of Life Science and Biotechnology
Via Luigi Borsari 46, I-44121 Ferrara (FE), Italy

Web site: <http://www.unife.it>

Activity: Finalization of my Ph.D. project and participation in other laboratory activity and plans.

01/01/2007-31/12/2009: **Ph.D. Course**

University of Ferrara, Department of Life Science and Biotechnology
Via Luigi Borsari 46, I-44121 Ferrara (FE), Italy

Web site: <http://www.unife.it>

Activity: **1)** Determine the effects of microgravity on the ionic currents in hair cells of the frog vestibular system (patch-clamp whole-cell configuration). **2)** Study the effects of specific PKA inhibitors on potassium currents in hair cells.

04/2003-04/2006: **Thesis internship during Biology Degree**

University of Modena and Reggio Emilia, Modena (Italy)
Via Università, 4, I-41121 Modena (MO), Italy

Web site: <http://www.unimore.it>

Activity: **1)** my studies aim to clarify the functional mechanisms of the protease activated receptors (*pars* receptors), both in neurons (DRG neurons) and non-neuronal cells. Using calcium imaging techniques and immunocytochemistry coupled to confocal microscopy, biochemical and electrophysiology. **2)** Studies on the possible influence of some proteases, and the possible role played by PKC, in the production of endocannabinoids into neuronal and non-neuronal cells.

Education

01/2007-12/2009: **Ph.D. in Biomedical, Endocrinology and Neurophysiology Science (XXII Cycle)**

University of Ferrara, Department of Life Science and Biotechnology
Via Luigi Borsari, 46, I-44121 Ferrara (FE), Italy

Coordinator: Prof. Alessandro Martini

Tutor: Prof. Marialisa Rossi

Thesis: Microgravity affects the hair cell ionic currents of the frog semicircular canals, 2010.

09/1998-04/2006: **Biology Degree**

University of Modena and Reggio Emilia, Modena (Italy)
Via Università, 4, I-41121 Modena (MO), Italy

Tutor: Dr. Vittorio Vellani

Thesis: Mechanisms of protease-activated receptors in neuronal and non-neuronal cells of the dorsal root ganglia, 2006.

Score: 100/110

09/1993-07/1998: **Diploma of Expert for Industrial Physics - Technical Safety and Environment**

Project F.A.S.E. (Fisica Ambientale Sanitaria Europea)

Istituto Tecnico Industriale I.T.I.S. "Fermo Corni"

Viale Leonardo da Vinci, 300, I-41100 Modena (MO), Italy

Score: 44/60

Courses

- 23-27/03/2015: **CSNII School on Neurotechniques 2015** "The toolbox for investigating the function of neural circuits". University of Padua, Department of Biomedical Science, Vassanelli Microchip Lab, Padua (PD).
- 18-21/06/2008: **School of Physiology 2008**. Società Italiana di Fisiologia (S.I.F.) c/o Dipartimento di Scienze Fisiologiche. University Residential Centre of Bertinoro, Bertinoro (FC)
Organiser: Dott.ssa Maria Calabretta,
Coordinator: Prof. S. Squatrito

Honors and Awards

- 10/2016: **Junior Research Grant**: "Disregolazione del calcio negli astrociti ed attività di network ippocampale in modelli animali di malattia di Alzheimer basati su presenilina 2", University of Padua, Department of Biomedical Sciences.
Duration: 12 months.
- 09/2015: **Junior Research Grant**: "Proprietà elettrofisiologiche di connexina32 con mutazioni di interesse patologico", University of Padua, Department of Physics and Astronomy "G. Galilei".
Duration: 12 months.
- 08/2013: **Junior Research Grant**: "Biophysical analysis of connexin32 channels and their mutants implicated in the pathogenesis of peripheral neuropathies", University of Padua, Department of Physics and Astronomy "G. Galilei".
Duration: 24 months.
- 03/2010: **University Scholarship** at University of Ferrara for graduates in Biological Sciences, financed with the ASI Convention Funds (Italian Space Agency) - Contract No. I / 006/06/0 DCMC (The Motor Control Disorders and Cardiorespiratory).
Duration: 3 months.
- 01/2007: **University Scholarship** at University of Ferrara for Ph.D. Students in Biomedical Science, Endocrinology and Neurophysiology (XXII Cycle).
Duration: 36 months.

Participation in research programs (Local, National, International)

Funding Agency: Fondazione Telethon

Project Title: Structural and functional analysis of selected connexin32 mutations implicated in the pathogenesis of the X-linked form of Charcot-Marie-Tooth disease;

Role: Junior Post-Doc Researcher;

Person in Charge: Prof. Mario Bortolozzi;

Time necessary: 3 years.

Funding Agency: MIUR and University of Ferrara

Project Title: Prin 2007 - Recupero funzionale della trasmissione sinaptica afferente ed efferente e della codificazione sensoriale nel labirinto di rana e di cavia dopo danno ototossico;

Role: Ph.D. Student;

Person in Charge: Prof. Marialisa Rossi;

Time necessary: 18 months.

Teaching Activity

2013-2016: Correlator of two Master's Thesis at the University of Padua

- 2014. Andrea Carrer. Title: "Biophysical analysis of Connexin32 in health and disease", score: 96/110;
- 2016. Mirko Zanon. Title: "3D-reconstruction of connexin32 channels distribution in the myelin of Schwann cells by advanced optical microscopy", score 110/110.

09/2015-10/2015: Student and Trainee Supervisor at the University of Padua (Applied Physics) at Venetian Institute of Molecular Medicine (Padua), Bortolozzi laboratory.

2013-2014: Conducting tutorials, seminars and assistance during examinations at the University of Padua (Applied Physics - Cultural Heritage, Environment, Biology and Medicine), held by Prof. Mario Bortolozzi.

2007-2009: Conducting tutorials, seminars and assistance during examinations at the University of Ferrara.

Communications and Presentations

19-20/02/2016: XIV V.I.M.M. Annual Retreat, Ponzano Veneto, Treviso (TV). *Poster Presentation.*

09-11/03/2015: XVIII Telethon Scientific Convention, Riva del Garda (TN). *Poster Presentation.*

06-07/02/2015: XIII V.I.M.M. Annual Retreat, Preganziol, Treviso (TV). *Talk and Poster Presentation.*

18-21/06/2008: Physiology Ph.D. National Meeting, University Residential Centre of Bertinoro, Bertinoro (FC). *Talk and Poster Presentation.*

Conventions, Meetings and Workshops

29/05/2009: Meeting "Around the Ear - Coclea naturale ed artificiale: dalle cellule alla terapia della sordità", Lecture Hall of I.U.S.S. (University Institute for Higher Studies), Via delle Scienze, 41b, Ferrara (FE);

21-24/09/2008: 45th Inner Ear Biology Workshop, Sala S. Francesco, Ferrara (FE);

14/05/2007: Convention "Il Cervello e lo Spazio", Lecture Hall of University of Ferrara, Ferrara (FE);

06-07/05/2005: Convention of National group of Neuroscience and Pain Study, "Dolore e Analgesia: stato della ricerca in Italia", University of Modena and Reggio Emilia, Modena (MO)

Publications List

Publications on International magazines

-Leparulo A.*, Carrer A.*, Crispino G., Ciubotaru C., Zonta F., Bortolozzi M. The C-terminus of connexin 32 is a key determinant of hemichannel opening by cytosolic Ca²⁺. (Submitted)

-Martini M., Canella R., Leparulo A., Fesce R., Rossi M. L. Ionic currents in hair cells dissociated from frog semicircular canals after preconditioning under micro-gravity conditions. *Am.J.Physiol:Reg,Integ,CompPhysiol* **296**:1585-1597, 2009.

Posters and Talk Presentations

-Leparulo A., Carrer A., Ciubotaru C., Mammano F. and Bortolozzi M. Design and construction of a cost-effective spinning disk system for 3D reconstruction of cell volumes. *XIV V.I.M.M. Annual Retreat (pp. 29).*

-Crispino G., Leparulo A., Bruno F., Carrer A., Bortolozzi M. Development of a small molecule-based protocol to differentiate human skin-derived mesenchymal stem cells into functional neurons. *XIV VIMM Annual Retreat (pp.18).*

- Leparulo A., Carrer A., Crispino G., Ciubotaru C., Zonta F., Bortolozzi M. Structural and functional alterations of connexin 32 channels with a C-terminal truncation causing Charcot-Marie-Tooth disease. *XIII VIMM Annual Retreat*.
- Crispino G., Leparulo A., Gardin C., Ferroni L., Vindigni V., Zavan B., Bortolozzi M. Isolation and neural differentiation of skin mesenchymal stem cells. *XIII VIMM Annual Retreat*.
- Carrer A., Leparulo A., Crispino G., Ciubotaru C., Zonta F., Bortolozzi M. Structural and functional analysis of selected connexin 32 mutations implicated in the pathogenesis of the X-linked form of Charcot-Marie-Tooth disease. *XVIII Telethon Scientific Convention (pp.35)*.
- Fesce R., Rubbini G., Martini M., Canella R., Leparulo A. and Rossi M.L. Exposure to reduced gravity decreases junctional transmission at the frog labyrinth. *45th Inner Ear Biology Workshop (pp. 31-32)*.
- Leparulo A., Martini M., Canella R. and Rossi M.L. Effetti della Microgravità sulla funzione vestibolare periferica in *rana esculenta*. *Riunione Nazionale Dottorandi in Fisiologia 2008*.

Thesis

- Thesis: Mechanisms of protease-activated receptors in neuronal and non-neuronal cells of the dorsal root ganglia, 2006.
- Ph.D. Thesis: Microgravity affects the hair cell ionic currents of the frog semicircular canals, 2010.

Personal Skills

Language Skills

Mother tongue(s): Italian

Other language(s): English

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
B1	C1	B1	B1	B1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user

PET Certificate (*inlingua School of Language* srl, Via Mascheraio, 17 - 44121 Ferrara, 2007/2008)

Common European Framework of Reference for Languages

Communication skills

- Team spirit;
- Ability to adapt into multicultural environments.

Organizational / managerial skills

- Teamwork;
- Planning skills;
- Analytical skills with attention to detail and summary;
- Critical sense;
- Record keeping and data management skills.

Digital competence

SELF-ASSESSMENT

Information processing	Communication	Content creation	Safety	Problem solving
Independent user	Proficient user	Proficient user	Independent user	Independent user

Digital competences - Self-assessment grid

- Good knowledge of Microsoft Windows OS;
- Good knowledge of Microsoft Office Package;
- Good knowledge of Molecular Device pClamp 10.X software;
- Basic knowledge of Mathworks Matlab environment.

Laboratory Competence

- Electrophysiological recordings (whole-cell patch-clamp, *in vivo* LFP recording);
- Fluorescence microscopy techniques (Calcium Imaging);
- Immunofluorescence;
- Treatment of animals (mammals, amphibian) subjected to experiments.

Interest and Other skills

- Good handicraft skills;
 - Technical and freehand drawing;
 - Static Model-making;
 - Sports (Boxing and Martial Arts).
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References

Dr. VELLANI VITTORIO; Assistant Professor (BIO/09)
Department of Biomedical, Metabolical and Neural Science, University of Modena and Reggio Emilia
Via G. Campi, 287, I-44121 Modena (MO), Italy.
e-mail: vvellani@unimore.it
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Prof. MARIALISA ROSSI; Associated Professor (BIO/09)
Department of Biology and Evolution Sec. Physiology and Biophysics, University of Ferrara
Via Luigi Borsari, 46, I-44100 Ferrara (FE), Italy.
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Prof. MARIO BORTOLOZZI; Assistant Professor (FIS/07)
Department of Physics and Astronomy "G.Galilei", University of Padua
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Venetian Institute of Molecular Medicine (V.I.M.M.)
via Giuseppe Orus 2, I-35129, Padova (PD), Italy.
e-mail: mario.bortolozzi@unipd.com
Tel. /Fax: (+39) 049 7923237/250

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In compliance with the Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorize the recipient of this document to use and process my personal details for the purpose of recruiting and selecting staff and I confirm to be informed of my rights in accordance to art. 7 of the above mentioned decree.

DATE

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Dott. Alessandro Leparulo
