

Curriculum Vitae et Studiorum



PERSONAL INFORMATION

Surname / First name : **CAROCCIA, Natascia**
Address : **CUBO Via Fossato di Mortara, 70, 44121, Ferrara, Italy
c/o Paolo Pinton's Lab**
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LinkedIn : **www.linkedin.com/in/natascia-caroccia-a09b0010b**
Nationality : Italian
Date and place of birth : 2nd December 1989 - Castel San Giovanni (PC), Italy

SUMMARY : I graduated in Biological Sciences (B. Sc.) in 2011 and in Molecular and Cellular Biology (M. Sc.) in 2014, both with honors. In achieving these, I have studied hard and with passion and I have shown myself to be self-motivated and determined in achieving my goals. After the graduation, from October 2014 to March 2015, I participated in the "Leonardo Da Vinci" Programme¹, Unipharma-Graduates 10 Project, doing my internship at the University of Barcelona. Also in this occasion, I have demonstrated organizing skills, a firm sense of responsibility and excellent communication skills to relate to a wide range of people. In January 2016 (II session 2015), I got the qualification to practice as a biologist (section A), at the University of Parma, and, at present, I am a PhD student in Biomedical Sciences and Biotechnology, in Paolo Pinton's lab, at the University of Ferrara.

ACTUAL POSITION

- Name and type of organization : Paolo Pinton's Lab, Dept. of Morphology, Surgery and Experimental Medicine, University of Ferrara
Address: CUBO Via Fossato di Mortara, 70, 44121, Ferrara, Italy
Tel: +39 0532 455806
 - Period : November 2016 - present
 - Position : PhD student (in Biomedical Sciences and Biotechnology)
- Research topic : Mitochondrial dynamics and apoptotic cell death
 - Tutor : Dr. Carlotta Giorgi

WORK EXPERIENCE

- Name and type of organization : Department of Biochemistry and Molecular Biology – School of Pharmacy University of Barcelona
Address: Avinguda Joan XXIII, 27-31, 08028 Barcelona, Spain
Tel: +34 934 024 522
 - Period : October 2014 – March 2015
 - Position : Leonardo Da Vinci trainee – Unipharma Graduates 10 Project
- Research topic : Fatty acid oxidation in liver
 - Tutor : Dr. Dolors Serra

In Spring 2014, I obtained one of the most competitive scholarships in Italy, the

¹ The "**Leonardo Da Vinci**" Programme is a European Commission funding programme focused on the teaching and training needs of those involved in vocational education and training. It consists of 50 scholarships to be awarded to talented graduated students. Generally come more than 400 applications. This programme funds international exchange for young graduates willing to do an internship in a host laboratory, generally located at a Research Center or University in Europe. The programme is part of the European Commission's Lifelong Learning Programme and aims to build a skilled and mobile workforce across Europe.

“Leonardo Da Vinci” Project (Unipharma Graduates 10) organized by the University of Rome. I worked for 6 months with the research team coordinated by Prof. Dolors Serra in the Faculty of Pharmacy at the University of Barcelona that focuses on lipid metabolism, in particular fatty-acid oxidation in liver. In her laboratory, I took advantage of the technique of mouse primary hepatocytes isolation by collagenase perfusion, which is an important tool in the biomedical research field for the assessment of hepatocyte function.

UNIVERSITARY STUDIES

- Name and type of organization : Alma Mater Studiorum - University of Bologna
 - Period : November 2011 – March 2014
- Title of qualification awarded : Master of Science (2-years) in Molecular and Cellular Biology, on 11th March 2014
 - Final degree mark : 110 /110 *cum laude*
 - Thesis title : Role of ND1 subunit in Complex I assembly and mitochondrial supercomplexes stabilization in mammals
 - Thesis supervisors : Dr. Anna Maria Porcelli, Dr. Maria Antonietta Calvaruso
- Internship conducted at : Laboratory of Cellular Biochemistry, FaBiT Department, University of Bologna
Address: Via Irnerio 42, 40126, Bologna, Italy
Tel: +39 051 2091325

My research project focused on the study of the Complex I (NADH:ubiquinone oxidoreductase) assembly in mammals and its dysfunction, which is the most common oxidative phosphorylation disorder in humans. In order to study this complicated assembly process, because of its large size and its dual control by nuclear and mitochondrial DNA, I used cybrid lines harboring a homoplasmic mutation in *MT-ND1* gene, coding for a mitochondrial-encoded core CI subunit.

- Name and type of organization : Alma Mater Studiorum - University of Bologna
 - Period : October 2008 – December 2011
- Title of qualification awarded : Bachelor of Science (3-years) in Biological Sciences, on 14th December 2011
 - Final degree mark : 110 /110 *cum laude*
 - Thesis title : Immunochemical methods for proteins identification in biological samples of neural tissue
 - Thesis supervisors : Dr. Antonio Contestabile, Dr. Barbara Monti
- Internship conducted at : Laboratory of Neurobiology, FaBiT Department, University of Bologna
Address: Via Selmi 3, 40126, Bologna
Tel: +39 051 2094134

In 2011, I spent 5 months in the Neurobiology laboratory of the Department of Pharmacy and Biotechnology at the University of Bologna. The purpose of this training was to learn and become well versed in some neuroscience techniques. I learnt these techniques during a study which aims to investigate the effects of valproic acid on hippocampus of rats, an important brain area for learning and memory, in connection with gene expression and neurogenesis in adult brain.

PROFESSIONAL SKILLS AND COMPETENCES

MOTHER TONGUE : **Italian**

OTHER LANGUAGE : **ENGLISH (EUROPEAN B2 LEVEL)**

- Read : GOOD
- Written : GOOD
- Spoken : GOOD

SPANISH (EUROPEAN B2 LEVEL)

- Read : GOOD
- Written : GOOD
- Spoken : GOOD

TECHNICAL SKILLS AND COMPETENCES

Technical skills and competences

- Well versed in sterility work in biosafety cabinets, (primary and cell line) cell culture, (MTT and SRB) cell viability assays, use of adenoviruses for the overexpression of the enzyme of interest, (Bradford and Lowry) protein quantification
- Familiar with the technique of isolation of mouse primary hepatocytes by collagenase perfusion
- Well versed in electrophoresis techniques (preparation of polyacrylamide gels also in gradient, SDS-PAGE, Blue Native (BN) and Clear Native (CN) electrophoresis, 2D BN/SDS-PAGE electrophoresis), in-gel activity assays, western blot analysis
- Excellent knowledge of biochemical assays, spectrophotometric analysis (measurement of enzyme activity) and ATP synthesis rate measurement by luminometer
- Knowledge of Molecular Biology techniques (extraction of nucleic acids from cells and tissues, minipreps, use of restriction enzymes and electrophoresis, reverse transcription, PCR, real time PCR, mutagenesis, TA cloning)
- Familiar with immunohistochemical analysis, immunoprecipitation for western blot, chromatography for purification of proteins, transforming bacterial cells and analysing DNA fragments with PCR
- Use of phase contrast optical microscope and fluorescence microscope
- Preparation of medium, solutions, sterilization by autoclave and maintenance of analytical equipment
- Autonomy and experience of laboratory routines

Social skills and competences

- Ability to work in an international research group
- Good communication skills and adaptability.
- Good ability to interact with technical and scientific staff at various levels
- My degree course greatly enhanced my written and verbal communication skills due to the many presentations, assignments, essays and projects required.
- Because of my good communication skills, I was also class representative in high school and a journalist and editor for the school newspaper.

Computer skills and competences

- Knowledge of operating systems Microsoft Windows and MacOS X
- Excellent knowledge of the Microsoft Office tools (Word, Excel, PowerPoint)
- Web surfing (Internet Explorer, Google Chrome, Firefox, Safari) and e-mail (Outlook)
- Good ability to use search engines (PubMed, Medline) of the Internet
- Expertise in processing and presentation of data and results
- Use of the reference manager Mendeley
- Basic knowledge of the programming language Java and HTML (HyperText Markup Language)
- Use of capture devices: scanner, digital camera, USB, video

In possession of the qualification to practice as a biologist (section A)

Italian Ministry of Education, University and Research
January 2016 (II session 2015)

REFERENCES:

Dr. Paolo Pinton, PhD
Full Professor of General
Pathology

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PI, Dr. Dolors Serra, PhD
Associate Professor of
Biochemistry

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PARTICIPATION IN CONGRESSES AND POSTERS:

- M Corricelli , S Kuchay , L Moro, N Carocchia, D Balestra, F Ulissi, M Pinotti, M Pagano, S Marchi, C Giorgi, P Pinton. *Role of Src kinase in the regulation of calcium homeostasis*. **ABCD Congress 2017 – The Biennial Congress of the Italian Association of Cell Biology and Differentiation**. Bologna, Italy. 2017
- G Morciano, D Preti, G Aquila , G Pedriali, A Fantinati, S Missiroli, N Carocchia, P Rizzo, R Ferrari, G Campo, C Giorgi, C Trapella, P Pinton. *C subunit of F1/FO-ATP synthase as target for the design of new pharmacological approaches: therapeutic implications in the treatment of myocardial infarction*. **ABCD Congress 2017 – The Biennial Congress of the Italian Association of Cell Biology and Differentiation**. Bologna, Italy. 2017
- JF Mir, MP Lichtenstein, M Weber, N Carocchia, FV García, M Calderón-Domínguez, R Fucho, C Suñol, L Herrero, D Serra. *Ghrelin modulates GABA metabolism and reduces its release: Implication of CPT1A*. **XXXVIII Congreso de la Sociedad Española de Bioquímica y Biología Molecular (SEBBM)**. Valencia, Spain. 2015
- M Weber, R Fucho, M Calderón-Domínguez, JF Mir, N Carocchia, N Casals, L Herrero, D Serra. *Increased liver fatty acid oxidation reduces hepatic steatosis and insulin resistance in obese mice*. **VII Symposium CIBERobn “Obesity and Nutrition in the 21st Century”**. Madrid, Spain. 2015

OTHER WORK EXPERIENCE:

In order to earn some money, I worked in an agritourism, as kitchen hand, 2 years ago, in summer, and in an ice cream shop, last summer. Furthermore, I occasionally worked as babysitter, did private lessons to High School students in many subjects (mainly in Maths, Chemistry and Physics) and worked as ambulance rescuer.

NON-SCIENTIFIC INTERESTS & HOBBIES:

I am a volunteer of the Italian Red Cross (in possession of European Patent First Aid and BLS-D certification) and a blood donor (moreover, I am an important member of the association of blood donors of my city with managerial tasks too). In my free time, I like listening music, watching movies, go to a walk. I enjoy travelling, I am fascinated by art and I love photography, especially concerning natural landscapes. I am a very quiet person with sense of humour; I like joking with friends and socialize with other people. This led me to communicate with anyone without problems and to work well in group.