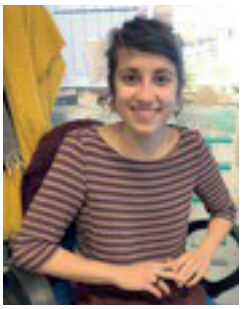
PhD Program in Biomedical Sciences

Students 2018-2019 | XXXIV cycle



Lucia Barazzuol
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research line: In vivo analysis of membrane contact sites in health and disease

The focus of my project is the in vivo study and characterization of organelle cross-talk in different physiological and pathological conditions, to help shedding light into membrane contact site regulation mechanisms. To this aim, new zebrafish transgenic lines expressing novel genetically-encoded sensors for organelle proximity will be generated and crossed with disease-relevant fish lines.

Cristina Calderan
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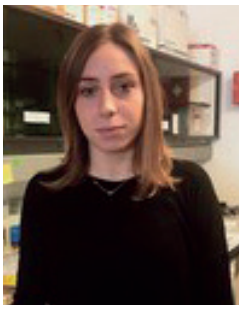
research line: development of experimental models for validating pathogenic mutations associated with human diseases

My PhD is focused on the characterization of novel mutations identified in patients using the yeast S.cerevisiae and the mouse models. I'm validating the pathogenic role of mutations found in the ACTA2 gene and in different Coq genes, associated respectively with Thoracic Aortic Aneurysm and/or Dissection (TAAD) and primary CoQ10 deficiency. My goal is to facilitate a prompt diagnosis and to test new therapies.



Giorgia D'Este
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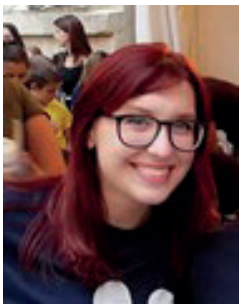
research line: Identification of novel mediators and signalling pathways promoting peripheral nerve regeneration

My PhD project is focused on the identification of small molecules as effective therapies to enhance peripheral nerve regeneration in different in vivo model of degeneration ranging from neurotoxins to mechanical trauma and neurodegenerative diseases. The main approach is through the combination of immunofluorescence and electrophysiological assays.



Ana Georgia Dumitras
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research line: The regulation of protein synthesis and function in muscle plasticity and disease.

The aim of my project is to dissect the identity and localization of the nascent muscle proteome in vivo to better understand the skeletal muscle proteome in physiological and pathological conditions

Federica Lia
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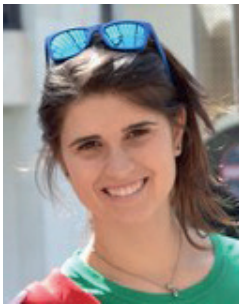
research line: Modulation of Androgen Receptor activity through phosphorylation.

My project regards the study of Androgen Receptor (AR) modulation by post-translational modifications. In particular, how phosphorylation regulates AR protein stabilization, nuclear translocation and transcriptional activity. Understanding these mechanisms is important as AR is involved in physiological functions of the cell but also plays a main role in cancer and neurodegeneration.



Stefania Lionello
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researc line: Mitochondrial entry of cytotoxic proteases: implication in cell death

My PhD Project is to investigate the mechanism of Mitochondrial entry of cytotoxic proteases (MECP) through the novel translocase activity of SAM50 channel. The central aim of my project is to characterize the phosphorylation sites of SAM50 in order to understand how MECP is regulated. We want to test whether SAM50 phosphorylation varies with the differentiation stage of cancer cells using a model of glioblastoma multiform, a very aggressive primary brain tumor for which there is no cure.

Chiara Mazzola
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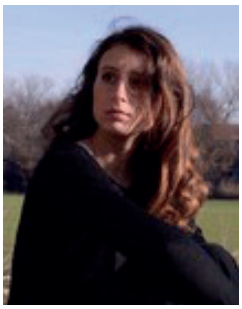
research line: Mitochondrial Calcium Signaling in Astrocytes

The overall aim of my project is to investigate the mitochondrial calcium dynamics in astrocytes in physiological and pathological conditions, using both in vitro (primary cultures) and ex vivo (brain slices from astrocyte-specific MCU-KO mice) approaches.



Sofia Parrasia
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research line: Natural compounds in health and pathology

During my PhD I am working on two main projects. The first and the most challenging one deals with the brain delivery of a promising natural-derived drug, that could be used to treat brain cancer, as well as autoimmune diseases such as multiple sclerosis. In parallel, I am working on the pharmacological effects of a natural compound (Pterostilbene) on a mouse model of obesity induced by high fat diet.

Martina Scano
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research line; Novel therapeutic approaches for sarcoglycanopathies: in vitro and in vivo studies

The aim of my PhD project is the investigation of novel therapeutic approaches to treat sarcoglycanopathies, which are rare forms of muscular dystrophy. We are testing small molecules called CFTR correctors both in myotubes deriving from sarcoglycanopathy patients and in murine models of the disease. We hope our efforts could be translated into a therapy.

Davide Steffan
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research line: Exploring new muscle mass regulators

My Phd Project regards the investigation of an uncharacterized gene transcriptionally regulated by exercise and Transcription Factor EB in skeletal muscle. The general aim of the project is to add little more information on the complex molecular pathways regulating beneficial effects of exercise on whole body metabolism