



# Noemi Orsini

## ABOUT ME

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I am a highly motivated PhD student in Neuroscience with a strong interest in cellular mechanisms of neuronal maintenance and degeneration. My PhD work is focusing on studying rodent models of retinal diseases to develop therapeutic strategies to delay the degeneration process and vision loss. I am looking for new exciting projects to improve my professional expertise and to explore other fields of neurodegeneration.

## WORK EXPERIENCE

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[ 11/2020 – Current ]

### Doctorate internship

***National Research Council (CNR), Neuroscience Institute, Pisa, Italy***

**City:** Pisa

My work is focusing on testing pharmacological molecules (hNGFp, HDAC6 inhibitors and dexamethasone) on mouse models of Retinitis Pigmentosa as a potential therapeutic approach to delay photoreceptor loss. Research project carried in the laboratory of Prof. Dr. Enrica Stretto, Director of Research, Neuroscience Institute of the Italian National Research Council.

[ 04/2019 – 03/2020 ]

### Master's degree curricular internship

***University of Pisa - Department of Biology - Unit of Cell and Developmental Biology***

**City:** Pisa

My work focused on the characterization of a zebrafish model to study tauopathies, using molecular techniques and immunostaining. Internship in the laboratory of Prof. Michela Ori.

## EDUCATION AND TRAINING

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[ 11/2020 – Current ]

### Regional Doctorate School in Neuroscience

***Universities of Florence, Pisa, Siena***

**Country:** Italy

PhD scholarship winner

[ 09/2016 – 05/2020 ]

### Master's degree in Molecular and Cellular Biology

***University of Pisa***

**City:** Pisa

**Final grade:** 110/110 cum laude

**Thesis:** "Phenotypic characterization of a new zebrafish model to study tauopathies"

Relator: Prof. Michela Ori, Department of Biology, Unit of Cell and Developmental Biology, University of Pisa

[ 09/2012 – 03/2016 ]

### Bachelor's degree in Biological Sciences

***University of Studies of L'Aquila***

**City:** L'Aquila

**Final grade:** 106/110

## LANGUAGE SKILLS

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**Mother tongue(s):** Italian

**Other language(s):**

**English**

**LISTENING** B1 **READING** B2 **WRITING** B1

**SPOKEN PRODUCTION** B1 **SPOKEN INTERACTION** B1

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

## DIGITAL SKILLS

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### Suites

Windows (Windows XP, Windows Vista, Windows 7, Windows 8, Windows 10) | Open Office | Microsoft/ Microsoft Office | PubMed ResearchGate

### Data analysis, Image analysis and editing

GraphPad Prism | ImageJ | Zen imaging software | MetaMorph | Adobe Photoshop | Image Studio (Li-cor)

## PROFESSIONAL SKILLS

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### Technical skills:

- Molecular biology and biochemistry techniques: PCR and qPCR, gel electrophoresis, extraction and purification of nucleic acids, western blot;
- Histological techniques: cryosectioning, fluorescence immunostaining, in situ hybridization;
- Confocal and epifluorescence microscopy; structured light, wide field microscopy;
- Experimental use of zebrafish model: manipulation, breeding, specific experimental protocols
- Experimental manipulation of mouse model: breeding, genotyping, eye injections and enucleation, retina and retinal pigmented epithelium isolation and processing
- Cell culture: seeding, maintenance, cell viability assay, immunostaining and western blot of 661W and ARPE-19 cell lines.

### Publications:

Napoli D et al. Human NGF painless (hNGFp) effects on a mouse model of Retinitis Pigmentosa. In preparation, 2023

Carullo G\*, Orsini N\*, Piano I\* et al. Targeting HDAC6 to support survival of cone photoreceptors in inherited retinal diseases: Synthesis, SARs analysis and identification of a potent inhibitor with in vitro and in vivo efficacy. Under revision, 2023. (\*co-first authorship)

Stretto E, Di Marco B, Orsini N, Napoli D. Retinal Plasticity. Int J Mol Sci. 2022 Jan 20;23(3):1138. doi: 10.3390/ijms23031138.

Napoli D, Biagioni M, Billeri F, Di Marco B, Orsini N, Novelli E, Stretto E. Retinal Pigment Epithelium Remodeling in Mouse Models of Retinitis Pigmentosa. Int J Mol Sci. 2021 May 20;22(10):5381. doi: 10.3390/ijms22105381. PMID: 34065385; PMCID: PMC8161377.

### Participation to seminars and meetings:

Orsini N, Rescue of cone photoreceptors in retinal degeneration mice by histone deacetylase inhibitors, online presentations at Italian Virtual Retina Institute, 2023 nov 10

Orsini N, Carullo G, Piano I, Corsi F, Fontana A, Napoli D, Di Marco B, Galante A, Salamone G, Gargini C, Campiani G, Stretto E. Epigenetic approaches to delay cone loss in Retinitis Pigmentosa mice. Poster presented at: Ophthalmic formulations: Challenges and Advances; 2023 jul 14; Pisa, Italy.

Orsini N, Carullo G, Corsi F, Di Marco B, Fontana A, Piano I, Napoli D, Gargini C, Campiani G, Stretto E. Histone Deacetylase inhibition rescues cone photoreceptors in Retinitis Pigmentosa mice. Poster presented at: BraYn. 5th Brainstorming Research Assembly for Young Neuroscientists; 2022 sep 28-30; Rome, Italy.

Orsini N, Napoli D, Cattaneo A, Stretto E. Pharmacological approaches to delay cone cell death in Retinitis Pigmentosa. Poster presented online at: IRPES Pisa 2021. Innovate Research in Pharmaceutical and Environmental Sciences. Drug development from zero to four; 2021 nov 19; Pisa, Italy.

## **ADDITIONAL COURSES AND SEMINARS**

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### **[ 06/11/2023 – 08/11/2023 ] "3D microscopy imaging with clearness"**

Practical workshop on tissue-clearing methods, imaging of cleared samples by light sheet microscopy, data analysis and management, at Instituto de Investigação e Inovação em Saúde, Porto; with certificate of attendance.

### **[ 23/09/2023 – 30/09/2023 ] Neurodegeneration and Neuroinflammation**

Attended the course in Neurodegeneration and Neuroinflammation, organized by Neuroscience School of Advanced Studies, at San Servolo; with certificate of attendance.

I have been elected assistant professor, and I have won a free course to use in the following year.

### **[ 06/2023 – Current ] Course on animal utilizations for experimental purposes**

Training course with final exam; jointly organized by University of Pisa, University of Siena, University of Perugia and National Research Council.

### **[ 25/05/2023 ] "Upgrade in focus" Beyond the limits of the Microscope**

Workshop at Best Western Hotel Globus, Rome; with certificate of attendance.

### **[ 02/2023 ] General and specific training in health and safety matters**

Modules:

- common risks to all tasks;
- chemical and carcinogen risks;
- equipments, DPI, ROA and CEM;
- biological risks.

### **[ 11/2022 ] Biology and management of laboratory animals-rodents and lagomorphs**

Training course on animal care, animal manipulation and experimental procedures. Held by Experimental Zooprophyllactic Institute of Lombardia and Emilia Romagna; with training certificate.

### **[ 11/2022 ] National legislation and ethics**

Training course on current laws on animal experimentations recognized by Ministry of Health. Held by Experimental Zooprophyllactic Institute of Lombardia and Emilia Romagna; with training certificate.

[ 28/09/2022 – 30/09/2022 ] **BraYn. 5th Brainstorming Research Assembly for Young Neuroscientists**

Meetings for young researchers in the field of Neuroscience, at Rome.

[ 07/2022 – Current ] **Virtual Retina seminars**

Monthly seminars organized online by a group of Italian investigators on retinal neurobiology in health and disease (Virtual Retina Institute).

[ 04/07/2022 – 06/07/2022 ] **Confocal microscopy stage**

Stage on image acquisition at Zeiss Laser Scanning (LSM) 900 confocal microscope, especially of microglial cells; Neuroscience Institute of CNR, Milan; tutor: Dr. Elisabetta Menna. With certificate of attendance.

[ 05/2020 ] **Training course for teaching**

Acquisition of 24 credits in the anthropo-psycho-pedagogical field and teaching methodologies and technologies at the University of Pisa, with certificate of achievement of credits.

[ 27/01/2020 – 28/01/2020 ] **ZF-Med & Pisa Zebrafish Day 2.0**

Seminars about ongoing researches using zebrafish as animal model, with certificate of attendance.

[ 23/10/2019 – 25/10/2019 ] **"Seminars on Mouse Brain Development and Structure"**

Neuroanatomical maps of developing murine brain. Prof. Luis Puelles, University of Pisa.

[ 03/12/2018 ] **"Out of the box research on neurodegeneration"**

Workshop on neurodegenerative diseases at Scuola Normale Superiore, Pisa. With certificate of attendance.

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*In accordance to the Regulation of the European Parliament 679/2016 and the Italian Legislative Decree no. 196 dated 30/06/2003, I give consent to use and process my personal data contained in this document with the purpose of the recruitment process*

*Pisa, 15/12/2023*