

Curriculum vitae

Personal Information

First name, Surname: Sabrina, Asteriti

Gender: Female

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Date of birth: November 1st, 1984

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Education and Research Training

2018–Present Postdoctoral researcher in the laboratory of prof. Daniele Dell’Orco, University of Verona (IT), supported by a Telethon Foundation Grant (project n. GGP16010).

2015–2018 Postdoctoral research associate in the laboratory of Prof. Roger Hardie, Dept. of Physiology, Development and Neuroscience at the **University of Cambridge (UK)**, funded by a Marie Skłodowska Curie individual fellowship (H2020-MSCA-IF-2014_658818, 24 months) and an Isaac Newton Trust Research Grant (10 months).

2013–2015 Postdoctoral fellowship in the laboratory of Prof. Lorenzo Cangiano, at the Dept. of Translational Research, University of Pisa.

2013 Doctoral degree with a thesis titled: “Gap Junctions in Mammalian Photoreceptors: Functional Impact and Modulation”. Supervisors: Prof. Maria Claudia Gargini and Dr. Lorenzo Cangiano.

2012–2013 Research training in the laboratory of Prof. Margaret Lin Veruki at the Dept. of Biomedicine of the University of Bergen (Norway), supported by an Yggdrasil fellowship from the Norwegian Research Council.

2011 International School of Biophysics “Antonio Borsellino” on Channels and Transporters. Erice, Italy.

2010–2013 Doctoral program within the School of Graduate Studies of Clinical Physiopathology and Pharmaceutical Science at the University of Pisa. Research work in the laboratory of Dr. Lorenzo Cangiano, under the joint supervision of Prof. Claudia Gargini.

2009 One year research fellowship on the expression and localisation of HCN channels in the mammalian retina in the laboratory of Prof. Claudia Gargini at the Dept. of Psychiatry, University of Pisa.

2008 Master’s degree in Pharmaceutical Science with a research thesis titled “New Allosteric Modulators for Protease Activated Receptor 1, PAR-1”, under the supervision of Prof. Maria R. Mazzoni at the Dept. of Psychiatry and Neurobiology, University of Pisa. Marks 110/110 *cum laude*.

2003 “Maturità Classica” high school diploma. Liceo Classico Pitagora, Crotone. Marks 100/100.

Teaching Experience

2018, 2019 Lectures in English on selected topics of physiology and neuroscience within the Master's Degree Course in Neuroscience, Faculty of Biology, University of Pisa.

Main Experimental Techniques

Electrophysiology: (i) Perforated and whole cell patch clamp recordings from neurons in vertebrate retinal slices: rod and cone photoreceptors (mouse, lamprey), bipolar cells (mouse), AII amacrine cells (rat); (ii) Whole cell patch clamp recordings from dissociated invertebrate photoreceptors (*Drosophila melanogaster*); (iii) Suction electrode recordings from rod outer segments (mouse, lamprey); (iv) *In vitro* and *in vivo* electroretinograms from vertebrate and invertebrate retinas; (v) Dissection and handling of wild type and mutant mouse, rat, lamprey, fruitfly retina in dark adapted conditions. (vi) Development of voltage-clamp and current-clamp recording protocols. (vii) Acquisition and analysis of biological signals with specialised software (AxographX, pClamp) and generalist statistical software.

Imaging: (i) Calcium imaging with genetically-encoded indicators from dissociated fruitfly photoreceptors and *in vivo* from intact flies with the deep pseudopupil technique. (ii) Intracellular calcium measurement in cultured cells.

Molecular biology: PCR, qPCR, cell cultures.

Awards and Grants

2018 Postdoctoral Fellowship supported by Telethon Foundation (24 months)

2018 Isaac Newton Trust Research Grant from University of Cambridge (10 months)

2017 FASEB Conference Travel Award

2015–17 Marie Skłodowska Curie individual fellowship (H2020-MSCA-IF-2014_658818, 24 months)

2013 European Meeting on Phototransduction 2013 Travel Grant

2012-13 Yggdrasil fellowship from the Norwegian Research Council (6 months)

Invited Talks at International Conferences

2017 FASEB Conference on the biology and chemistry of vision, Steamboat Springs, CO, USA. Talk title: “ Ca^{2+} modulation of light responses in *Drosophila* photoreceptors.”

2018 Workshop on Sensory systems in health and disease, University of Verona, Italy. Talk title: “The role of calcium in the performance of *Drosophila* photoreceptors”

Peer Reviewed Papers

1. **Asteriti S**, Ricci V, Cangiano L (2020). Two simple criteria to estimate an objective's performance when imaging in non design tissue clearing solutions. *J Neurosci Meth* 332: 108564.
2. Federighi G, **Asteriti S**, Cangiano L (2019). Lumbar spinal cord neurons putatively involved in ejaculation are sexually dimorphic in early postnatal mice. *J Comp Neurol* 528: 624-636.
3. Liu C-H, Bollepalli MK, Long SV, **Asteriti S**, Tan J, Brill JA, Hardie RC (2018). Genetic dissection of the phosphoinositide cycle in Drosophila photoreceptors. *J Cell Sci* 131: 1-12.
4. Bollepalli MK, Kuipers ME, Liu C-H, **Asteriti S**, Hardie RC (2017). Phototransduction in Drosophila is compromised by Gal4 expression but not by InsP3 receptor knockdown or mutation. *eNeuro* 4: 1-18.
5. **Asteriti S**, Liu C-H, Hardie RC (2017). Calcium signalling in Drosophila photoreceptors measured with GCaMP6f. *Cell Calcium* 65: 40-51.
6. Barbato S, Marrocco E, Intartaglia D, Pizzo M, **Asteriti S**, Naso F, Falanga D, Bhat RS, Meola N, Carissimo A, Karali M, Prosser HM, Cangiano L, Surace EM, Banfi S, Conte I (2017) MiR-211 is essential for adult cone photoreceptor maintenance and visual function. *Sci Rep* 7: 17004, 1-13.
7. **Asteriti S**, Gargini C, Cangiano L (2017). Connexin 36 expression is required for electrical coupling between mouse rods and cones. *Vis Neurosci* 34: e006, 1-7. **[F1000 Biology, recommended]**
8. Schön C, **Asteriti S**, Koch S, Sothilingam V, Garrido MG, Tanimoto N, Herms J, Seeliger MW, Cangiano L, Biel M, Michalakis S, (2016). Loss of HCN1 enhances disease progression in mouse models of CNG channel-linked retinitis pigmentosa and achromatopsia, *Hum Mol Gen* 25: 1165-75.
9. **Asteriti S**, Grillner S, Cangiano L, (2015). A Cambrian origin for vertebrate rods. *eLife* 4: e07166, 1-16.
10. **Asteriti S**, Cangiano L, (2015). Slow light response kinetics in rods points towards a perturbation of the normal cellular milieu. *J Physiol* 593: 2975-6.
11. **Asteriti S**, Dal Cortivo G, Pontelli V, Cangiano L, Buffelli M, Dell'Orco D, (2015). Effective delivery of recombinant proteins to rod photoreceptors via lipid nanovesicles. *Biochem Biophys Res Commun* 461: 665-70.
12. **Asteriti S**, Gargini C, Cangiano L, (2014). Mouse rods signal through gap junctions with cones. *eLife* 3: e01386, 1-21.
13. Cangiano L, **Asteriti S**, Cervetto L, Gargini M, (2012). The photovoltage of rods and cones in the dark-adapted mouse retina. *J Physiol* 590: 3841-55.

14. **Asteriti S**, Daniele S, Porchia F, Dell'Anno MT, Fazzini A, Pugliesi I, Trincavelli M, Taliani S, Martini C, Mazzoni M, Gilchrist A, (2012). Modulation of PAR1 signaling by benzimidazole compounds. *Br J Pharmacol* 167: 80–94.

Peer reviewer for The Journal of Physiology

Employer References

Prof. Daniele Dell'Orco (current supervisor)

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Prof. Roger Hardie (former postdoctoral supervisor)

Dept. Physiology, Development and Neuroscience. University of Cambridge, UK

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Prof. Maria Claudia Gargini (former doctoral supervisor)

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