

# Curriculum Vitae et Studiorum



## Dr. Giuditta Dal Cortivo

University of Verona, Dep. of Neuroscience Biomedicine and Movement Sciences

Sec. of Biological Chemistry

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## Education / Academic positions

- June 2020 - present: Post-Doc at the University of Verona, Department of Neurosciences, Biomedicine and Movement Sciences, Sec. of Biological Chemistry.
- October 2019 – May 2020: Research assistant (Ph.D. to be defended in May 2020).
- October 2016 – October 2019: PhD in Biomolecular Medicine (curriculum Biochemistry) at the University of Verona, Department of Neurosciences, Biomedicine and Movement Sciences, Sec. of Biological Chemistry.
- April 2016 - October 2016: Research collaborator at the University of Verona, Department of Neuroscience Biomedicine and Movement Science, Sec. Biological Chemistry.
- October 2014 - March 2016: M.Sc. in Bioinformatics and Medical Biotechnologies at the University of Verona.
- October 2009 - March 2013: B.Sc. in Biotechnology at the University of Verona.

## Tutoring and teaching activities:

- 2020: Internship for Medical doctor students in collaboration with the School of Medicine, University of Verona.
- 2019: Internship for Medical doctor students, in collaboration with the School of Medicine, University of Verona.
- 2019: Co-supervision of B. Sc student Sofia Munari (Biotechnology course, University of Verona).
- 2016: Co-supervision of B. Sc student Melania Diodà (Biotechnology course, University of Verona).

## Awards and qualifications

- 2019: Finn Wold travel grant from the “33<sup>rd</sup> annual symposium of the Protein Society”, Seattle, June 30<sup>th</sup> - July 3<sup>rd</sup>, 2019.

## Grants:

- 2017: Società Italiana di Biochimica e Biologia Molecolare (SIB) – Short Visit Grant Halle-Saale, Leipzig (Germany)

## Research topics and expertise

- Biochemical and biophysical characterization of protein-nanodevice interactions (inorganic nanoparticles and liposomes) for nanomedical applications.
- Investigation of structure-function relationship of calcium sensor proteins and complexes involved in sight, hearing and cardiac muscle functioning.
- Expression and purification of recombinant proteins from prokaryotic (E. Coli) and eukaryotic systems (HEK 293) by chromatographic techniques (FPLC).
- Quantification of small molecules by HPLC.
- Protein-ion and protein-protein interaction studied by experimental techniques (Absorption, Fluorescence and Circular Dichroism Spectroscopies, Dynamic Light Scattering, Surface Plasmon Resonance, Mass Spectrometry).
- Expert in Windows OS (text composition, spreadsheet, slides preparation), biological databases (Protein Data Bank, Uniprot and NCBI related databases), molecular visualization software (Pymol).
- Good command of molecular visualization (PyMol), data analysis software (SigmaPlot, Prism) and photo editing (Photoshop).

## Invited seminars

- July 2019: The Young Researcher Vision Camp (July 14, Leibertingen, Germany). Invited talk entitled: “Effects of missense mutations in the GUCA1A gene associated with cone-rod dystrophy and perturbation of second messenger homeostasis in photoreceptors”.
- June 2018: Sensory System in Health and Disease (June 6<sup>th</sup>, Verona, Italy). Invited talk entitled: “Guanylate Cyclase Activating Protein 1 mutants associated with Cone/Cone-Rod-Dystrophy: a biochemical characterization”.

## Membership

- 2019: Member of the Protein Society.
- 2018: Member of the European Calcium Society.
- 2017: Member of *Società Italiana di Biochimica e Biologica Molecolare*.

## Publications

Since 2015, Dr. Dal Cortivo has authored 6 articles appearing in international peer-reviewed journals (Underlined: co-first author). To date, **H-index** is 4 (Google Scholar).

- Dell'Orco D., **Dal Cortivo G.**, “Normal GCAPs partly compensate for altered cGMP signaling in retinal dystrophies associated with mutations in GUCA1A”, *Scientific Reports*, **2019**, doi: 10.1038/s41598-019-56606-5.
- **Dal Cortivo G.**, Marino V., Iacobucci C., Vallone R., Arlt C., Rehkamp A., Sinz A., Dell'Orco D., “Oligomeric state, hydrodynamic properties and target recognition of human Calcium and Integrin Binding protein 2 (CIB2)”, *Scientific Reports*, **2019**, doi: 10.1038/s41598-019-51573-3
- Marino V., **Dal Cortivo G.**, Oppici E., Maltese P. E., D'esposito F., Manara E., Ziccardi L., Falsini B., Maglio A., Bertelli M., Dell'Orco D., “A novel p.(Glu111Val) missense mutation in GUCA1A associated

with cone-rod dystrophy leads to impaired calcium sensing and perturbed second messenger homeostasis in photoreceptors”, Human Molecular Genetics, 2018, doi: 10.1093/hmg/ddy311.

- Vallone R., Dal Cortivo G., D’Onofrio M., Dell’Orco D., “Preferential binding of Mg<sup>2+</sup> over Ca<sup>2+</sup> to CIB2 triggers an allosteric switch impaired in Usher Syndrome Type 1J”, Frontiers in Molecular Neurosciences, 2018, doi: 10.3389/fnmol.2018.00274.
- Dal Cortivo G., Wagner E. G., Cortelletti P., Krishna Mohan Padmanabha Das, Zangger K., Speghini A., Dell’Orco D., Meyer H., “Luminescent properties of nanoparticles shed light on their interactions with proteins”, Scientific Reports, 2018, doi: 10.1038/s41598-018-21571-y.
- Asteriti S., Dal Cortivo G., Pontelli V., Cangiano L., Buffelli M., Dell’Orco D., “Effective delivery of recombinant proteins to rod photoreceptors via lipid nanovesicles”, Biochemical and Biophysical Research Communication, 4, 655-670, 2015, doi: 10.1016/j.bbrc.2015.04.088.

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