

CURRICULUM VITAE

ANDREOTTI GIUSEPPINA

-since December 2001 Researcher @ the Institute of Biomolecular Chemistry - National Research Council of Italy, Pozzuoli-Naples
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RESEARCH SECTORS: Protein chemistry, enzymology, rare diseases, drug discovery, pharmacological chaperone, NMR spectroscopy, metabolomic

EXPERTISE

- Spectroscopic techniques. UV-visible, fluorimetry, circular dichroism, one- e two-dimensional NMR spectroscopy (^1H , ^{13}C , ^{31}P), Thermal shift assay (TSA). Cellular Thermal Shift Assay (CeTSA)
- Chromatographic techniques. Any kind of low and medium-pressure chromatography: ion exchange chromatography, gel-filtration, hydrophobic interaction, affinity, immunoaffinity. HPLC.
- Electrophoresis. PAGE under denaturant and native conditions, isoelectrofocusing, 2D-electrophoresis, Western-blotting, ecc.
- Molecular biology techniques. Basic knowledge of purification, sequencing and manipulation of DNA; cloning in plasmids, expression and purification of recombinant proteins in bacteria.
- Cell biology. Basic knowledge of eukaryotic cell culture. Cell fractionation.

RECENT SCIENTIFIC INTERESTS

- Small molecule therapies: identification of targets and development of drugs. Fabry disease and PMM2-CDG (congenital disorder of glycosylation Ia or Jaken disease)
- Purification and characterization of wild-type and mutated proteins/enzymes for structural and functional studies, search for inhibitors/ligands, ecc. Human PMM1 and PMM2, yeast PGM1.
- Application of NMR spectroscopy to metabolomic studies and to structural characterization of proteins and peptides.

RESPONSIBILITY OF FUNDED RESEARCH PROJECTS

2025: Accordo per la Coesione della Regione Campania. Fondo di Rotazione ex L. 183/1987
"Promozione di progetti di ricerca, sviluppo sperimentale e innovazione collaborativi nel campo delle malattie rare", "STUDIARE MALATTIE RARE PER COMPRENDERE MALATTIE NON RARE"-
RareForNotRare - 2 years - Role: coordinator and PI

2024: Partenariato Esteso "Health Extended ALLiance for Innovative Therapies, Advanced Lab-research, and Integrated Approaches of Precision Medicine -HEAL ITALIA" - PE_00000019 SPOKE N.5 "Next-Gen Therapeutics". "Predictive Research On Personalized Healthcare through Experimental Characterization of Yielding GLYCOprotein Rare Ailments and Responsive Endoplasmic reticulum modulation for therapeutic handling" – PROPHECY GlycoRARE- 1 year - Role: coordinator and PI

2023: Joint Bilateral Agreement CNR/Slovak Academy of Sciences, Biennial program 2023-24: Characterization of engineered PMM2-CDG fibroblasts as tools for deciphering the molecular basis of the disease and developing therapeutic approaches. Role: Italian PI

2021: Sponsored Research Agreement between ICB-CNR and Perlara PBC. Role: PI

2015: "Crystal-modulating biomineralization proteins from mussel shells: purification and structural and functional characterization" - LR5 Ricerca scientifica in Campania, Legge Regionale 28/03/2002, n. 5-2007 – 1 year – Role: PI

2012: "Pharmacological chaperones: identification of targets and development of drugs". Telethon grant GGP12108 - 3 years- PI @ ICB-CNR

INSTITUTIONAL ACTIVITIES

- since February 2024: board member of the Italian Chemical Society, Società Chimica Italiana-Sezione Campania
- Since December 2023: elected member of the council of the ICB-CNR

- 2016/2017: Project manager: DCM.AD003.011 / ANDREOTTI - Progetti comuni di istituto per la comunicazione e divulgazione dei risultati e della conoscenza scientifica e per la formazione del personale
- 2014/2019: member of PREDIR, Public relations with the territory, result dissemination and scientific formation (one of the Services of Common Interest within the Institute of Biomolecular Chemistry).
- since 2009: in charge of institutional projects within Piano di Gestione Preliminare (PdGP- CNR).

THESIS TUTORSHIP

- Master's thesis co-supervisor (more than 20 up to now, University of Naples Federico II-Italy, Freie Universität Berlin-Germany)
- PhD thesis supervisor:
 1. L. Liguori, PhD in Biomolecular Sciences, XXXII cycle, University of Campania "Luigi Vanvitelli", Italy (PON RI 2014/2020 "Dottorati innovativi con caratterizzazione industriale")- Title: Small Molecules and Pharmacological Chaperones to cure Enzymopathies
 2. M. Allocca, PhD student in Biomolecular Sciences, XXXIV cycle, University of Campania "Luigi Vanvitelli", Italy (POR Campania FSE 2014/2020 "Dottorati di Ricerca Con Caratterizzazione Industriale")- Title: Search for orphan drugs using bioinformatics tool and in vitro validation

MEMEBERSHIPS

- since 2024: member of the National Biochemical Society-Società Italiana di Biochimica e Biologia Molecolare
- since 2016: member of the CDG & Allies- professionals and Patient Associations International Network, <http://www.apcdg.com/wg-cdg-pharmacological-chaperones.html>
- since 2020: editorial board member of Applied Sciences-MDPI, <https://www.mdpi.com/journal/applsci/editors>
- since 2019: member of the SCI, Società Chimica Italiana (The Italian Chemical Society), group "Chemistry of biological systems"
- since 2019: member of the Scientific Community of the SZN Anton Dohrn
- since 2015: registered in REPRISE (the Register of Scientific Experts set up at the MIUR) for the following sections: Fundamental research, Scientific popularization

STAGES ABROAD

- 2022: @dept of Biology, Lehigh University, Bethlehem- PA, USA. Host professor G Lang. CNR-STM Program 2022
- 2019: @Universidad Autónoma de Madrid. Host professor: prof B Perez. CNR-STM Program 2019
- 2019: @ Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, Caparica, Portugal, host professor P Videira. CNR-STM Program 2018
- 2018: @ Pediatric Neurology Hospital Sant Joan de Déu, Barcelona, Spain. Hosting: Prof M Serrano

OTHER

- 2023, guest editor: Genes (ISSN 2073-4425), Special Issue "Diagnosis and Therapies for Genetic Diseases"
- July 2020: member of the PhD commission at the Universidad Autónoma de Madrid, Departament of Molecular Biology
- 2019/2020, guest editor: Applied Science-MDPI, Special Issue "Application of Spectroscopic Techniques to Metabolomic Research"
- since 2013: web site FabryCEP, http://www1.na.icb.cnr.it/project/fabry_cep/. Fabry_CEP is a user-friendly web-application designed to help clinicians Choose Eligible Patients for the therapy with pharmacological chaperones. Role: coauthor
- Evaluator of grants: (MIUR, University of Rome, University of Insubria, University of Venice, University of Florence and other Universities, Agency for Health Quality and Assessment of Catalonia, FWO)
- Referee for journals (WoS, <https://publons.com/researcher/AAX-8952-2020/>)
- Languages: English (B2), Spanish (B2), Portuguese (A2)

PATENT

- Bioactive peptide sequence for use in the replacement of human calcitonin (Application Details: IT1380429-B , ITRM0481, 17 Sep 2007)