CURRICULUM VITAE

ANDREOTTI GIUSEPPINA

From 2001 Researcher @ the Institute of Biomolecular Chemistry - National Research Council of Italy, Pozzuoli-Naples
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ACADEMIC DEGREES
- 13/12/1996 Doctoral Degree in Biochemical Sciences, University of Naples "Federico II", Italy. Title of thesis: "Enzymes of the aminoacidic metabolism in thermophilic archaebacteria". Supervisor: Prof. G. Marino.
- 1991 Passed exam to become a qualified Chemist
- 18/12/1990 Degree in chemistry with top marks (110/110 cum laude) at the Faculty of Science, University of Naples "Federico II", Italy. Title of thesis: "Aminotransferases from thermophilic organisms". Supervisor: Prof. G. Marino.

RESEARCH SECTORS: Protein chemistry, enzymology, rare diseases, drug discovery, pharmacological chaperone, NMR spectroscopy, metabolomic

EXPERTISE
Recombinant proteins production and purification; Structural and functional characterization; Thermal shift assay; NMR spectroscopy (^{1}H, ^{31}P, ^{13}C); metabolomic analysis by NMR
- Spectroscopic techniques. UV-visible, fluorimetry, circular dichroism, one- e two-dimensional NMR spectroscopy.
- 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, isolectrofocusing, 2D-electrophoresis, Western-blotting, ecc.
- Molecular biology techniques. Purification, sequencing and manipulation of DNA; cloning in plasmids, expression of recombinant proteins.
- Cell biology. Eukaryotic cell culture.

SCIENTIFIC INTERESTS
- Recent interests:
i) Pharmacological chaperones: identification of targets and development of drugs. Fabry disease and PMM2-CDG (congenital disorder of glycosylation Ia or Jaken disease)-
ii) Purification and characterization of proteins/enzymes for biotechnological applications: Glycosyl hydrolases from marine organisms and exploitation of their potential for biotechnological applications (fine and pharmaceutical chemistry, agrochemistry, and so on). Biomolecules (proteins, lipids, ect.) from biomaterials.
iii) Application of NMR spectroscopy to metabolomic studies and to structural characterization of proteins and peptides.
- 1989-95: Enzymes from thermophilic bacteria: Purification and characterization of aminotransferases from the thermophilic archaebacterium Sulfolobus solfataricus, from the hyperthermophilic archaebacteria Pyrococcus furiosus and Thermococcus litoralis. Cloning and expression in E. coli of thermostable indole-3-glycerol-phosphate synthase from Sulfolobus solfataricus and study on the main features that confer thermal stability.

RESEARCH PROJECTS-funded
2015: "Crystal-modulating biomineralization proteins from mussel shells: purification and structural and

functional characterization" - LR5 Ricerca scientifica in Campania, LR 28/03/2002, n. 5-2007 – 1 year – Principal Investigator
2012: "Pharmacological chaperones: identification of targets and development of drugs". Telethon grant GGP12108 - 3 years- Principal Investigator @ ICB-CNR

PARTICIPATION TO OTHER FUNDED PROJECTS
- 2018. ADVISE: Antitumor Drugs and Vaccines from the Sea. POR Campania FESR 2014/2020 O.S. 1.2 Az. 1.2.1 e 1.2.2 Avviso "Piattaforme Tecnologiche di ricerca collaborativa per la lotta alle patologie oncologiche"
- 2017-2020. "Molecular genetics and new directions for clinical management of growth disorders associated with genomic imprinting". MIUR-PRIN 2015
- 2011-2014. BIAM-EPI: "Ricerca e sviluppo di bioregolatori attivi sui meccanismi epigenetici dei processi infiammatori nelle malattie croniche e degenerative". MIUR-PON 2007-2013
- 2011-2013. "Nuovi approcci allo studio dei disordini della crescita associati a difetti dell'imprinting genomico". MIUR-PRIN 2009
- 2008-2010. "Difetti di imprinting genomico nei disordini della crescita e tumori". MIUR-PRIN 2007
- 2007-2009. "Recettori per chemochine come marcatori biologici e molecolari di risposta clinica e target diagnostico terapeutico". Alleanza Contro il Cancro (ACC)-Istituto Superiore di Sanità (ISS)-Convenzione ACC9
- 2002-2005. "Strutture ed interazioni molecolari di prodotti genici". Legge 449/97-Fondo speciale per lo sviluppo della ricerca di interesse strategico,.Settore tematico"Genomica Funzionale"
- 1996-2000. "Intracellular mechanism of antigen processing and presentation by the MHC class I and class II molecules". European Community Research Training Networks grant

SCIENTIFIC OUTREACH PROJECTS-funded
2016: "Together in the real and in the virtual worlds for a sustainable chemistry". MIUR Legge 113/91 D.D. 1524/08-07-2015 T2. 1 year. Role: Project coordinator @ ICB-CNR
2011: "L'Istituto di Chimica Biomolecolare -Pozzuoli va a scuola e ..... le scuole vanno all'Istituto di Chimica Biomolecolare". MIUR Legge 6/2000- progetti annuali 2010. 1 year. Role: Project coordinator
2010: "L'Istituto di Chimica Biomolecolare va a scuola". Supported by ""Ufficio Promozioni e Sviluppo Collaborazioni del CNR". 1 year. Role: Project coordinator

SCIENCE OUTREACH (selected activities)
- from 2017: Coordinator of DidaLab@ICB (Laboratory for didactic activities).
- from 2016: Divulgation and formation activities concerning biomolecular chemistry, aimed to support the social/scholastic/employment inclusion of children with autism – collaboration agreement between AutismAid Onlus and ICB-CNR. Role: coordinator
- from 2015: Piccolo Museo della Scienza @ ICB-Pozzuoli, http://collection.na.icb.cnr.it/. Role: scientific coordinator
- from 2015: "Attività di alternanza scuola-lavoro (ASL) e percorsi per le competenze trasversali e l'orientamento (PTCO)" according to the law 107/2015 (La Buona Scuola). Role: tutor and coordinator of the activities at the ICB-CNR
- from 2010: National and international events (European Biotech Week, Festival della Scienza di Genova, Futuro Remoto, Settimana della cultura scientifica, Internet Festival, ecc.). Role: participant and/or coordinator

RESEARCH FELLOWSHIPS and AWARDS
-2019: CNR Short-Term Mobility Program, at the Centro de Diagnóstico de Enfermedades Moleculares, Universidad Autónoma de Madrid, Spain
-2018: CNR Short-Term Mobility Program, at the Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, Portugal
-2005 awarded from National Research Council with "Premio Incentivazione del personale ricercatore sui risultati della ricerca dell'anno 2005" for young researchers of CNR
- 1998-2000: Research fellowship positions on: "Application of NMR spectroscopy for food quality control. INFM-CNR
- 1991: "Premio di laurea - Consorzio Napoli Ricerche" for the dissertation "Aminotransferases in thermophilic organisms".

INSTITUTIONAL ACTIVITIES
- from September 2014: 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).
- from November 2008: Responsible of institutional workpackages within the projects of the Dipartimento Progettazione Molecolare-CNR.
- Master's thesis co-supervisor (about 20 up to now)
- PhD thesis supervisor:

L. Liguori, PhD in Biomolecular Science, XXXII cycle, University of Campania "Luigi Vanvitelli", Italy (PON RI 2014/2020 "Dottorati innovativi con caratterizzazione industriale")- Title: Piccole Molecole e Chaperon Farmacologici per la cura di Enzimopatie

M. Allocca, PhD student in Biomolecular Science, XXXIV cycle, University of Campania "Luigi Vanvitelli", Italy (POR Campania FSE 2014/2020 "Dottorati di Ricerca Con Caratterizzazione Industriale")- in progress
- July 2020: member of the PhD commission at the Universidad Autónoma de Madrid, Departament of Molecular Biology

STAGES ABROAD
- 25/11 - 17/12/2019: @ Centro de Diagnóstico de Enfermedades Moleculares, Universidad Autónoma de Madrid. hosting: prof B Perez. "Metabolomics characterization of PMM2-CDG patients' fibroblasts". CNR STM Program
- 28/01 - 18/02/19: @ Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, Caparica, Portugal, host professor P Videira. "Biochemical characterization of samples from CDG patients". CNR STM Program
- 8-21 september 2018: @ Pediatric Neurology Hospital Sant Joan de Déu, Barcelona, Spain. Hosting: Dr Palau, Dr Serrano, Dr Montero, Dr Artuch, Dr Hoenika
- september/december 1991: graduate student at the Prof. MWW Adams' Laboratory, Department of Biochemistry, The University of Georgia, USA

MEMEBERSHIPS
- from 2016: member of the CDG & Allies- professionals and Patient Associations International Network, http://www.apcdg.com/wg-cdg-pharmacological-chaperones.html
- from 2020 editorial board member of Applied Sciences-MDPI
- from 2019 member of the SCI, Società Chimica Italiana (The Italian Chemical Society), group "Chemistry of biological systems"
- from 2019 member of the Scientific Community of the SZN Anton Dohrn
- from 2015 registered in REPRISE (the Register of Scientific Experts set up at the MIUR) for the following sections: Fundamental research, Scientific popularization

OTHER
- 2019 guest editor: Applied Science-MDPI, Special Issue "Application of Spectroscopic Techniques to Metabolomic Research"
- from 2009: in charge of institutional projects within Piano di Gestione Preliminare (PdGP- CNR)
- from 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, Agency for Health Quality and Assessment of Catalonia and others)
- Referee for journals (IJMS, Medicine, Molecules, Marine drugs, Computational Biology and Chemistry, Clinical Ophthalmology, Journal of Rare Diseases Research & Treatment,…)
- 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)