

PERSONAL INFORMATION

Andrea Benzi



WORK EXPERIENCE

01/09/2015–30/10/2018

Undergraduate Internship for Bachelor and Master Degree

Department of Experimental Medicine (DIMES), Section of Biochemistry, University of Genoa.

Research activities including molecular biology and biochemistry techniques

EDUCATION AND TRAINING

01/10/2013–28/10/2016

Bachelor's Degree in Biotechnology

University of Genoa

Thesis Title: Expression and characterization of a glycosyl-transferase involved in sugar metabolism

01/10/2016–06/11/2018

Master's Degree in Medical-Pharmaceutical Biotechnology

University of Genoa

Thesis Title: Characterization of an enzyme involved in Cotel-Manzke syndrome

01/11/2018–Present

PhD student in Experimental medicine (Curriculum: Biochemistry)

Department of Experimental Medicine, Section of Biochemistry, University of Genoa. Tutor: Prof. Santina Bruzzone

Experience Abroad

Erasmus+ Fellowship

From 17th August 2021 to 19th November 2021, 3 months research activity in Prof J. Heeren's lab, Department of Biochemistry and Molecular Cell Biology, University Medical Center Hamburg-Eppendorf, Hamburg (Germany)

SCIENTIFIC SKILLS

Technical Expertise

Main laboratory techniques:

Chromatographic techniques, HPLC

Purification of proteins and nucleotides

Electrophoresis, Western blotting and immunoenzymatic detection

Cell cultures

Fluorimetric studies of Ca²⁺ homeostasis in different cell types

ELISA assay

Evaluation of cellular chemotaxis

Assay of nucleotides with cyclic enzymatic methods

Assay of Enzymatic activities with spectrophotometric and fluorimetric techniques

Molecular Biology Techniques: extraction, manipulation and analysis of nucleic acids; RT-PCR and PCR; use of plasmids and restriction enzymes; cloning in vectors and bacterial transformation, expression of proteins in bacteria.

- Courses attendance**
- Workshop: Animal models for perinatal stress and metabolism (University of Genova, 19-20 Sept, 2018)
 - Course for Animal Experimentation (Animal Facility IRCCS San Martino, Genova, 21-22 November, 2018)
- Teaching**
- Since 2017: Support in the practical course of Biochemistry for students in the Bachelor Degree in Biotechnology (organization of practical activities in a laboratory: assay of enzymatic activities; electrophoresis; ...).
- Congresses**
- Meeting on Carbohydrate Chemistry (XVI CSCC 2018), Certosa di Pontignano (sede del Convegno), Siena, Italy, 17-20 June 2018. Poster presentation: The 6-deoxy hexoses metabolism in trichomonas vaginalis. Gaglianone M, Laugieri ME, Benzi A, Tonetti M.
 - Annual Meeting of the Italian Multiple Sclerosis Society, Roma, Italy, 29-31 May 2019. Poster presentation: SIRT6 inhibition as a therapeutic approach for treating multiple sclerosis. Ferrara G, Frumento D, Benzi A, Scaroni F, Petrosino V, Sturla L, Verderio C, Kerlero de Rosbo N, Uccelli A, Bruzzone S.
 - FASEB Summer Conference "The NAD Metabolism and Signalling Conference", Dublin, Ireland, 23-28 June 2019. Poster presentation: Role of CD38 in cold-induced thermogenesis. Benzi A, Heine M, Fischer A, Sturla L, Koch-Nolte F, Mittrücker H-W, Guse AH, Zocchi E, Heeren J, Bruzzone S.
 - BraYn, Milano, Italy, 14-16 November 2019. Poster presentation: SIRT6 inhibition as a therapeutic approach in multiple sclerosis. Benzi A, Ferrara G, Frumento D, Scaroni F, Petrosino V, Spinelli S, Sturla L, Verderio C, Kerlero de Rosbo N, Uccelli A, Bruzzone S.
 - The 45th FEBS (Federation of the European Biochemical Societies) Virtual Congress, Online meeting, 3-8 July 2021. Poster presentation: Role of CD38 during thermogenesis in adipose tissues and liver. Benzi A, Spinelli S, Heine M, Fischer A, Abbotto E, Sturla L, Koch-Nolte F, Mittrücker H-W, Guse AH, De Flora A, Zocchi E, Heeren J, Bruzzone S.
 - FASEB Summer Conference "The NAD Metabolism and Signalling Conference", Online meeting, 15-16 June 2021. Poster presentation: Role of CD38 during thermogenesis in adipose tissues and liver. Benzi A, Spinelli S, Heine M, Fischer A, Abbotto E, Sturla L, Koch-Nolte F, Mittrücker H-W, Guse AH, De Flora A, Zocchi E, Heeren J, Bruzzone S.
 - Congresso Nazionale Società Italiana Biochimica e Biologia molecolare (SIB), Online meeting, 23-24 September 2021. Poster presentation: Role of CD38 during thermogenesis in adipose tissues and liver. Benzi A, Spinelli S, Heine M, Fischer A, Abbotto E, Sturla L, Koch-Nolte F, Mittrücker H-W, Guse AH, De Flora A, Zocchi E, Heeren J, Bruzzone S.
- Publications**
- Sociali G, Liessi N, Grozio A, Caffa I, Parenti MD, Ravera S, Tasso B, **Benzi A**, Nencioni A, Del Rio A, Robina I, Millo E, Bruzzone S. Differential modulation of SIRT6 deacetylase and deacetylase activities by lysine-based small molecules. *Mol Divers*. 2020; 24:655-671.
- Ferrara G, **Benzi A***, Sturla L, Marubbi D, Frumento D, Spinelli S, Abbotto E, Ivaldi F, von Holtey M, Murone M, Nencioni A, Uccelli A, Bruzzone S. Sirt6 inhibition delays the onset of experimental autoimmune encephalomyelitis by reducing dendritic cell migration. *J Neuroinflammation*. 2020;17:228. *co-first author
- Benzi A**, Sturla L, Heine M, Fischer AW, Spinelli S, Magnone M, Sociali G, Parodi A, Fenoglio D, Emionite L, Koch-Nolte F, Mittrücker HW, Guse AH, De Flora A, Zocchi E, Heeren J, Bruzzone S. CD38 downregulation modulates NAD⁺ and NADP(H) levels in thermogenic adipose tissues. *Biochim Biophys Acta Mol Cell Biol Lipids*. 2021;1866:158819.
- Becherini P, Caffa I, Piacente F, Damonte P, Vellone VG, Passalacqua M, **Benzi A**, Bonfiglio T, Reverberi D, Khalifa A, Ghanem M, Guijarro A, Tagliafico L, Sucameli M, Persia A, Monacelli F, Cea M, Bruzzone S, Ravera S, Nencioni A. SIRT6 enhances oxidative phosphorylation in breast cancer and promotes mammary tumorigenesis in mice. *Cancer Metab*. 2021;9:6.

Benzi A, Grozio A, Spinelli S, Sturla L, Guse AH, De Flora A, Zocchi E, Heeren J, Bruzzone S. Role of CD38 in Adipose Tissue: Tuning Coenzyme Availability? *Nutrients*. 2021;13:3734.

PERSONAL SKILLS

Mother tongue Italian

Foreign languages (s) English: good
French: average