

Curriculum vitae

Ada Consalvo

Center for Advances Studies and *Technologies* (CAST)

Unit of Analytical and Proteomic Biochemistry

University “G. d’Annunzio” of Chieti-Pescara,

Via Luigi Polacchi 11, 66100 Chieti Scalo.

Tel.: +39 0871 541587/99/92

e-mail: ada.consalvo@unich.it

Born in Casoli (CH), Italy, on November 20th, 1984.

Italian citizen, home address: Via Filippo Molino 61, 66100 Chieti, Italy.

STUDIES AND PROFESSIONAL TRAINING

- From November 2016: Research fellow entitled “Ionic and metabolomic profiles determination in human matrix”, SSD BIO12, "G. d'Annunzio" of Chieti-Pescara, Chieti, Italy, Department of Medical and Oral Sciences and Biotechnologies.
- 2012/2016: PhD in Basic and Applied Medical Sciences XXVIII cycle, University "G. d'Annunzio" of Chieti-Pescara (ITALY), Unit of Analytical and Proteomic Biochemistry of Ce.S. I.
- 2012: Qualifying exam for the profession of pharmacist, Chieti, Italy.
- 2003/2011: Master degree student in Chemistry and Pharmaceutical Technology, University “G. d’Annunzio” of Chieti-Pescara.
- 1998-2003: High school degree, Liceo Scientifico “Galileo Galilei”, Lanciano.

RESEARCH ACTIVITY

Development and validation of analytical methods and the characterization of post-translational protein modifications by molecular and elemental mass spectrometry. Application and integration of molecular and elemental mass spectrometry and bioinformatics to the assessment of proteomic, metabolomic, and ionic profiles linked to cellular functions and/or disease. The main area of research:

- Investigation of metal dyshomeostasis and protein alteration in Alzheimer's disease
- Study of the interaction between proteins and metals in living systems
- Characterization of metabolic phenotype of cancer stem cells
- Identification of peripheral biomarkers of Alzheimer's disease
- Development of confirmation methods for positive neonatal screening tests for metabolic diseases.

METHODS

- Preparation techniques for the analysis of biological samples of various nature (serum, plasma, tissues, culture media, food and environmental samples) through acid digestion, liquid / liquid extraction, and derivatization.

- Development and validation of analysis methods for the quantification of trace and ultra-trace elements Inductively coupled plasma mass spectrometry (ICP-MS)
- Applications of Metabolomics on different biological matrices (serum, plasma, culture media and cell cultures) by gas chromatography coupled with mass spectrometry (GC-MS) and liquid chromatography coupled with tandem mass spectrometry (LC-MS / MS).
- Protein separation techniques using one-dimensional gel
- Protein identification techniques by Western Blot
- Chromatographic separation techniques using HPLC
- Filter assisted protein digestion techniques (FASP), solution digestion, and protein digestion on bands.
- Management of instrumental software Agilent Technologies and Waters.

SCIENTIFIC PRODUCTION

- 1) Ciavardelli D., Ammendola S., Ronci M., **Consalvo A.**, Marzano V., Lipoma M., Sacchetta P., Federici G., Di Ilio C., Battistoni A., Urbani A. "Phenotypic profile linked to inhibition of the major Zn influx system in Salmonella enterica: proteomics and ionomics investigations" MOLECULAR BIOSYSTEMS 2011; 7(3): 608-619. (I.F. 2.759).
- 2) **Consalvo A.**, Ciavardelli D., Caldaralo V., Di Vacri M.L., Nisi S., Corona C., Frazzini V., Sacchetta P., Urbani A., Di Ilio C., Sensi S.L. "Characterisation of element profile changes induced by long-term dietary supplementation of zinc in the brain and cerebellum of 3xTg-AD mice by alternated cool and normal plasma ICP-MS" METALLOMICS 2012; 4(12): 1321-1332. (I.F. 4.069).
- 3) Ciavardelli D., D'Orazio M., Pieroni L., **Consalvo A.**, Rossi C., Sacchetta P., Di Ilio C., Battistoni A., Urbani A. "Proteomic and ionic profiling reveals significant alterations of protein expression and calcium homeostasis in cystic fibrosis cells." MOLECULAR BIOSYSTEMS 2013; 9(6): 1117-1126. (I.F. 2.759).
- 4) Pompilio A., Ciavardelli D., Crocetta V., **Consalvo A.**, Zappacosta R., Di Ilio C., Di Bonaventura G. "Stenotrophomonas maltophilia virulence and specific variations in trace elements during acute lung infection: implications in cystic fibrosis" PLOS ONE 2014; 9(2): e88769. (I.F. 2.766).
- 5) Ciavardelli D., Rossi C., Barcaroli D., Volpe S., **Consalvo A.**, Zucchelli M., De Cola A., Scavo E., Carollo R., D'Agostino D., Forlì F., D'Aguzzo S., Todaro M., Stassi G., Di Ilio C., De Laurenzi V., Urbani A. "Breast cancer stem cells rely on fermentative glycolysis and are sensitive to 2-deoxyglucose treatment" CELL DEATH & DISEASE 2014; 5: e1336. (I.F. 5.638).
- 6) D'Orazio M., Mastropasqua M.C., Cerasi M., Pacello F., **Consalvo A.**, Chirullo B., Mortensen B., Skaar E.P., Ciavardelli D., Pasquali P., Battistoni A. "The capability of Pseudomonas aeruginosa to recruit zinc under conditions of limited metal availability is affected by inactivation of the ZnuABC transporter" METALLOMICS 2015; 7(6): 1023-35. (I.F.= 4.069).
- 7) Ciavardelli D., Piras F., **Consalvo A.**, Rossi C., Zucchelli M., Di Ilio C., Frazzini V., Caltagirone C., Spalletta G., Sensi S.L. "Medium-chain plasma acylcarnitines, ketone levels, cognition, and gray matter volumes in healthy elderly, mildly cognitive impaired, or Alzheimer's disease subjects" NEUROBIOLOGY OF AGING 2016; 43:1-12. (I.F.= 4.454).
- 8) Mastropasqua M.C., D'Orazio M., Cerasi M., Pacello F., Gismondi A., Canini A., Canuti L., **Consalvo A.**, Ciavardelli D., Chirullo B., Pasquali P., Battistoni A. "Growth of Pseudomonas aeruginosa in zinc poor environments is promoted by a nicotianamine-related metallophore" MOLECULAR MICROBIOLOGY 2017, 106(4): 543-561 (I.F.= 3.816).
- 9) Ciavardelli D., Bellomo M., **Consalvo A.**, Crescimanno C., Vella V. "Metabolic alterations of thyroid cancer as potential therapeutic targets" BIOMED RESEARCH INTERNATIONAL 2017: 2545031 (I.F.= 2.583).

- 10) Rossi C., Marzano V., **Consalvo A.**, Zucchelli M. Levi Mortera S., Casagrande V., Mavilio M., Sacchetta P., Federici M., Menghini R., Urbani A., Ciavardelli D. "Proteomic and metabolomic Characterization of streptozotocin-induced diabetic nephropathy in TIMP-3-deficient mice" ACTA DIABETOLOGICA, 2018, 55(2): 121-129 (I.F.= 3.126).
- 11) Saracco M., Maccauro G., Urbani A., **Consalvo A.**, Ciavardelli D., Persichilli S., Calvisi V., Logroscino G." Ceramic on metal bearing in short stems total hip arthroplasties. Ions, functional and radiographic evaluation at long term follow up" HIP INTERNATIONAL, EUROPEAN HIP SOCIETY, January 2020
- 12) Fasano G., Godoy R., Angiulli E., **Consalvo A.**, Franco C., Ciavardelli D., Biffali E., Ekker M., Canzoniero, L., Sordino P. "Developmental sub-chronic toxicity of environmental methylcyclopentadienyl manganese trycarbonil on the dopaminergic neurons in Danio rerio" JOURNAL OF NEUROSCIENCE, March 2020, (I.F.= 6.074).