

## **CURRICULUM VITAE**

### **1. PERSONAL DATA**

**Name:** Maurizio Ronci

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**Email:** maurizio.ronci@unich.it

### **2. ACADEMIC/PROFESSIONAL PARTICULARS**

#### **Field of Specialization:**

Chemistry, Biochemistry, Proteomics, Mass Spectrometry Imaging

#### **Academic Qualifications**

- PhD in Laboratory Medicine, 2008, analytical biochemistry unit c/o "Centre of Excellence on Aging" (Ce.S.I.), Chieti, Italy, and at the proteomics and metabolomics laboratory of Fondazione – Santa Lucia c/o European Centre for Brain Research (CERC), Rome, Italy. Dissertation Title: Protein unlocking procedures of formalin-fixed paraffin-embedded tissues: application to MALDI-TOF imaging MS investigations.
- MSc in Chemistry and Pharmaceutical Technologies, 2003, Università degli Studi "G. d'Annunzio" CHIETI-PESCARA, Italy, Dissertation Title: Hydrophilic/Hydrophobic balance of fulleropyrrolidine derivatives.

#### **Academic Honors and Awards**

- Poster Prize 'Award in Proteomic Sciences' at the 10th Annual Congress of the European Proteomics Association - Istanbul, Turkey – June 2016.
- Sciex C-HPP Young Investigator Award for excellent achievements in C-HPP Research. At the 14th Human Proteome Organization World Congress - Vancouver, Canada – September 2015.

#### **Membership of Professional Bodies**

Italian Proteomics Association, Member of the Executive Board (elected) timeframe 2016-2018.

#### **Language Proficiency**

Italian Mother tongue

English Fluently spoken – very good written (LEVEL C1)

French Good verbal skills – elementary writing skills (LEVEL B1)

### **3. CAREER DETAILS**

#### **Academic Positions Held**

- Assistant Professor (RTD/b). General Biochemistry, Department of Pharmacy - University "G. D'Annunzio" of Chieti-Pescara, Italy. 01/03/2020 to date
- Assistant Professor (RTD/a). Clinical Biochemistry, Department of Medical, Oral and Biotechnological Sciences - University "G. D'Annunzio" of Chieti-Pescara, Italy. 24/01/2014 to 23/01/2019
- Adjunct Senior Research Fellow, Mawson Institute, University of South Australia. Adelaide, Australia 2014-2017.
- ARC Research Fellow, Mawson Institute, University of South Australia. Adelaide, Australia. 01/01/2012 - 28/02/2014
- Research Associate, School of Physical and Chemical Sciences, Flinders University of South Australia. Adelaide Australia. 10/10/2009 - 31/12/2011
- Postdoctoral Fellow, Department of animal Pathology, Università degli Studi di Torino, Italy. 01/10/2007 - 30/09/2009

## 4. Teaching

### Summary of Courses Taught

Biochemistry, Cardiocirculatory Physiopathology and Cardiovascular Perfusion Techniques, 4 Times Taught, Evaluation 3.4 out of 4

### Research Students Supervised/Trained

| <u>Level</u>           | <u>Number of Trainees</u> |
|------------------------|---------------------------|
| Postdoctoral Fellows   | 1                         |
| PhD Students           | 4                         |
| Master Students        | 8                         |
| Undergraduate Students | 2                         |

### Participation in Thesis and Oral Examination Committees

| <u>Level</u>    | <u>Number of Examinations</u> |
|-----------------|-------------------------------|
| PhD Students    | 1                             |
| Master Students | 6                             |

## 5. RESEARCH

### Research Interests

Analytical mass spectrometry, protein profiling, shotgun proteomics and MALDI MS imaging. Quantification of small molecules and metabolites in biological fluids using modern technological platforms.

### Publications/Citations Data

| <u>Type of Publication</u>                              | <u>Number of Publications</u> |
|---------------------------------------------------------|-------------------------------|
| Articles in Indexed and Refereed International Journals | 52                            |
| Conference Papers                                       | 18                            |
| Books/Book Chapters                                     | 2                             |

  

| <u>Citation Source</u> | <u>Number of Citations</u> |
|------------------------|----------------------------|
| Scopus                 | 807                        |
| Google scholar         | 1009                       |
| H-index (Scopus)       | 19                         |

### Research Grants

- "Futuro in Ricerca" (FIRB) for young researcher (RBFR13PDFX), PI, "Development and optimization of engineered pSi surfaces as support for Mass Spectrometry analysis", Italian Ministry for University and Research (MIUR), 2014-2017, 236.800 €
- Project GR-2011-02351086, Coordinator of Operative Unit, "Looking for new insight on Omega-3 fatty acids role on cognitive decline and brain dysfunctions in age-related disorders", Italian Ministry of Health, 2014-2018, 400.000 €.
- ARC Industry linkage grant # LP110200446, ARC Fellowship, "Forensic Platform Technologies for Roadside and Workplace Testing Based on Nanostructured Silicon Chips", Australian Research Council, 2012-2015, 500.000 \$.
- Project grant # 1031347, Chief Investigator, "Functional analysis of recently identified

novel glaucoma genes” National Health and Medical Research Council Australia, 2012-2015, 500.000 \$.

- Competitive Personal Grant (FFABR) for the year 2018, Italian Ministry for University and Research (MIUR), 3.000 €

## **6. SERVICE**

### **Membership of Institutional, National, or International Scientific Advisory Boards**

Independent External Expert for the evaluation of proposals submitted to COST intergovernmental framework for international co-operation between nationally-funded research activities, supported by the EU Framework Program. Proposal evaluated in the COST Open Call OC-2016-1 and OC-2015-1.

### **Membership of Conference Committees**

Member of the Scientific Committee of the XI Annual conference of the Italian Proteomics Association (ItPA), Perugia (Italy), May 2016.

Member of the Scientific Committee of the XII Annual conference of the Italian Proteomics Association (ItPA), Lecce (Italy), June 2017

Member of the Scientific Committee of the XIII Annual conference of the Italian Proteomics Association (ItPA), Como (Italy), September 2018

### **Service as Reviewer**

- JOURNAL OF PROTEOMICS, 1874-3919, Elsevier Science.
- PLOS ONE, 1932-6203, San Francisco: Public Library of Science.
- Oncogenesis, 2157-9024, Nature Publishing Group.
- Metabolism, 0026-0495, Elsevier Science.
- EuPA Open Proteomics, 2212-9685, Elsevier Science.
- Expert Review of Proteomics, 1478-9450, Taylor & Francis Online
- Molecular Biosystems, 1742-206X, Royal Society of Chemistry
- Scientific Reports

### **Membership of Journal Editorial Boards**

Journal of integrated OMICS

Frontiers in Pharmacology

### **Invited Presentations at Scientific Meetings/Workshops**

High Density Coverage of Mitochondrial Proteome: A Progress Update. Invited talk in the session Mt-HPP (mitochondria) at the 14th Human Proteome Organization World Congress, Vancouver, Canada – September 2015.

## **7. Selected Publications**

### **International Refereed Journals**

1. Veschi, S., Ronci, M., Lanuti, P., De Lellis, L., Florio, R., Bologna, G., Scotti, L., Carletti, E., Brugnoli, F., Di Bella, M.C., Bertagnolo, V., Marchisio, M., Cama, A. Integrative proteomic and functional analyses provide novel insights into the action of the repurposed drug candidate nitroxoline in AsPC-1 cells (2020) Scientific Reports, 10 (1), art. no. 2574, .
2. Seccia, V., Navari, E., Donadio, E., Boldrini, C., Ciregia, F., Ronci, M., Aceto, A., Dallan, I., Lucacchini, A., Casani, A.P., Mazzoni, M.R., Giusti, L. Proteomic Investigation of Malignant Major Salivary Gland Tumors (2020) Head and Neck Pathology, 14 (2), pp. 362-373.
3. Di Giacomo, V., Chiavaroli, A., Recinella, L., Orlando, G., Cataldi, A., Rapino, M., Di

- Valerio, V., Ronci, M., Leone, S., Brunetti, L., Menghini, L., Zengin, G., Gunes, A., Abdallah, H.H., Ferrante, C. Antioxidant and neuroprotective effects induced by cannabidiol and cannabigerol in rat CTX-TNA2 astrocytes and isolated cortexes (2020) *International Journal of Molecular Sciences*, 21 (10), art. no. 3575, .
4. di Giacomo, V., Ferrante, C., Ronci, M., Cataldi, A., Di Valerio, V., Rapino, M., Recinella, L., Chiavaroli, A., Leone, S., Vladimir-Knežević, S., Kindl, M., Brunetti, L., Menghini, L., Orlando, G. Multiple pharmacological and toxicological investigations on *Tanacetum parthenium* and *Salix alba* extracts: Focus on potential application as anti-migraine agents (2019) *Food and Chemical Toxicology*, 133, art. no. 110783, .
  5. Kuot, A., Ronci, M., Mills, R., Klebe, S., Snibson, G., Wiffen, S., Loh, R., Corbett, M., Zhou, T., Chataway, T., Burdon, K.P., Craig, J.E., Urbani, A., Sharma, S. Reduced expression of apolipoprotein E and immunoglobulin heavy constant gamma 1 proteins in Fuchs endothelial corneal dystrophy (2019) *Clinical and Experimental Ophthalmology*, 47 (8), pp. 1028-1042.
  6. Ferrante, C., Recinella, L., Ronci, M., Orlando, G., Di Simone, S., Brunetti, L., Chiavaroli, A., Leone, S., Politi, M., Tirillini, B., Angelini, P., Covino, S., Venanzoni, R., Vladimir-Knežević, S., Menghini, L. Protective effects induced by alcoholic *Phlomis fruticosa* and *Phlomis herba-venti* extracts in isolated rat colon: Focus on antioxidant, anti-inflammatory, and antimicrobial activities in vitro (2019) *Phytotherapy Research*, 33 (9), pp. 2387-2400.
  7. Pieragostino, D., Lanuti, P., Cicalini, I., Cufaro, M.C., Ciccocioppo, F., Ronci, M., Simeone, P., Onofri, M., van der Pol, E., Fontana, A., Marchisio, M., Del Boccio, P. Proteomics characterization of extracellular vesicles sorted by flow cytometry reveals a disease-specific molecular cross-talk from cerebrospinal fluid and tears in multiple sclerosis (2019) *Journal of Proteomics*, 204, art. no. 103403, .
  8. Giusti, L., Molinaro, A., Alessandri, M.G., Boldrini, C., Ciregia, F., Lacerenza, S., Ronci, M., Urbani, A., Cioni, G., Mazzoni, M.R., Pizzorusso, T., Lucacchini, A., Baroncelli, L. Brain mitochondrial proteome alteration driven by creatine deficiency suggests novel therapeutic venues for creatine deficiency syndromes (2019) *Neuroscience*, 409, pp. 276-289.
  9. Zengin, G., Ferrante, C., Menghini, L., Orlando, G., Brunetti, L., Recinella, L., Chiavaroli, A., Leone, S., Ronci, M., Aumeeruddy, M.Z., Mahomoodally, M.F. Protective effects of *Cotoneaster integerrimus* on in vitro and ex-vivo models of H<sub>2</sub>O<sub>2</sub>-induced lactate dehydrogenase activity in HCT116 cell and on lipopolysaccharide-induced inflammation in rat colon (2019) *Journal of Food Biochemistry*, 43 (3), art. no. e12766,
  10. Lualdi, M., Ronci, M., Zilocchi, M., Corno, F., Turilli, E.S., Sponchiado, M., Aceto, A., Alberio, T., Fasano, M. Exploring the mitochondrial degradome by the TAILS proteomics approach in a cellular model of Parkinson's disease (2019) *Frontiers in Aging Neuroscience*, 10 (JUL), art. no. 195, .
  11. Ronci, M., Del Prete, S., Puca, V., Carradori, S., Carginale, V., Muraro, R., Mincione, G., Aceto, A., Sisto, F., Supuran, C.T., Grande, R., Capasso, C. Identification and characterization of the  $\alpha$ -CA in the outer membrane vesicles produced by *Helicobacter pylori* (2019) *Journal of Enzyme Inhibition and Medicinal Chemistry*, 34 (1), pp. 189-195.
  12. Ronci, M., Pieroni, L., Greco, V., Scotti, L., Marini, F., Carregari, V.C., Cunsolo, V., Foti, S., Aceto, A., Urbani, A. Sequential Fractionation Strategy Identifies Three Missing Proteins in the Mitochondrial Proteome of Commonly Used Cell Lines (2018) *Journal of Proteome Research*, 17 (12), pp. 4307-4314.
  13. Ronci, M., Leporini, L., Felaco, P., Sirolli, V., Pieroni, L., Greco, V., Aceto, A., Urbani, A., Bonomini, M. Proteomic Characterization of a New asymmetric Cellulose Triacetate Membrane for Hemodialysis (2018) *Proteomics - Clinical Applications*, 12 (6), art. no. 1700140, .
  14. Giusti, L., Angeloni, C., Barbalace, M.C., Lacerenza, S., Ciregia, F., Ronci, M., Urbani,

- A., Manera, C., Digiaco, M., Macchia, M., Mazzoni, M.R., Lucacchini, A., Hrelia, S. A proteomic approach to uncover neuroprotective mechanisms of oleocanthal against oxidative stress (2018) *International Journal of Molecular Sciences*, 19 (8), art. no. 2329, .
15. Sharma, S., Chataway, T., Klebe, S., Griggs, K., Martin, S., Chegeni, N., Dave, A., Zhou, T., Ronci, M., Voelcker, N.H., Mills, R.A., Craig, J.E. Novel protein constituents of pathological ocular pseudoexfoliation syndrome deposits identified with mass spectrometry (2018) *Molecular Vision*, 24, pp. 801-817.
  16. Ciregia, F., Bugliani, M., Ronci, M., Giusti, L., Boldrini, C., Mazzoni, M.R., Mossuto, S., Grano, F., Cnop, M., Marselli, L., Giannaccini, G., Urbani, A., Lucacchini, A., Marchetti, P. Palmitate-induced lipotoxicity alters acetylation of multiple proteins in clonal  $\beta$  cells and human pancreatic islets (2017) *Scientific Reports*, 7 (1), art. no. 13445, .
  17. Alberio, T., Pieroni, L., Ronci, M., Banfi, C., Bongarzone, I., Bottoni, P., Brioschi, M., Caterino, M., Chinello, C., Cormio, A., Cozzolino, F., Cunsolo, V., Fontana, S., Garavaglia, B., Giusti, L., Greco, V., Lucacchini, A., Maffioli, E., Magni, F., Monteleone, F., Monti, M., Monti, V., Musicco, C., Petrosillo, G., Porcelli, V., Saletti, R., Scatena, R., Soggiu, A., Tedeschi, G., Zilocchi, M., Roncada, P., Urbani, A., Fasano, M. Toward the Standardization of Mitochondrial Proteomics: The Italian Mitochondrial Human Proteome Project Initiative (2017) *Journal of Proteome Research*, 16 (12), pp. 4319-4329.
  18. Rudd, D., Ronci, M., Johnston, M.R., Guinan, T., Voelcker, N.H., Benkendorff, K. Mass spectrometry imaging reveals new biological roles for choline esters and Tyrian purple precursors in muricid molluscs (2015) *Scientific Reports*, 5, art. no. 13408,
  19. Ronci, M., Catanzaro, G., Pieroni, L., Po, A., Besharat, Z.M., Greco, V., Levi Mortera, S., Screpanti, I., Ferretti, E., Urbani, A. Proteomic analysis of human sonic hedgehog (SHH) medulloblastoma stem-like cells (2015) *Molecular BioSystems*, 11 (6), pp. 1603-1611.
  20. Guinan, T., Ronci, M., Vasani, R., Kobus, H., Voelcker, N.H. Comparison of the performance of different silicon-based SALDI substrates for illicit drug detection (2015) *Talanta*, 132, pp. 494-502.
  21. Guinan, T., Kirkbride, P., Pigou, P.E., Ronci, M., Kobus, H., Voelcker, N.H. Surface-assisted laser desorption ionization mass spectrometry techniques for application in forensics (2015) *Mass Spectrometry Reviews*, 34 (6), pp. 627-640.
  22. Cutuli, D., de Bartolo, P., Caporali, P., Laricchiuta, D., Foti, F., Ronci, M., Rossi, C., Neri, C., Spalletta, G., Caltagirone, C., Farioli-Vecchioli, S., Petrosini, L. n-3 polyunsaturated fatty acids supplementation enhances hippocampal functionality in aged mice (2014) *Frontiers in Aging Neuroscience*, 6 (AUG), pp. 1-53.
  23. Colanzi, A., Grimaldi, G., Catara, G., Valente, C., Cericola, C., Liberali, P., Ronci, M., Lalioti, V.S., Bruno, A., Beccari, A.R., Urbani, A., De Florah, A., Nardini, M., Bolognesi, M., Luini, A., Corda, D. Molecular mechanism and functional role of brefeldin A-mediated ADP-ribosylation of CtBP1/BARS (2013) *Proceedings of the National Academy of Sciences of the United States of America*, 110 (24), pp. 9794-9799.
  24. Ronci, M., Sharma, S., Martin, S., Craig, J.E., Voelcker, N.H. MALDI MS imaging analysis of apolipoprotein E and lysyl oxidase-like 1 in human lens capsules affected by pseudoexfoliation syndrome (2013) *Journal of Proteomics*, 82, pp. 27-34.
  25. Ronci, M., Rudd, D., Guinan, T., Benkendorff, K., Voelcker, N.H. Mass spectrometry imaging on porous silicon: Investigating the distribution of bioactives in marine mollusc tissues (2012) *Analytical Chemistry*, 84 (21), pp. 8996-9001.
  26. Guinan, T., Ronci, M., Kobus, H., Voelcker, N.H. Rapid detection of illicit drugs in neat saliva using desorption/ionization on porous silicon (2012) *Talanta*, 99, pp. 791-798.
  27. Sweetman, M.J., Ronci, M., Ghaemi, S.R., Craig, J.E., Voelcker, N.H. Porous silicon films micropatterned with bioelements as supports for mammalian cells (2012) *Advanced Functional Materials*, 22 (6), pp. 1158-1166.

28. Ronci, M., Sharma, S., Chataway, T., Burdon, K.P., Martin, S., Craig, J.E., Voelcker, N.H. MALDI-MS-imaging of whole human lens capsule (2011) *Journal of Proteome Research*, 10 (8), pp. 3522-3529.
29. Donna, L.D., Ronci, M., Sacchetta, P., Ilio, C.D., Biolatti, B., Federici, G., Nebbia, C., Urbani, A. A food safety control low mass-range proteomics platform for the detection of illicit treatments in veal calves by MALDI-TOF-MS serum profiling (2009) *Biotechnology Journal*, 4 (11), pp. 1596-1609.
30. Ronci, M., Bonanno, E., Colantoni, A., Pieroni, L., Di Ilio, C., Spagnoli, L.G., Federici, G., Urbani, A. Protein unlocking procedures of formalin-fixed paraffin-embedded tissues: Application to MALDI-TOF Imaging MS investigations. (2008) *Proteomics*, 8 (18), pp. 3702-3714.

### **Conference Papers (oral selected)**

- M. Ronci et al. Integrated National HPP Network Mitochondria. THE MITOCHONDRIAL HUMAN PROTEOME PROJECT- mt-HPP. Poster presented at the XIV Human Proteome Organization World Congress, Vancouver, Canada – September 2015.
- M. Ronci, G. Catanzaro, L. Pieroni, A. Po, E. Ferretti and A. Urbani. Label-free shotgun proteomics analysis of human medulloblastoma cancer stem-like cells: insights into the quiescent state. Presented at the IX annual Congress of the European Proteomics Association, Milan, Italy, June 2015.
- M. Ronci Mass spectrometry imaging for tissue mapping of low molecular weight compounds: facts and expectations. Invited speaker at the 1st IMASS Network meeting – ROMA May 26th – 27th, 2014.
- M. Ronci, D. Rudd, T. Guinan, K. Benkendorff and N.H. Voelcker, Metabolite imaging profiling by chemically functionalized porous silicon as support for mass spectrometry: application to the hypobranchial gland of a marine whelk. ItPA VIII Annual Congress, June 2013, Padova. Italy Speaker selected from abstract
- M. Ronci, D. Rudd, T. Guinan, K. Benkendorff and N.H. Voelcker, Desorption/Ionization on porous silicon mass spectrometry imaging: a novel approach for the analysis of the distribution of low molecular weight metabolites, Porous Silicon Science and Technology (PSST) VIII International Conference, Malaga, March 2012, Spain. Speaker selected from abstract