Maria Concetta CUFARO

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WORK EXPERIENCE

11/2018 – PRESENT – Chieti, Italy

PhD STUDENT IN MEDICAL BIOTECHNOLOGIES – Analytical Biochiemistry and Proteomics Laboratory, Center for Advanced Studies and Technology (CAST), University "G. d'Annunzio" of Chieti - Pescara, Chieti (CH), Italy

Scientific research related to proteomics, lipidomics and metabolomics investigations on different biological matrices for the biomarker discovery. In this context, use of high-throughput methodologies, such as liquid chromatography coupled with tandem mass spectrometry (LC-ESI-triploQ, nanoLC- ESI-QTOF -MS/MS), is essential. Particular attention will be paid to the molecular and functional characterization of extracellular vesicles sorted by various biofluids through flow cytometry techniques.

04/2018 – 10/2018 – Chieti, Italy

BIOCHEMICAL LABORATORY INTERN – Analytical Biochiemistry and Proteomics Laboratory, Ce.S.I.-MeT, University "G. d'Annunzio" of Chieti - Pescara, Chieti (CH), Italy

Scientific research related to lipidomics, metobolomics and proteomics investigations on different biological matrices for the discovery of new molecular biomarkers in different pathological conditions.

28/11/2016 – 15/03/2018 – Chieti, Italy

BIOCHEMICAL LABORATORY INTERN FOR EXPERIMENTAL THESIS – Department of Pharmacy, Analytical Biochiemistry and Proteomics Laboratory, Ce.S.I. - MeT, University "G. d'Annunzio" of Chieti - Pescara, Chieti (CH), Italy

Experimental thesis carried out in the Biochemical laboratories. It allowed to gain experience about proteomics strategies based on liquid chromatography-tandem mass spectrometry analysis (nanoLC- ESI-QTOF-MS; LC-ESI- triple-Q). Good experience about the purification, isolation and analysis of extracellular vesicles from different biological fluids, especially linked to sorting techniques through flow cytometry.

25/08/2016 – 25/11/2016 – Nova Siri (MT), Italy

STUDENT INTERN – Farmacia Persiani Anna Maria, Piazza Plebiscito, Nova Siri (MT), Italia

Assistance in dispensing drugs with a specific medical prescription, SOP and OTC: correct counseling.

02/05/2016 – 11/08/2016 – Chieti, Italy

STUDENT INTERN – Farmacia Ospedaliera Ospedale Clinicizzato "Ss. Annunziata", Via dei Vestini, Chieti (CH),Italia

Management of the warehouse inside the pharmacy. Preparation of total parenteral nutrition formulae. Relationship and correct communication with the public. Assistance in dispensing H, PHT drugs subject to monitoring with the therapeutic treatment plan. Prescriptive appropriateness..

EDUCATION AND TRAINING

11/2018 – PRESENT – Chieti, Italy

WINNER OF PhD COURSE IN MEDICAL BIOTECHNOLOGIES, XXXIV cycle, academic year 2018/2019 – University "G. d'Annunzio" of Chieti - Pescara, Chieti (CH), Italy

Research Project: *"Shotgun Proteomics of FACS-sorted Extracellular Vesicles subsets in Multiple Sclerosis: a new perspective in biomarkers discovery"*

Tutor: Professor Piero Del Boccio

Co-Tutor: Professor Damiana Pieragostino

07/2018 – Chieti, Italy

PHARMACIST QUALIFICATION – Department of Pharmacy, University "G. d'Annunzio" of Chieti - Pescara, Chieti (CH), Italy

10/2011 – 03/2018 – Chieti, Italy

MASTER'S DEGREE in Pharmaceutical Chemistry and Technology (CTF). Mark obtained 104/110. – Department of Pharmacy, University "G. d'Annunzio" of Chieti - Pescara, Chieti (CH), Italy

EQF level 7

Experimental Thesis: *"Development of a Proteomics method for the study of FACS-sorted microvesicles from cerebrospinal fluid and tears: an application to Multiple Sclerosis"*
Supervisor: Professor Piero DelBoccio
Co-Supervisor: Professor Antonella Fontana

09/2006 – 07/2011 – Nova Siri (MT), Italy

HIGH SCHOOL DIPLOMA (CLASSICAL STUDIES). Mark obtained 100/100. – Istituto Statale d'Istruzione Superiore "Pitagora" Montalbano Jonico (MT), Vittorio Bachelet Street, Nova Siri (MT) headquarters, Italia

EQF level 4

● LANGUANGE SKILLS

Mother tongue (s): ITALIAN

	UNDERSTANDING		SPIKING		WRITING
	Listining	Reading	Spoken Interaction	Spoken Production	
ENGLISH	B1	B1	B1	B1	B1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user

● COMMUNICATION SKILLS

Ability to work in a group motivated by multiple situations in which the collaboration between different figures was indispensable.

● ORGANISATIONAL / MANAGERIAL SKILLS

Ability to manage the use of common spaces and tools in the workplace, at the university and at home. Good predisposition to the pursuit of established objectives with the consequent ability to work under stress in full compliance with deadlines. Ability to organize one's work methodically and rigorously.

● JOB-RELATED SKILLS

Preparation techniques for the analysis of biological samples (serum, plasma, urine, cerebrospinal fluid, tears, cell lysates, culture media) by liquid-liquid extraction (LLE). Enzymatic digestion (FASP, Filter-aided sample preparation; In-solution digestion and protein digestion of bands) and protein assays. Purification and molecular analysis of extracellular vesicles isolated from various biological fluids.

Lipidomics, metabolomics and proteomics investigations through liquid chromatography coupled with tandem mass spectrometry (LC-MS/MS), especially *shotgun* and *label-free* proteomics by nanoLC-MS/MS.

Good laboratory experience. Good management of bioinformatics software for subsequent data processing. Strong attitude to scientific research.

● DIGITAL SKILLS

Software skills

Good knowledge of Office Programs (specially Word, Excel, PowerPoint ecc). Good knowledge of statistical analysis software (Graphpad). Editing photo and video. Management of Bruker and Waters instrumental software including Data Analysis, BioTools and MassLynkx.

Internet

Good ability to surf on the Internet. Good and autonomous management of e-mail. Social Network. Google Chrome. Android System.

Bioinformatics Software
Proteomics Databases. PeptideShaker (CompOmics). Mascot (MatrixScience). FunRich Analysis. MaxQuant and Perseus (Max Plank Institute). Ingenuity PathwayAnalysis (IPA$^{®}$, Quiagen)

● DRIVING LICENCE

B

● PUBBLICATIONS

Pubblications

o Madonna, R.; Pieragostino, D.; <u>Cufaro, M.C.</u>; Doria, V.; Del Boccio, P.; Deidda, M.; Pierdomenico, S.D.; Cadeddu Dessalvi, C.; De Caterina, R; Mercuro, G.; *"Ponatinib Induces Vascular Toxicity through the Notch-1 Signaling Pathway",JournalofClinical Medicine, 2020.* 2020: 9(3),820.

o Brocco, D.; Lanuti, P.; Simeone, P.; Bologna, G.; Pieragostino, D.; <u>Cufaro, M.C.</u>; Graziano, V.; Peri, M.; Di Marino, P.; De Tursi, M.; Grassadonia, A.; Pierdomenico, L.; Ercolino, E.; Ciccocioppo, F.; Del Boccio, P.;Marchisio, M.; Natoli, C.; Miscia, S.; Tinari, N.; Rapposelli, I.G.; *"Circulating Cancer Stem Cell-Derived Extracellular Vesicles as a Novel Biomarker for Clinical Outcome Evaluation", Journal of Oncology, 2019.* 2019: p. 5879616.

o Rossi, C.; Cicalini, I.; <u>Cufaro, M.C.</u>; Agnifili, L.; Mastropasqua, L.; Lanuti, P.; Marchisio, M.; De Laurenzi, V.; Del Boccio, P., Pieragostino, D., *"Multi-Omics Approach for Studying Tears in Treatment-Naïve Glaucoma Patients", International Journal of Molecular Sciences, 2019.* 20(16).

o <u>Cufaro, M.C.</u>; Pieragostino, D.; Lanuti, P.; Rossi, C.; Cicalini, I.; Federici, L.; De Laurenzi, V.; Del Boccio, P., *"Extracellular Vesicles and Their Potential Use in Monitoring Cancer Progression and Therapy: The Contribution of Proteomics", Journal of Oncology, 2019.* 2019: p. 1639854.

o Pieragostino, D.; Lanuti, P.; Cicalini, I.; <u>Cufaro, M.C.</u>; Ciccocioppo, F.;Ronci, M.; Simeone, P.; Onofrj, 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", Journal of Proteomics, 2019.* 204: p. 103403.

Conference Proceedings

o Poster Presentation: Falcone, L.; Aruffo, E.; Di Carlo, P.; Del Boccio, P.; <u>Cufaro, M.C.</u>; Pesce, M.; Ballerini, P., *"Ozone effect on inflammatory and proteomic profile of human macrophages and airway epithelial cells", 16th World Congress on Public Health 2020, Online Event, October 12 th-16 th, 2020.*

o Oral Communication: <u>Cufaro, M.C.</u>, Cicalini, I., Lanuti, P., Del Boccio, P., Pieragostino, D., *"Proteomics characterization of Extracellular Vesicles FACS-sorted from untouched biofluids: an application on Multiple Sclerosis", 8 th MS J-DAY 1 st online edition, July 9 th, 2020.*

o Poster Presentation: <u>Cufaro, M.C.</u>; Pieragostino, D.; Cicalini I.; Lanuti,P.; Bologna, P., Del Boccio, P., *"Shotgun Proteomics of FACS-sorted Extracellular Vesicles: a new perspective in biomarkers discovery", ItPA XIV Annual Congress, Catanzaro, Italy, June 25 th-27 th, 2019.*

o Poster Presentation: Rosa, C.; Perrotti, F.; Caravatta, L.; Di Tommaso, M.; Pieragostino, D.; Cicalini I.; Rossi C.; <u>Cufaro, M.C.</u>; Genovesi, D., *"Potential predictive biomarkers of chemoradiation response in rectal cancer: a metabolomic study", Congresso: Estro 37 Innovation for Value and Access, Barcelona, Spain, April 20 th-24 th, 2018.*

o Poster Presentation: Cicalini, I.; Pieragostino, D.; <u>Cufaro, M.C.</u>; Magliulo, L.; Di Matteo, G.; Rossi, C.; Del Boccio, P., *"LC-MS Methods for Metabolomics in tear and serum: An application on Multiple Sclerosis", Convegno: New trends in liquid chromatography and sample preparation, Chieti, Italy, January 25 th, 2018.*

● CONFERENCES

o *8 th MS J-Day "I giovani e la spettrometria di massa" 1 st online edition*, Società Chimica Italiana, Divisione di Spettrometria di Massa (DSM), *July 9 th,2020.*

o *XIV Conference of Italian Proteomics Association joint with the Hellenic Proteomics Society*, "Proteomics and Metabonomics on the Verge of One Health Approach", Catanzaro, Italy, *June 25 th-27 th, 2019.*

o *"New trends in liquid chromatography and sample preparation"*, Chieti, Italy, *January 25 th, 2018.*

COURSES

- Course: *"24° Corso di Spettrometria di Massa 2020"* - Società Chimica Italiana, Divisione di Spettrometria di Massa (DSM), Siena, Italy, *October 4 th-9 th 2020*
- Webinar: *"Trovare lavoro ai tempi del Covid-19"* - IPE Business School, Naples, Italy, *May 2020*
- Online Training Course: *"SARS-CoV-2 and COVID-19: a World Problem Needing a World Response"*, Prodotti Gianni, Milan, Italy, *May 27 th, 2020*
- Webinar: *"vLC-MS.com Event"*, Thermo Fischer Scientific, San Jose, California, USA, *May 26 th-28 th, 2020*
- Online Course: *"STATSX0001: Statistical Learning"*, Professors Trevor Hastie and Robert Tibshirani, StanfordOnline, Stanford University, Stanford, California, USA, *May 10 th, 2020*
- Webinar: *"Emergenza Nitrosammine. Le soluzioni analitiche per rispettare le richieste degli enti regolatori"*, Agilent Technologies, Santa Clara, California, USA, *January 17 th,2020*
- Course: *"Corso di inglese specialistico – Academic writing and speaking"*, Professor Maria Rosaria Vitti-Alexander – Nazareth College of Rochester (USA), School of Advanced Studies "G. d'Annunzio", Chieti, Italy, *June 17 th-22 th, 2019*
- Training Course: *"Formazione Lavoratori Rischio Medio"*, University "G. d'Annunzio" Chieti - Pescara, Chieti, Italy, *March 1 st, 2017*

HONOURS AND AWARDS

Winner of the Travel Grant for the abstract: *"Shotgun Proteomics of FACS-sorted Extracellular Vesicles: a new perspective in biomarkers discovery"* - ItPA XIV Annual Congress, Catanzaro, Italy, June 25th-27th, 2019.

MEMBERSHIPS

Individual member of ItPA (Italian Proteomics Association) and EuPA (European Proteomics Association) Associated Society - year 2019.
Individual member of ADI (Associazione dottorandi e dottori di ricerca in Italia) Chieti - Pescara headquarters - year 2020.

CERTIFICATIONS

Certificate of achievement: *"STATSX0001: Statistical Learning"*, StanfordOnline, Stanford University, Stanford, California, USA, May 10th, 2020.

TREATMENT OF PERSONAL DATA

In compliance with the Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorize the recipient of this document to use and process my personal details for the purpose of recruiting and selecting staff and I confirm to be informed of my rights in accordance to art. 7 of the above mentioned decree.

Chieti, October 11, 2020