




PERSONAL INFORMATION

Manuela Simonato

-  Corso Stati Uniti 4, Padova, Italy, 35127
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Sex Female | Date of birth 14/07/1977 | Nationality Italian

WORK EXPERIENCE

December 2014 to present

Research fellow

Pediatric Research Institute "Città della Speranza" Corso Stati Uniti 4, Padova , Italy 35127

- Senior analyst in a project entitled: "Brain damage, pulmonary dysfunction, and surfactant derangement during cardiopulmonary bypass for congenital heart diseases. Perioperative parameters and markers to prevent morbidity"

Business or sector Medical

June 2014- November 2014

Research fellow

Pediatric Research Institute "Città della Speranza" Corso Stati Uniti 4, Padova , Italy 35127

- Responsible for the oxidative and neurodegenerative markers determination by GC-MS and ELISA technique in a project entitled "Paediatric neurodegenerative disorders: preclinical evaluation of a nanoparticle-mediated brain therapy and identification of biomarkers of pathogenesis and treatment efficacy"

Business or sector Medical

June 2013-June 2014

Research fellow

University of Padova, Department of Women's and children's health. Giustiniani street, 10, Padova, Italy 35128

- Principal investigator of a study entitled: Surfactant proteins in neonates with RDS

Business or sector Medical

May 2011 to April 2013

Research fellow

University of Padova, Department of Anesthesia and Intensive Care and Department of Pediatrics. Giustiniani street, 10, Padova, Italy 35128

- Maintenance and use of mass spectrometry instrument (GC-MS, GC-IRMS, and TC-EA/IRMS). Responsible for a team of 4 people. Principal investigator of a study entitled: Surfactant Protein C kinetics in adults with ARDS by stable isotopes. Protein enrichment analysis in biological fluid using high resolution mass spectrometry techniques (Orbitrap and LC/MS-MS)

Business or sector Medical

January 2009 to December
2010

Research fellow

University of Padova, Department of Anesthesia and Intensive Care and Department of Pediatrics. Giustiniani street, 10, Padova, Italy 35128

- Maintenance and use of mass spectrometry instrument (GC-MS, GC-IRMS, and TC-EA/IRMS). Responsible for a team of 4 people. Principal investigator of a study entitled: the Effect of Steroid treatment on Early Acute Respiratory Distress Syndrome, a New Approach on Lung Damage Quantification. Development of a new technique to determine the enrichment of proteins in tracheal aspirates (particularly surfactant protein B) by the use of tandem mass spectrometry (LC-MS/MS). This technique has been developed during a two months stage at the Genomic Department of Washington University (Seattle, USA).

Business or sector Medical

November 2005 to April 2006

Pharmacist trainee

Dei Colli Pharmacy, Dei Colli street, Padova Italy. 35143

- Dispense prescribed medications, and advise patients on how to correctly use and benefit from their medications.

Business or sector Pharmaceutical

EDUCATION AND TRAINING

January 2006 to December
2009

PhD in Rare Disease

Level 6

University of Padova, Department of Pediatrics Giustiniani street, Padova, Italy

Use of stable isotopes as tracer of metabolic pathway.

Metabolic studies on polyunsaturated fatty acid (arachidonic acid and docosahexaenoic acid), in preterm infants using fatty acid as tracer with different natural isotope abundance.

Determination of a new method to calculate the fatty acid synthesis in preterm infants using stable isotope.

The use of metabolic precursors of disaturated phosphatidylcholine (DSPC) and of the specific surfactant protein B (SP-B) labeled with stable isotope, to determine the synthesis and the turnover of DSPC and SP-B in preterm infants and in adults with different pulmonary inflammatory diseases.

The use of dipalmitoyl phosphatidylcholine (DPPC) labeled with stable isotope ¹³C in newborns with respiratory failure to determine the synthesis and turnover of surfactant DSPC in relation to different ventilation mode and to different amount of surfactant dose.

Measurements of markers of pulmonary and systemic inflammation in biological fluids (blood, urine and bronchoalveolar lavage fluid).

Studies to estimate body composition and energy expenditure, in adults and infants, using doubly labeled water (²H₂¹⁸O).

Use of gas-chromatographer coupled with single quadrupole (GC-MS) or magnetic sector (GC-IRMS). Use of temperature conversion elemental analyzer (TC-EA) coupled with IRMS.

Degree thesis title: Biological and medical applications of mass spectrometry techniques.

October 1997 to September

Degree in Pharmaceutical Chemistry and Technology (100/110)

Level 5

2004 University of Padova, Department of Pharmacy Luzzati street, 4. Padova, Italy

My research interests encompass various aspect of protein phosphorylation, with special reference to the assessment of the biological role and pathogenic potential role of protein kinase syk.

Degree thesis title: Structural and Functional Study of a Band 3 Human Variant.

September 1991 to September 1996

September 1991 to September 1996

Level 3

Pietro Scalcerle Institute. Via dei Colli, Padova, Italy

- Advanced laboratory procedures. Biological and biochemical laboratory techniques. Chemical laboratory techniques. Use of autoclave, analytical balances, centrifuges, incubators, micropipettes, pH meters, microscope and spectrophotometers. Experience in bacterial cultures.

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C2	B2	C1	C2

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills

- Excellent communication skills gained through my experience as pharmacist.
- Team spirit.
- The ability to adapt to multicultural environments gained through my experience abroad and friendships around the world. Frequent international traveller.

Organisational / managerial skills

- Leadership (currently responsible for a team of 4 people)
- Excellent organizational and planning capacities.
- I'm used to operating independently, and I work well to achieve fixed targets.
- Talented trouble shooter and problem solver.

- Job-related skills**
- Expert in mass spectrometry (GC-MS, GC-IRMS, TC-EA/IRMS, and LC-MS/MS) applied to the study of protein, lipids and peptides with particular reference to the analysis of their enrichment in ^{13}C or deuterium.
 - Good experience in using EIA and ELISA kit.
 - Good ability in purification and identification of proteins with chromatographic techniques and SDS-PAGE.
 - Ability in processing samples of plasma, tracheal aspirates and oil for lipid classes analysis.
- Computer skills**
- Good command of Microsoft Office tools (Word , Excel and Power Point)
 - Good knowledge of data elaborator program (Prism, SPSS, Graph Pad)
- Other skills**
- Snowboarder
- Driving licence**
- B

ADDITIONAL INFORMATION

Publications

- Virgilio P Carnielli, M. Simonato, G. Verlato, I. Luijendijk, M. De Curtis, P.J.J. Sauer, P.E. Cogo. Synthesis of long-chain polyunsaturated fatty acids in preterm newborns fed formula with long-chain polyunsaturated fatty acids. *Am J Clin Nutr* 2007; 86:1323-30.
- Paola.E. Cogo, M. Simonato, G.M. Toffolo, G. Stefanutti, M. Chierici, C. Cobelli, C. Ori, V.P. Carnielli. Dexamethasone therapy in preterm infants developing bronchopulmonary dysplasia: effect on pulmonary surfactant disaturated-phosphatidylcholine kinetics. *Pediatr Res*, 2008; 63:433-437.
- Antonina Gucciardi, P.E. Cogo, U. Traldi, S. Eaton, T Darch, M. Simonato, C Ori, V.P. Carnielli. Simplified method for microliter deuterium measurements in water and urine by gas chromatography-high temperature conversion-isotope ratio mass spectrometry. *Rapid Commun Mass Spectrom*. 2008;22: 2097-2103.
- Paola E Cogo, Ori C, Simonato M, Verlato G, Isak I, Hamvas A, Carnielli VP. Metabolic precursors of surfactant disaturated-phosphatidylcholine in preterms with respiratory distress. *J Lipid Res*. 2009 Nov;50(11):2324-31.
- Paola E Cogo, Facco M, Simonato M, Verlato G, Rondina C, Toffolo GM, Carnielli VP. Dosing of porcine surfactant: effect on kinetics and gas exchange in respiratory distress syndrome. *Pediatrics*. 2009 Nov 124 (5): e950-7.
- Silvia Carraro, Cogo PE, Isak I, Simonato M, Corradi M, Carnielli VP, Baraldi E. EIA and GC-MS analysis of 8-isoprostane in EBC of children with problematic asthma. *Eur Respir J*. 2010 (35), 1364-1369.
- Manuela Simonato, Baritussio A, Ori C, Vedovelli L, Rossi S, Dalla Massara L, Rizzi S, Carnielli VP, Cogo PE. Disaturated-phosphatidylcholine and Surfactant Protein-B turnover in Human Acute Lung Injury. *Respir Res*. 2011 Mar 24; 12-36.
- Luca Vedovelli, Baritussio A, Carnielli VP, Simonato M, Giusti P, Cogo PE. Simultaneous measurement of phosphatidylglycerol and disaturated-phosphatidylcholine palmitate kinetics from alveolar surfactant. Study in infants with stable isotope tracer, coupled with isotope ratio mass spectrometry. *J Mass Spectrom*. 2011 Oct;46(10):986-92.
- Michael S Bereman, Tomazela DM, Heins HS, Simonato M, Cogo PE, Hamvas A, Patterson BW, Cole FS, Maccoss MJ. A method to determine the kinetics of multiple proteins in human infants with respiratory distress syndrome. *Anal Bioanal Chem*. 2012 Jun;403(8):2397-402. Epub 2012 Apr 14.
- Paola E Cogo, Simonato M, Danhaive O, Verlato G, Cobellis G, Savignoni F, Peca D, Baritussio A, Carnielli VP. Impaired surfactant protein b synthesis in infants with congenital diaphragmatic hernia. *Eur Respir J*. 2012 Jun 14.
- Manuela Simonato, Baritussio A, Vedovelli L, Lamonica G, Carnielli VP, Cogo PE. Surfactant Protein B amount and kinetics in newborn infants: an optimized procedure. *J Mass Spectrom*. 2012 Nov;47(11):1415-9.
- Giulia Lamonica, Amigoni M, Vedovelli L, Zambelli V, Scanziani M, Bellani G, Grassi A, Simonato M, Carnielli VP, Cogo PE. Pulmonary surfactant synthesis after unilateral lung injury in mice. *J Appl Physiol* (1985). 2014 Jan 15;116(2):210-5.
- Manuela Simonato, Baritussio A, Pioselli B, Ori C, Catinella S, Carnielli VP, Cogo PE. Surfactant protein C metabolism in human infants and adult patients by stable isotope tracers and mass spectrometry. *Anal Bioanal Chem*. 2014 Oct;406(25):6225-33.
- Maddalena Facco, Nespeca M, Simonato M, Isak I, Verlato G, Ciambra G, Giorgetti C, Carnielli VP, Cogo PE. In vivo effect of pneumonia on surfactant-disaturated phosphatidylcholine kinetics in newborn infants.. *PLoS One*. 2014 Dec 31;9(12):e93612.
- Giorgetti Chiara, Vedovelli L, Savini S, Simonato M, D'Ascenzo R, Pompilio A, Cogo PE, Carnielli VP. Double blind exploratory study on de novo lipogenesis in preterm infants on parenteral nutrition with a lipid emulsion containing 10% of fish oil. *Clin Nutr*. 2015 Apr 12.

- Sara D'Aronco, Simonato M, Vedovelli L, Baritussio A, Verlato G, Nobile S, Giorgetti C, Nespeca M, Carnielli VP, Cogo PE. Surfactant protein B and A concentrations are increased in neonatal pneumonia. *Pediatr Res*. 2015 Jun 24. doi: 10.1038/pr.2015.123.
- Luca Vedovelli, Padalino M, Simonato M, D'Aronco S, Bertini D, Stellan G, Ori C, Carnielli VP, Cogo PE. Cardiopulmonary bypass increases plasma glial fibrillary acidic protein only in the first stage palliation of hypoplastic left heart syndrome. *Can J Cardiol*. 2016 Mar;32(3):355-61.
- Daniele Pupillo, Simonato M, Cogo PE, Lapillonne A, Carnielli VP. Short-Term Stability of Whole Blood Polyunsaturated Fatty Acid Content on Filter Paper During Storage at -28 °C. *Lipids*. 2016 Feb;51(2):193-8
- Virgilio Carnielli, Giorgetti C, Simonato M, Vedovelli L, Cogo P. Neonatal Respiratory Diseases in the Newborn Infant: Novel Insights from Stable Isotope Tracer Studies. *Neonatology*. 2016;109(4):325-33.
- Matteo Nespeca, Giorgetti C, Nobile S, Ferrini I, Simonato M, Verlato G, Cogo P, Carnielli VP. Does Whole-Body Hypothermia in Neonates with Hypoxic-Ischemic Encephalopathy Affect Surfactant Disaturated-Phosphatidylcholine Kinetics? *PLoS One*. 2016 Apr 12;11(4):e0153328.

Courses

Technology innovations for LC and LC-MS LC e LC-MS. Venezia, Italy. May 17 2006.
Analytical methodologies in mass spectrometry school. Parma, Italy. May 22-26 2006.
Mass spectrometry applications training course: newborn metabolic screening. Firenze, Italy. May 8-9 2008.
Scanning electron microscope training course. Padova, Italy. June 8-9 2010.

Abstract

Co-author of more than 20 abstract presented at national/International meetings

MS authorizes the use of this curriculum data, according to local regulations (i.e. DL 196, June 2003, for Italy).