



Susy Piovesana

ABOUT ME

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WORK EXPERIENCE

Postdoctoral researcher

[01/04/2021 – 31/03/2022]

01/04/2021-31/03/2022: **Postdoctoral researcher** in the Department of Chemistry, Faculty of Mathematical, Natural and Physical Sciences, Sapienza University of Rome. Project title: "Untargeted analytical approach, by high resolution mass spectrometry, to study metabolites and new/unexpected compounds in Antarctica".

Postdoctoral researcher

[01/03/2020 – 28/02/2021]

01/03/2020-28/02/2021: **Postdoctoral researcher** in the Department of Chemistry, Faculty of Mathematical, Natural and Physical Sciences, Sapienza University of Rome. Project title: "Characterization of the molecular profile of snow samples by omics technologies".

Research fellow (RTD-A)

[01/03/2017 – 29/02/2020]

Address: Roma (Italy)

01/03/ 2017-29/02/2020: **Research fellow (RTD-A)** in the Department of Chemistry, Faculty of Mathematical, Natural and Physical Sciences, Sapienza University of Rome, research fields of Analytical Chemistry and Separation Science, Omics Sciences, and Proteomics.

Research fellowship

[01/11/2016 – 28/02/2017]

Address: Roma (Italy)

01/11/2016-28/02/2017: **researcher** in the Department of Chemistry, Faculty of Mathematical, Natural and Physical Sciences, Sapienza University of Rome. Three-month fellowship on the project: "*New materials for enrichment of phosphopeptides in biological matrices*".

Postdoctoral researcher

[01/11/2014 – 31/10/2016]

Address: Roma (Italy)

01/11/2014-31/10/2016: **Postdoctoral researcher** in the Department of Chemistry, Faculty of Mathematical, Natural and Physical Sciences, Sapienza University of Rome. Project title: "*Assessment of quality and safety of seafoods by omics sciences*" (Settore Scientifico Disciplinare CHIM/01).

EDUCATION AND TRAINING

PhD in Chemical Sciences

Sapienza University of Rome [18/12/2014]

Address: Rome (Italy)

Tesi: *"Proteomic Characterization of Biomedically Interesting Particles by nanoHPLC and High Resolution Mass Spectrometry"*

Visiting student

Utrecht University, Biomolecular Mass Spectrometry and Proteomics Center of Prof. A.J.R. Heck [11/2013 – 05/2014]

Address: Utrecht (Netherlands)

Titolo del progetto: *Development of molecular imprinted polymers selective for the enrichment of sulfopeptides in biological samples*

Master's Degree in Chemistry

Sapienza University of Rome [26/01/2010]

Address: Roma (Italy)

Tesi: Addizioni organocatalitiche a cascata.

Bachelor of Science in Chemistry

Sapienza University of Rome [27/09/2007]

Address: Roma (Italy)

Diploma from Language High School

Liceo Linguistico Europeo "Santa Giovanna d'Arco", Vittorio Veneto (TV) [2004]

LANGUAGE SKILLS

Mother tongue(s): **Italian**

Other language(s):

English

LISTENING B2 READING B2 WRITING B2

SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

DIGITAL SKILLS

Suite Office (Excel Word Ppt) / Excellent research skills with main internet browser (Mozilla, Safari, Chrome...) / Use of email and shared workspace services

COMPETENZE PROFESSIONALI

Research activity

Dr. Piovesana research activity produced 99 publications on international scientific journals, 16 talks and 36 posters contributions at national and international congresses. Her activity was also awarded six awards, including the awards for young researchers in separation sciences, analytical chemistry, and bioanalytical chemistry by the Italian Chemical Society, Analytical Chemistry Division and Gruppo Interdivisionale di Scienza delle Separazioni.

The research topics focus on the development and validation of innovative analytical methods based on liquid chromatography-mass spectrometry for the qualitative and quantitative determination of analytes in a variety of matrices (environmental, food, and biological matrices). The research activity can be divided into the following topics: proteomics and peptidomics, short-chain peptide peptidomics, lipidomics, metabolomics and targeted analysis of small molecules.

PROGETTI DI RICERCA FINANZIATI

Funding Information - Grants as PI-principal investigator

2020 Initial research project - Type 2: Development of a Sample Preparation Workflow for Sulfopeptides, from Enrichment to Identification

€ 3000 (Sapienza University of Rome - 12 months)

2017 Funding for Basic Activities Related to Research to finance basic activities undertaken by full-time researchers and associate professors working for Italian state universities - **FFABR** – MIUR: € 3000

2017 Medium research project: Development of new materials for the enrichment of phosphopeptides in complex real matrices within the framework of shotgun phosphoproteomics

€ 11000 (+ fellowship € 23750) (Sapienza University of Rome - 36 months)

2016 Initial research project: Development of innovative carbon composite materials for phosphopeptide enrichment

€ 3435 (Sapienza University of Rome -12 months)

2015 Initial research project: Development of new separation technologies based on polydopamine coating

€ 3000 (Sapienza University of Rome -12 months)

2013 Initial research project: Peptidomic study of naturally occurring peptides in serum

€ 2000 (Sapienza University of Rome -12 months)

2012 Initial research project: Shotgun proteomics study of platelet microparticles

€ 2000 (Sapienza University of Rome -12 months)

TEACHING EXPERIENCE

Teaching Experience

A. A. 2019-2020: Analytical Chemistry I with Laboratory [1020315]/30443 Bachelor's Degree course in Chemistry (L-27), 6 CFU of 9 CFU, for laboratory activity

A. A. 2018-2019: Analytical Chemistry I with Laboratory [1020315]/30443 Bachelor's Degree Course in Chemistry (L-27), 9 CFU, 3 CFU for lecture and 6 CFU for laboratory activity

A. A. 2017-2018: Analytical Chemistry I with Laboratory [1020315]/30443 Bachelor's Degree course in Chemistry (L-27), 6 CFU of 9 CFU, divided into 3 CFU for lecture and 3 CFU for laboratory activity

A. A. 2015-2016 e 2016-2017: General and Inorganic Chemistry (module in Chemical and Epidemiological Sciences [1036290])/Bachelor's Degree Course in Environment and Workplace Prevention Techniques (L/SNT4) - Sant'Andrea Hospital (2 CFU)

PUBBLICAZIONI SU RIVISTE INTERNAZIONALI

1-Unsaturated beta-ketoesters as versatile electrophiles in organocatalysis

[2010]

S. Piovesana, D.M. Scarpino Schietroma, L.G. Tulli, M.R. Monaco, M. Bella. Unsaturated beta-ketoesters as versatile electrophiles in organocatalysis. *Chemical Communications*, 2010, 46:5160-5162. DOI: 10.1039/c003296d;

2-Multiple catalysis with two chiral units: an additional dimension for asymmetric synthesis

[2011]

S. Piovesana, D.M. Scarpino Schietroma, M. Bella. Multiple catalysis with two chiral units: an additional dimension for asymmetric synthesis. *Angewandte Chemie International Edition*, 2011, 50:6216-6232. DOI: 10.1002/anie.201005955.

3-Comparison of three different enrichment strategies for serum low molecular weight protein identification using shotgun proteomics approach

[2012]

A.L. Capriotti, G. Caruso, C. Cavaliere, **S. Piovesana**, R. Samperi, A. Laganà. Comparison of three different enrichment strategies for serum low molecular weight protein identification using shotgun proteomics approach. *Analytica Chimica Acta*, 2012, 740:58-65. DOI: 10.1016/j.aca.2012.06.033

4-Multiclass screening method based on solvent extraction and liquid chromatography-tandem mass spectrometry for the determination of antimicrobials and mycotoxins in egg

[2012]

A.L. Capriotti, C. Cavaliere, **S. Piovesana**, R. Samperi, A. Laganà. Multiclass screening method based on solvent extraction and liquid chromatography-tandem mass spectrometry for the determination of antimicrobials and mycotoxins in egg. *Journal of Chromatography A*, 2012, 1268:84-90. DOI: 10.1016/j.chroma.2012.10.040

5-Recent trends in matrix solid-phase dispersion

[2013]

A.L. Capriotti, C. Cavaliere, A. Laganà, **S. Piovesana**, R. Samperi. Recent trends in matrix solid-phase dispersion. *Tr AC - Trends in Analytical Chemistry*, 2013, 43:53-66. DOI: 10.1016/j.trac.2012.09.021

6-Proteomic characterization of human platelet-derived microparticles

[2013]

A.L. Capriotti, G. Caruso, C. Cavaliere, **S. Piovesana**, R. Samperi, A. Laganà, Proteomic characterization of human platelet-derived microparticles. *Analytica Chimica Acta*, 2013, 776:57-63. DOI: 10.1016/j.aca.2013.03.023

7-Determination of enantioselectivity and enantiomeric excess by mass spectrometry in the absence of chiral chromatographic separation: An Overview

[2013]

S. Piovesana, R. Samperi, A. Laganà, M. Bella. Determination of enantioselectivity and enantiomeric excess by mass spectrometry in the absence of chiral chromatographic separation: An Overview. *Chemistry - A European Journal*, 2013, 19:11478-11494. DOI: 10.1002/chem.201300233

8-Proteomic platform for the identification of proteins in olive (*Olea europaea*) pulp

[2013]

A.L. Capriotti, C. Cavaliere, P. Foglia, **S. Piovesana**, R. Samperi, S. Stampachiacchiere, A. Laganà. Proteomic platform for the identification of proteins in olive (*Olea europaea*) pulp. *Analytica Chimica Acta*, 2013, 800:36-42. DOI: 10.1016/j.aca.2013.09.014

9-Analytical strategies based on chromatography-mass spectrometry for the determination of estrogen-mimicking compounds in food

[2013]

A.L. Capriotti, C. Cavaliere, V. Colapicchioni, **S. Piovesana**, R. Samperi, A. Laganà. Analytical strategies based on chromatography-mass spectrometry for the determination of estrogen-mimicking compounds in food. *Journal of Chromatography A*, 2013, 1313:62-77. DOI: 10.1016/j.chroma.2013.06.054

10-Proteome investigation of the non-model plant pomegranate (*Punica granatum L*)

[2013]

A.L. Capriotti, G. Caruso, C. Cavaliere, P. Foglia, **S. Piovesana**, R. Samperi, A. Laganà. Proteome investigation of the non-model plant pomegranate (*Punica granatum L*). *Analytical and Bionalytical Chemistry*, 2013, 405:9301-9309. DOI: 10.1007/s00216-013-7382-3

11-High performance liquid chromatography tandem mass spectrometry determination of perfluorinated acids in cow milk

[2013]

A.L. Capriotti, C. Cavaliere, A. Cavazzini, P. Foglia, A. Laganà, **S. Piovesana**, R. Samperi. High performance liquid chromatography tandem mass spectrometry determination of perfluorinated acids in cow milk. *Journal of Chromatography A*, 2013, 1319:72-79. DOI: 10.1016/j.chroma.2013.10.029

12-Proteomic study of a tolerant genotype of durum wheat under salt-stress conditions

[2014]

A.L. Capriotti, G.M. Borrelli, V. Colapicchioni, R. Papa, **S. Piovesana**, R. Samperi, S. Stampachiacchiere, A. Laganà. Proteomic study of a tolerant genotype of durum wheat under salt-stress conditions. *Analytical and Bionalytical Chemistry*, 2014, 406:1423-1435. DOI: 10.1007/s00216-013-7549-y

13-Effect of polyethyleneglycol (PEG) chain length on the bio-nano-interactions between PEGylated lipid nanoparticles and biological fluids: from nanostructure to uptake in cancer cells

[2014]

D. Pozzi, V. Colapicchioni, G. Caracciolo, **S. Piovesana**, A.L. Capriotti, S. Palchetti, S. De Grossi, A. Riccioli, H. Amenitsch, A. Laganà. Effect of polyethyleneglycol (PEG) chain length on the bio-nano-interactions between PEGylated lipid nanoparticles and biological fluids: from nanostructure to uptake in cancer cells. *Nanoscale*, 2014, 6:2782-2792. DOI: 10.1039/c3nr05559k

14-Heterosis profile of sunflower leaves: A label free proteomics approach

[2014]

M. Mohayjeji, A.L. Capriotti, C. Cavaliere, **S. Piovesana**, R. Samperi, S. Stampachiacchiere, M. Toorchi, A. Laganà. Heterosis profile of sunflower leaves: A label free proteomics approach. *Journal of Proteomics*, 2014, 99:101-110. DOI: 10.1016/j.jprot.2014.01.028

15-Analytical methods for characterizing the nanoparticle-protein corona

[2014]

A.L. Capriotti, G. Caracciolo, C. Cavaliere, V. Colapicchioni, **S. Piovesana**, D. Pozzi, A. Laganà. Analytical methods for characterizing the nanoparticle-protein corona. *Chromatographia*, 2014, 406:1423-1435. DOI: 10.1007/s10337-014-2677-x

16-Development of an analytical strategy for the identification of potential bioactive peptides generated by in vitro tryptic digestion of fish muscle proteins

[2014]

A.L. Capriotti, C. Cavaliere, P. Foglia, **S. Piovesana**, R. Samperi, R. Zenezini Chiozzi, A. Laganà. Development of an analytical strategy for the identification of potential bioactive peptides generated by in vitro tryptic digestion of fish muscle proteins. *Analytical and Bioanalytical Chemistry*, 2014, 407:845-854. DOI: 10.1007/s00216-014-8094-z

17-The liposome-protein corona in mice and humans and its implications for in vivo delivery

[2014]

G. Caracciolo, D. Pozzi, A.L. Capriotti, C. Cavaliere, **S. Piovesana**, G. La Barbera, A. Amici, A. Laganà. The liposome-protein corona in mice and humans and its implications for in vivo delivery. *Journal of Materials Chemistry B*, 2014, 2:7419-7428. DOI: 10.1039/c4tb01316f

18-A proteomics-based methodology to investigate the protein corona effect for targeted drug delivery

[2014]

D. Pozzi, G. Caracciolo, A.L. Capriotti, C. Cavaliere, **S. Piovesana**, V. Colapicchioni, S. Palchetti, A. Riccioli, A. Laganà. A proteomics-based methodology to investigate the protein corona effect for targeted drug delivery. *Molecular BioSystems*, 2014, 10:2815-2819. DOI: 10.1039/c4mb00292j

19-Multiresidue determination of UV filters in water samples by solid phase extraction and liquid chromatography-tandem mass spectrometry analysis

[2014]

A.L. Capriotti, C. Cavaliere, **S. Piovesana**, R. Samperi, S. Stampachiacchiere, S. Ventura, A. Laganà. Multiresidue determination of UV filters in water samples by solid phase extraction and liquid chromatography-tandem mass spectrometry analysis. *Journal of Separation Science*, 2014, 37:2882-2891. DOI: 10.1002/jssc.201400708

20-Chromatographic methods coupled to mass spectrometry detection for the determination of phenolic acids in plants and fruits

[2015]

A.L. Capriotti, C. Cavaliere, P. Foglia, **S. Piovesana**, S. Ventura, Chromatographic methods coupled to mass spectrometry detection for the determination of phenolic acids in plants and fruits. *Journal of Liquid Chromatography & Related Technologies*, 2015, 38:353-370. DOI: 10.1080/10826076.2014.941263

21-Lipid composition: A “key factor” for the rational manipulation of the liposome-protein corona by liposome design

[2015]

G. Caracciolo, D. Pozzi, A.L. Capriotti, C. Cavaliere, **S. Piovesana**, H. Amenitsch, A. Laganà. Lipid composition: A “key factor” for the rational manipulation of the liposome-protein corona by liposome design. *RSC Advances*, 2015, 5:5967-5975. DOI: 10.1039/C4RA13335H

22-Peptidome characterization and bioactivity analysis of donkey milk

[2015]

S. Piovesana, A.L. Capriotti, C. Cavaliere, G. La Barbera, R. Samperi, R. Zenezini Chiozzi, A. Laganà. Peptidome characterization and bioactivity analysis of donkey milk. *Journal of Proteomics*, 2015, 119:21-29. DOI: 10.1016/j.jprot.2015.01.020

23-Characterization of quinoa seed proteome combining different protein precipitation techniques: Improvement of knowledge of nonmodel plant proteomics

[2015]

A.L. Capriotti, C. Cavaliere, **S. Piovesana**, S. Stampachiachiere, S. Ventura, R. Zenezini Chiozzi, A. Laganà. Characterization of quinoa seed proteome combining different protein precipitation techniques: Improvement of knowledge of nonmodel plant proteomics. *Journal of Separation Science*, 2015, 38:1017-1025. DOI: 10.1002/jssc.201401319

24-Development of a rapid LC-MS/MS method for the determination of emerging fusarium mycotoxins enniatins and beauvericin in human biological fluids

[2015]

A.B. Serrano, A.L. Capriotti, C. Cavaliere, **S. Piovesana**, R. Samperi, S. Ventura, A. Laganà. Development of a rapid LC-MS/MS method for the determination of emerging fusarium mycotoxins enniatins and beauvericin in human biological fluids. *Toxins*, 2015, 7:3554-3571. DOI: 10.3390/toxins7093554

25-Simultaneous determination of naturally occurring estrogens and mycoestrogens in milk by ultrahigh-performance liquid chromatography–tandem mass spectrometry analysis

[2015]

A.L. Capriotti, C. Cavaliere, **S. Piovesana**, S. Stampachiachiere, R. Samperi, S. Ventura, A. Laganà. Simultaneous determination of naturally occurring estrogens and mycoestrogens in milk by ultrahigh-performance liquid chromatography–tandem mass spectrometry analysis. *Journal of Agricultural and Food Chemistry*, 2015, 63:8940-8946. DOI: 10.1021/acs.jafc.5b02815

26-Natural estrogens in dairy products: Determination of free and conjugated forms by ultra high performance liquid chromatography with tandem mass spectrometry

[2015]

C. Cavaliere, A.L. Capriotti, P. Foglia, **S. Piovesana**, R. Samperi, S. Ventura, A. Laganà. Natural estrogens in dairy products: Determination of free and conjugated forms by ultra high performance liquid chromatography with tandem mass spectrometry. *Journal of Separation Science*, 2015, 38:3599-3606. DOI: 10.1002/jssc.201500549

27-Labeling and label free shotgun proteomics approaches to characterize muscle tissue from farmed and wild gilthead sea bream (*Sparus aurata*)

[2016]

S. Piovesana, A.L. Capriotti, G. Caruso, C. Cavaliere, G. La Barbera, R. Zenezini Chiozzi, A. Laganà. Labeling and label free shotgun proteomics approaches to characterize muscle tissue from farmed and wild gilthead sea bream (*Sparus aurata*). *Journal of Chromatography A*, 2016, 1428:193-201. DOI:10.1016/j.chroma.2015.07.049

28-Recent trends in the analysis of bioactive peptides in milk and dairy products

[2016]

A.L. Capriotti, C. Cavaliere, **S. Piovesana**, R. Samperi, A. Laganà. Recent trends in the analysis of bioactive peptides in milk and dairy products. *Analytical and Bioanalytical Chemistry*, 2016, 408:2677-2685. DOI: 10.1007/s00216-016-9303-8

29-Phosphopeptide enrichment: development of magnetic solid phase extraction method based on polydopamine coating and Ti⁴⁺-IMAC

[2016]

S. Piovesana, A.L. Capriotti, C. Cavaliere, F. Ferraris, R. Samperi, S. Ventura, A. Laganà. Phosphopeptide enrichment: development of magnetic solid phase extraction method based on polydopamine coating and Ti⁴⁺-IMAC. *Analytica Chimica Acta*, 2016, 909:67-74. DOI: 10.1016/j.aca.2016.01.008

30-Polydopamine coated magnetic nanoparticles for isolation and enrichment of estrogenic compounds from water samples followed by liquid chromatography-tandem mass spectrometry determination

[2016]

A.L. Capriotti, C. Cavaliere, G. La Barbera, **S. Piovesana**, R. Samperi, R. Zenezini Chiozzi, A. Laganà. Polydopamine coated magnetic nanoparticles for isolation and enrichment of estrogenic compounds from water samples followed by liquid chromatography-tandem mass spectrometry determination. *Analytical and Bioanalytical Chemistry*, 2016, 408:4011-4020. DOI: 10.1007/s00216-016-9489-9

31-Purification and identification of endogenous antioxidant and ACE-inhibitory peptides from donkey milk by multidimensional liquid chromatography and nanoHPLC-high resolution mass spectrometry

[2016]

R. Zenezini Chiozzi, A.L. Capriotti, C. Cavaliere, G. La Barbera, **S. Piovesana**, R. Samperi, A. Laganà. Purification and identification of endogenous antioxidant and ACE-inhibitory peptides from donkey milk by multidimensional liquid chromatography and nanoHPLC-high resolution mass spectrometry. *Analytical and Bioanalytical Chemistry*, 2016, 408:5657-5666. DOI: 10.1007/s00216-016-9672-z

32-Membrane proteome functional characterization of breast cancer initiating cells subjected to bone morphogenetic protein signaling inhibition by dorsomorphin

[2016]

S. Piovesana*, A.L. Capriotti, V. Colapicchioni, F. Ferraris, G. La Barbera, S. Ventura. Membrane proteome functional characterization of breast cancer initiating cells subjected to bone morphogenetic protein signaling inhibition by dorsomorphin. *Medicinal Chemistry Research*, 2016, 25:1971-1979. DOI: 10.1007/s00044-016-1657-0

33-Identification of three novel angiotensin converting enzyme inhibitory peptides derived from cauliflower by-products by multidimensional liquid chromatography and bioinformatics

[2016]

R. Zenezini Chiozzi, A.L. Capriotti, C. Cavaliere, G. La Barbera, **S. Piovesana**, A. Laganà. Identification of three novel angiotensin converting enzyme inhibitory peptides derived from cauliflower by-products by multidimensional liquid chromatography and bioinformatics. *Journal of Functional Foods*, 2016, 27:262-273. DOI: 10.1016/j.jff.2016.09.010

34-New magnetic graphitized carbon black TiO₂ composite for phosphopeptide selective enrichment in shotgun phosphoproteomics

[2016]

S. Piovesana, A.L. Capriotti, C. Cavaliere, F. Ferraris, D. Iglesias, S. Marchesan, A. Laganà. New magnetic graphitized carbon black TiO₂ composite for phosphopeptide selective enrichment in shotgun phosphoproteomics. *Analytical Chemistry*, 2016, 88:12043-12050. DOI: 10.1021/acs.analchem.6b02345

35-Magnetic materials for the selective analysis of peptide and protein biomarkers

[2017]

S. Piovesana, A.L. Capriotti. Magnetic materials for the selective analysis of peptide and protein biomarkers. *Curr ent Medicinal Chemistry*, 2017, 24: 438-453. DOI: 10.2174/0929867323666160805121905

36-Comprehensive polyphenol profiling of a strawberry extract (*Fragaria × ananassa*) by ultra-high-performance liquid chromatography coupled with high-resolution mass spectrometry

[2017]

G. La Barbera, A.L. Capriotti, C. Cavaliere, **S. Piovesana**, R. Samperi, R. Zenezini Chiozzi, A. Laganà. Comprehensive polyphenol profiling of a strawberry extract (*Fragaria × ananassa*) by ultra-high-performance liquid chromatography coupled with high-resolution mass spectrometry. *Analytical and Bioanalytical Chemistry*, 2017, 409:2127-2142. DOI: 10.1007/s00216-016-0159-8

37-A multidimensional liquid chromatography-tandem mass spectrometry platform to improve protein identification in high-throughput shotgun proteomics

[2017]

A.L. Capriotti, C. Cavaliere, A. Cavazzini, F. Gasparrini, G. Pierri, **S. Piovesana**, A. Laganà. A multidimensional liquid chromatography-tandem mass spectrometry platform to improve protein identification in high-throughput shotgun proteomics. *Journal of Chromatography A*, 2017, 1498:176-182. DOI: 10.1016/j.chroma.2017.03.032

38-Evaluation of column length and particle size effect on the untargeted profiling of a phytochemical mixture by means of ultra-high performance liquid chromatography coupled to high resolution mass spectrometry

[2017]

R. Zenezini Chiozzi, A.L. Capriotti, C. Cavaliere, F. Ferraris, G. La Barbera, **S. Piovesana**, A. Laganà. Evaluation of column length and particle size effect on the untargeted profiling of a phytochemical mixture by means of ultra-high performance liquid chromatography coupled to high resolution mass spectrometry. *Journal of Separation Science*, 2017, 40:2541-2557. DOI:10.1002/jssc.201700135

39-A new carbon-based magnetic material for the dispersive solid phase extraction of UV filters from water samples before liquid chromatography-tandem mass spectrometry analysis

[2017]

S. Piovesana, A.L. Capriotti, C. Cavaliere, G. La Barbera, R. Samperi, R. Zenezini Chiozzi, A. Laganà. A new carbon-based magnetic material for the dispersive solid phase extraction of UV filters from water samples before liquid chromatography-tandem mass spectrometry analysis. *Analytical and Bioanalytical Chemistry*, 2017, 409:4181-4194. DOI: 10.1007/s00216-017-0368-9

40-Proteomic analysis and bioluminescent reporter gene assays to investigate effects of simulated microgravity on Caco-2 cells

[2017]

G. La Barbera, A.L. Capriotti, E. Michelini, **S. Piovesana**, M.M. Calabretta, R. Zenezini Chiozzi, A. Roda, A. Laganà. Proteomic analysis and bioluminescent reporter gene assays to investigate effects of simulated microgravity on Caco-2 cells, *Proteomics*, 2017, 17:1700081. DOI: 10.1002/pmic.201700081

41- Liquid chromatography-high resolution mass spectrometry for the analysis of phytochemicals in vegetal-derived food and beverages

[2017]

G. La Barbera, A.L. Capriotti, C. Cavaliere, C.M. Montone, **S. Piovesana***, R. Samperi, R. Zenezini Chiozzi, A. Laganà. Liquid chromatography-high resolution mass spectrometry for the analysis of phytochemicals in vegetal-derived food and beverages. *Food Research International*, 2017, 100:28-52. DOI: 10.1016/j.foodres.2017.07.080

42-Label free shotgun proteomics approach to characterize muscle tissue from farmed and wild European sea bass (*Dicentrarchus labrax*)

[2018]

R. Zenezini Chiozzi, A.L. Capriotti, C. Cavaliere, G. La Barbera, C.M. Montone, **S. Piovesana**, A. Laganà. Label free shotgun proteomics approach to characterize muscle tissue from farmed and wild European sea bass (*Dicentrarchus labrax*). *Food Analytical Methods*, 2018, 292-301. DOI: 10.1007/s12161-017-0999-7

43-New Ti-IMAC magnetic polymeric nanoparticles for phosphopeptide enrichment from complex real samples

[2018]

A.L. Capriotti, C. Cavaliere, F. Ferraris, V. Gianotti, M. Laus, **S. Piovesana***, K. Sparnacci, R. Zenezini Chiozzi, A. Laganà. New Ti-IMAC magnetic polymeric nanoparticles for phosphopeptide enrichment from complex real samples. *Talanta*, 2018, 178:274-281. DOI: 10.1016/j.talanta.2017.09.010

44-Development of an enrichment method for endogenous phosphopeptide characterization in human serum

[2018]

G. La Barbera, A.L. Capriotti, C. Cavaliere, F. Ferraris, M. Laus, **S. Piovesana***, K. Sparnacci, A. Laganà. Development of an enrichment method for endogenous phosphopeptide characterization in human serum. *Analytical and Bioanalytical Chemistry*, 2018, 410:1177-1185. DOI: 10.1007/s00216-017-0822-8

45-Chromatographic column evaluation for the untargeted profiling of glucosinolates in cauliflower by means of ultra-high performance liquid chromatography coupled to high resolution mass spectrometry

[2018]

A.L. Capriotti, C. Cavaliere, G. La Barbera, C.M. Montone, **S. Piovesana**, R. Zenezini Chiozzi, A. Laganà. Chromatographic column evaluation for the untargeted profiling of glucosinolates in cauliflower by means of ultra-high performance liquid chromatography coupled to high resolution mass spectrometry. *Talanta*, 2018, 179:792-802. DOI: doi.org/10.1016/j.talanta.2017.12.019

46-Recent trends and analytical challenges in plant bioactive peptide separation, identification and validation

[2018]

S. Piovesana, A.L. Capriotti, C. Cavaliere, G. La Barbera, C.M. Montone, R. Zenezini Chiozzi, A. Laganà. Recent trends and analytical challenges in plant bioactive peptide separation, identification and validation. *Analytical and Bioanalytical Chemistry*, 2018, 410:3425-3444. DOI: 10.1007/s00216-018-0852-x

47-Peptidomic strategy for purification and identification of potential ACE-Inhibitory and antioxidant peptides in *Tetrademus obliquus* microalgae

[2018]

C.M. Montone, A.L. Capriotti, C. Cavaliere, G. La Barbera, **S. Piovesana**, R. Zenezini Chiozzi, A. Laganà. Peptidomic strategy for purification and identification of potential ACE-Inhibitory and antioxidant peptides in *Tetrademus obliquus* microalgae. *Analytical and Bioanalytical Chemistry*, 2018, 410:3573-3586. DOI: 10.1007/s00216-018-0925-x

48-Characterization of antioxidant and angiotensin-converting enzyme inhibitory peptides derived from cauliflower by-products by multidimensional liquid chromatography and bioinformatics

[2018]

C.M. Montone, A.L. Capriotti, C. Cavaliere, G. La Barbera, **S. Piovesana**, R. Zenezini Chiozzi, A. Laganà. Characterization of antioxidant and angiotensin-converting enzyme inhibitory peptides derived from cauliflower by-products by multidimensional liquid chromatography and bioinformatics. *Journal of Functional Foods*, 2018, 44:40-47. DOI: 10.1016/j.jff.2018.02.022

49-Saliva as a source of new phosphopeptide biomarkers: development of a comprehensive analytical method based on shotgun peptidomics

[2018]

G. La Barbera, A.L. Capriotti, C. Cavaliere, F. Ferraris, C.M. Montone, **S. Piovesana***, R. Zenezini Chiozzi, A. Laganà. Saliva as a source of new phosphopeptide biomarkers: development of a comprehensive analytical method based on shotgun peptidomics. *Talanta*, 2018, 183:245-249. DOI: 10.1016/j.talanta.2018.02.085

50-Extraction of polycyclic aromatic hydrocarbons from polyhydroxyalkanoates before gas chromatography/mass spectrometry analysis

[2018]

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[2021]

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94-High-resolution mass spectrometry and chemometrics for the detailed characterization of short endogenous peptides in milk by-products

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98-A.L. Capriotti, G. La Barbera, S. **Piovesana***, Recent Trends in Solid-Phase Extraction for Environmental, Food and Biological Sample Preparation. *Chromatographia*, 2019, 82:1119–1120. DOI: 10.1007/s10337-019-03762-5

Talks at national congresses

[1] **S. Piovesana. Invited lecture** "New trends for the enrichment and liquid chromatography-mass spectrometry analysis of peptides with protein post-translational modifications", XXVII Congresso Nazionale della Società Chimica Italiana "La chimica guida lo sviluppo sostenibile, 14-23 September 2021. Virtual congress.

[2] **S. Piovesana. Keynote lecture** "Challenges and New Developments in Shotgun Phosphoproteomics for Complex Real-World Samples" Incontri di Scienza delle Separazioni, Napoli, 28-29 November 2019. **Medal "Gruppo Interdivisionale di Scienza delle Separazioni - Premio Giovane Ricercatore"**[2] **S. Piovesana, F. Ferraris, P. Foglia, G. La Barbera, R. Samperi, R. Zenezini Chiozzi, A. Laganà.** "Studio dell'interfaccia nano-bio di liposomi mediante analisi proteomica shotgun" Incontri di Scienza delle Separazioni 2014, Rome, 12 December, 2014

[3] **S. Piovesana, M. Antonelli, B. Benedetti, A. Cerrato, C.M. Montone, A. Laganà.** "Unravelling the bioactivity potential of complex matrices: focusing on lipids and unusual amino acids in oils" XXVIII Congress of the Analytical Chemistry Division, Bari, 22-26 September 2019

[4] **S. Piovesana. Keynote lecture** "Separation and Enrichment of Peptides and Amino Acids: a Piece in the Puzzle of the Bioactivity of Protein Derivatives" XXVII Congresso della Divisione di Chimica Analitica, Bologna (Bo), 16-20 September 2018

[5] **S. Piovesana. Keynote lecture** "Cutting-edge developments in shotgun proteomics, peptidomics and shotgun phosphoproteomics in real matrices" XXVI Congresso Nazionale della Società Chimica Italiana, Paestum (SA), 10-14 September 2017. **"Giovane Ricercatore Chimica Analitica" Award**

[6] **S. Piovesana. Keynote lecture** "Shotgun Phosphoproteomics of Complex Real Samples by New Magnetic Materials" Giornate di chimica analitica in memoria del Prof. Francesco Dondi Recenti sviluppi in Scienze delle Separazioni e Bioanalitica, Ferrara, 10-11 July 2017. **"Giovane Ricercatore Bioanalitica" Award**

[7] A.L. Capriotti, F. Ferraris, **S. Piovesana, A. Laganà** "Preparation of new composite materials for phosphopeptide enrichment in shotgun phosphoproteomics" XXVI Congresso della Divisione di Chimica Analitica, Giardini Naxos, 18-22 September 2016.

[8] A.L. Capriotti, **S. Piovesana, R. Zenezini Chiozzi, A. Laganà** "Development of new composite magnetic phases for phosphopeptides isolation in shotgun phosphoproteomics" Bioanalitica 2016, Bologna, 4 July, 2016

[9] **S. Piovesana, A.L. Capriotti, F. Ferraris, R. Samperi, A. Laganà** "Post-translational modifications: development of new materials for the enrichment of phosphopeptides" XXV Congresso della Divisione di Chimica Analitica della Società Chimica Italiana, Trieste, 13 - 17 September, 2015.

[10] C. Cavaliere, F. Ferraris, G. La Barbera, **S. Piovesana, A. Puglisi, A. Laganà** "Peptidomic and bioactivity study on the peptides isolated in commercial donkey milk" Bioanalitica 2015, Florence, 26 June, 2015

Talks at international congresses

[1] **S. Piovesana**, C.M. Montone, A. Cerrato, C. Cavaliere, A. Laganà. "Sulfopeptide enrichment and identification by liquid chromatography-mass spectrometry" AMYC-Biomed 2021, 3-5 November 2021. Virtual conference.

[2] G. La Barbera, M. Antonelli, B. Benedetti, A. Cerrato, G. Cruciani, L. Goracci, C.M. Montone, **S. Piovesana**, A. Laganà. "Delving into the Polar Lipidome of Microalgae by Optimized Chromatographic Separation, High-Resolution Mass Spectrometry, and Comprehensive Identification with Lipostar" 48TH International Symposium on High-Performance Liquid Phase Separations and Related Techniques, Milano, 16-20 June 2019.

[3] **S. Piovesana**, C. Cavaliere, F. Ferraris, G. La Barbera, R. Zenezini Chiozzi, A. Laganà "Development of new magnetic materials in shotgun phosphoproteomics" MYCS - Merck Young Chemists Symposium, Rimini, 25-27 October 2016.

[2] **S. Piovesana**, A.L. Capriotti, V. Mancinelli, V. Trionfera, R. Zenezini Chiozzi, A. Laganà "Phosphopeptide selective enrichment by new affinity chromatography magnetic phases based on polydopamine and graphitized carbon black" 6th EuCheMS Chemistry Congress, Siviglia, 11-15 September 2016.

[4] **S. Piovesana**, A.L. Capriotti, F. Ferraris, A. Laganà "New materials for magnetic solid phase extraction and enrichment of phosphorylated peptides" 40th ISCC Symposium, Riva del Garda, 29 maggio-3 June 2016. **Talk awarded with the Genzo Shimadzu Oral Award.**

ABILITAZIONE SCIENTIFICA NAZIONALE

National scientific qualification to function as associate professor in Italian Universities

[28/03/2018 – 28/03/2024]

National scientific qualification to function as associate professor in Italian Universities, academic recruitment field 03/A1, academic discipline Analytical Chemistry, Call D.D. 1532/2016 (valid from 28/03/2018 to 28/03/2024, art. 16, Subparagraph 1, Law 240/10).

Editorial boards and guest editors

[2019 – Current]

July 2021-: Review Editor of the Editorial Board of Environmental Analysis (specialty section of Frontiers in Analytical Science).

October 2019-: Section Editorial Board of *Molecules* for the section Analytical Chemistry.

2019: Guest editor for *Chromatographia* Topical collection "Recent Trends in Solid-Phase Extraction for Environmental, Food and Biological Sample Preparation" with guest editors Anna Laura Capriotti, Giorgia La Barbera, and **Susy Piovesana**. Editorial for this Topical Collection: A.L. Capriotti, G. La Barbera, **S. Piovesana***, *Chromatographia*, 2019, 82:1119–1120. DOI: 10.1007/s10337-019-03762-5

2020: Guest editor for *Applied Sciences* in the Special Issue "Application of Nanomaterials/Nanotechnology in Analytical Chemistry" with guest editors Chiara Cavaliere and **Susy Piovesana**.

2020: Guest editor for *Molecules* in the Special Issue "Advancements in Analytical Techniques for Proteomics" with guest editors **Susy Piovesana**, Carmela Maria Montone, and Andrea Cerrato.

2020: Guest Editor for *Applied Sciences* in the Special Issue: "Application of New Methods for the Determination of Contaminants in Food and Environmental Quality and Safety" with guest editors Chiara Cavaliere and **Susy Piovesana**.

ATTIVITÀ DI REFERAGGIO PER RIVISTE SCIENTIFICHE INTERNAZIONALI

Peer Reviewer Activity

[Current]

Acta Biomaterialia (2019-)

Analytical and Bioanalytical Chemistry (2021-)

Analytica Chimica Acta (2020-)

Analyst (2019-)

Analytical Methods (2016-)

Biomolecules (2019-)

Current Organic Chemistry (2016-);

Data in Brief (2019-)

Expert Opinion on Drug Delivery (2016-)

Food Analytical Methods (2019-)

Food Chemistry (2018-)

Food Research International (2018-)

Foods (2019-)

International Journal of Molecular Sciences (2019-)

Journal of Chromatography A (2016-)

Journal of Food Composition and Analysis (2019-)

Journal of Food Science (2019-)

Journal of Proteomics (2016-);

Journal of the Science of Food and Agriculture (2016-);

Microchemical Journal (2019-)

Microchimica Acta (2019-)

Molecules (2019-)

Nanomedicine (2019-)

RSC Advances (2016-)

TrAC-Trends in Analytical Chemistry (2020-)

Separations (2019-)

MEMBERSHIPS

Membership to the Italian Chemical Society (Analytical Chemistry Division and Gruppo Interdivisionale di Scienza delle Separazioni); card number 18726

[2012 – Current]