Curriculum Vitae

1. CURRENT POSITION

1 March 2017-29 February 2020: **Research Fellow** at the Department of Chemistry, Sapienza University of Rome, Italy.

2. EDUCATION AND TRAINING

- November 2014-February 2017 **Post-Doc,** Università degli Studi di Roma "La Sapienza", Italy.
- **PhD in Chemical sciences,** December 2014, Department of Chemistry, Sapienza University of Rome, Italy.
- **Visiting PhD student** November 2013 - May 2014, Utrecht University (Netherlands), Biomolecular Mass Spectrometry and Proteomics Center of Prof. Albert Heck.
- **Master's degree in Chemistry** (final mark 110/110) January 2010**,** Department of Chemistry, Sapienza University of Rome, Italy, thesis title *Cascade Organocatalytic Additions*.
- **Bachelor of Science in Chemistry** (mark 110/110 cum laude) September 2007**,** Department of Chemistry, Sapienza University of Rome, Italy.

3. AWARDS

- **Best Young Researcher in Separation Science award by the Gruppo Interdivisionale di Scienza delle Separazioni** received at *Incontri di Scienza delle Separazioni*, Napoli, 28-29 November 2019.
- **Best Young Researcher in Analytical Chemistry award by the Italian Chemical Society** received at *XXVI Congresso Nazionale della Società Chimica Italiana*, Paestum (SA), 10-14 September 2017.
- **Best Young Researcher in Bioanalytics** received at the *Giornate di Chimica Analitica in memoria del Prof. Francesco Dondi*, Ferrara, 10-11 July 2017.
- **Genzo Shimadzu Oral Award for the Best Oral Presentation** *40th International Symposium on Capillary Chromatography (ISCC) and 13th GCxGC Symposium (GCxGC)*, Riva del Garda, 29 May-03 June 2016.
- **Award for the Best Oral Presentation** at the *Quinto Convegno Giovani La Chimica per lo Sviluppo*, Rome, 12-13 june 2012.

4. FUNDED PROJECTS

- 2017 Fund for researchers and associate professors by the Ministry of Education, University and Research - FFARB – MIUR: € 3000
- 2017 Intermediate research project (Università degli Studi di Roma "La Sapienza"-36 months). Project title: Development of new materials for the enrichment of phosphopeptides in complex real matrices within the framework of shotgun phosphoproteomics. Funding: € 11000 (+ fellowship € 23750) Role: PI
- 2016 Project title: Development of innovative carbon composite materials for phosphopeptide enrichment
  Funding: € 3435 (Università degli Studi di Roma "La Sapienza"-12 mesi) Role: PI
- 2015 Project title: Development of new separation technologies based on polydopamine coating Funding: € 4000 (Università degli Studi di Roma "La Sapienza"-12 months) Role: PI
- 2013 Project title: Peptidomic study of naturally occurring peptides in serum Funding: € 2000 (Università degli Studi di Roma "La Sapienza"-12 months) Role: PI
- 2012 Project title: Shotgun proteomics study of platelet microparticles Funding: € 2000 (Università degli Studi di Roma "La Sapienza"-12 months) Role: PI

5. INVITED TALKS/KEYNOTES

[1] **S. Piovesana.** "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.

[2] **S. Piovesana. "**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

[3] **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, 16-20 September 2017

6. EDITORIAL BOARD AND GEUST EDITOR ACTIVITY

[1] October 2019-: Section Editorial Board of Molecules for Analytical Chemistry

[2] 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***, *Chromatographia*, 2019, 82:1119–1120. DOI: 10.1007/s10337-019-03762-5

7. TEACHING ACTIVITY

- Since academic year 2017-2018: Analytical Chemistry I with Laboratory [1020315], Chemistry L-27, Università degli Studi di Roma "La Sapienza" (9 CFU).
- 2015-2017: General and inorganic chemistry, Bachelor Degree in Occupational Health and Safety Technicians - Sant'Andrea Hospital, Rome.

8. PUBLICATIONS ON SCIENTIFIC INTERNATIONAL JOURNALS

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

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

[9] 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] 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] 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] 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] 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] M. Mohayeji, 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] 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] 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

[17] 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

[18] 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

[19] 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

[20] 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

[21] 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] **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

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[24] **S. Piovesana**, A.L. Capriotti, G. Caruso, C. Cavaliere, G. La Barbera, R. Zenenzini 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

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[26] 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] A.L. Capriotti, C. Cavaliere, **S. Piovesana**, S. Stampachiacchiere, 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

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[32] **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] 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. http://dx.doi.org/10.1016/j.jff.2016.09.010

[34] **S. Piovesana**, A.L. Capriotti. Magnetic materials for peptide and protein biomarker selective analysis. *Current Medicinal Chemistry,* 2017*,* 24: 438-453. doi: 10.2174/0929867323666160805121905

[35] **S. Piovesana**, A.L. Capriotti C. Cavaliere, F. Ferraris, D. Iglesias, S. Marchesan, A. Laganà. New magnetic graphitized carbon black TiO_2 composite for phosphopeptide selective enrichment in shotgun phosphoproteomics. *Analytical Chemistry.* 2016, 88:12043-12050 DOI: 10.1021/acs.analchem.6b02345

[36] 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 to high resolution mass spectrometry. *Analytical and Bioanalytical Chemistry*, 2017, 409:2127-2142. DOI: 10.1007/s00216-016-0159-8

[37] 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. 10.1016/j.chroma.2017.03.032

[38] 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] **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] 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] 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

[42] 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

[43] 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] 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] 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] **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 peptides separation, identification and validation. *Analytical and Bioanalytical Chemistry,* 2018, 410:3425-3444. DOI: 10.1007/s00216-018-0852-x

[47] 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 *Tetradesmus obliquus* microalgae. *Analytical and Bioanalytical Chemistry,* 2018, 410:3573-3586. DOI: 10.1007/s00216-018-0925-x

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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

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[51] A.L. Capriotti, C.M. Montone, M. Antonelli, C. Cavaliere, F. Gasparrini, G. La Barbera, **S. Piovesana***, A. Laganà. Simultaneous Preconcentration, Identification, and Quantitation of Selenoamino Acids in Oils by Enantioselective High Performance Liquid Chromatography and Mass Spectrometry. *Analytical Chemistry*, 2018, 90:8326-8330. DOI: 10.1021/acs.analchem.8b02089

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[56] **S. Piovesana**, C.M. Montone, C. Cavaliere, C. Crescenzi, G. La Barbera, A. Laganà, A.L. Capriotti. Sensitive Untargeted Identification of Short Hydrophilic Peptides by High Performance Liquid Chromatography on Porous Graphitic Carbon Coupled to High Resolution Mass Spectrometry. *Journal of Chromatography A*, 2019, 1590:73-79. DOI:10.1016/j.chroma.2018.12.066

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9. PARTECIPATIONS AT CONFERENCES

She is author of 36 poster contributions and of 14 oral communications at national and international congresses