

Presentazione:

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## ● ESPERIENZA LAVORATIVA

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01/04/2021 – ATTUALE

### ASSEGNISTA DI RICERCA CATEGORIA B, TIPO II

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01/04/2021-31/03/2022: **assegnista di ricerca categoria B, tipo II**, presso il Dipartimento di Chimica, Facoltà di Scienze Matematiche, Fisiche e Naturali, Università degli Studi di Roma "La Sapienza". Titolo del progetto: "Approccio analitico untargeted, mediante spettrometria di massa ad alta risoluzione per studiare metaboliti e composti nuovi/inaspettati in Antartide" (Settore Scientifico Disciplinare CHIM/01).

01/03/2020 – 28/02/2021

### ASSEGNISTA DI RICERCA CATEGORIA B, TIPO II

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01/03/2020-28/02/2021: **assegnista di ricerca categoria B, tipo II**, presso il Dipartimento di Chimica, Facoltà di Scienze Matematiche, Fisiche e Naturali, Università degli Studi di Roma "La Sapienza". Titolo del progetto: "Caratterizzazione del profilo molecolare di campioni di neve mediante tecnologie omiche" (Settore Scientifico Disciplinare CHIM/01).

01/03/2017 – 29/02/2020

### RICERCATORE A TEMPO DETERMINATO TIPO A

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01/03/ 2017-29/02/2020: **Ricercatore a tempo determinato A** presso il Dipartimento di Chimica, Facoltà di Scienze Matematiche, Fisiche e Naturali, Università degli Studi di Roma "La Sapienza", nel settore della Chimica Analitica e delle Scienze della Separazione, Scienze Omiche, e Proteomica (settore concorsuale 03/A1 - Settore Scientifico Disciplinare CHIM/01).

Roma, Italia

01/11/2016 – 28/02/2017

### BORSA DI RICERCA

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01/11/2016-28/02/2017: **borsista di ricerca** presso il Dipartimento di Chimica, Facoltà di Scienze Matematiche, Fisiche e Naturali, Università degli Studi di Roma "La Sapienza". Borsa di tre mesi, titolo del progetto: "*New materials for enrichment of phosphopeptides in biological matrices*".

Roma, Italia

01/11/2014 – 31/10/2016

### ASSEGNISTA DI RICERCA DI CATEGORIA B

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01/11/2014-31/10/2016: **assegnista di ricerca di categoria B** presso il Dipartimento di Chimica, Facoltà di Scienze Matematiche, Fisiche e Naturali, Università degli Studi di Roma "La Sapienza". Titolo del progetto: "*Assessment of quality and safety of seafoods by omics sciences*" (Settore Scientifico Disciplinare CHIM/01).

Roma, Italia

## ● ISTRUZIONE E FORMAZIONE

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18/12/2014 – Roma, Italia

**DOTTORATO DI RICERCA IN SCIENZE CHIMICHE** – Università degli Studi di Roma “La Sapienza”

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

11/2013 – 05/2014 – Utrecht, Paesi Bassi

**VISITING STUDENT** – Università di Utrecht, Centro di spettrometria di massa biomolecolare e proteomica del Prof. Heck

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

26/01/2010 – Roma, Italia

**LAUREA SPECIALISTICA IN CHIMICA** – Università degli Studi di Roma “La Sapienza”

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Tesi: Addizioni organocatalitiche a cascata.

27/09/2007 – Roma, Italia

**LAUREA TRIENNALE IN CHIMICA** – Università degli Studi di Roma “La Sapienza”

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2004

**DIPLOMA DI LICEO LINGUISTICO** – Liceo Linguistico Europeo “Santa Giovanna d’Arco”, Vittorio Veneto (TV)

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## ● COMPETENZE LINGUISTICHE

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Lingua madre: **ITALIANO**

Altre lingue:

	COMPRENSIONE		ESPRESSIONE ORALE		SCRITTURA
	Ascolto	Lettura	Produzione orale	Interazione orale	
<b>INGLESE</b>	B2	B2	B2	B2	B2

*Livelli: A1 e A2: Livello elementare B1 e B2: Livello intermedio C1 e C2: Livello avanzato*

## ● COMPETENZE DIGITALI

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Padronanza del Pacchetto Office (Word Excel PowerPoint ecc) | Posta elettronica | Utilizzo del browser

## ● **COMPETENZE PROFESSIONALI**

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### **Attività scientifiche di ricerca**

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I risultati dell'attività scientifica della Dott.ssa Piovesana hanno prodotto 98 pubblicazioni su riviste scientifiche internazionali, 16 comunicazioni orali e 36 poster a congressi nazionali ed internazionali. Le tematiche delle ricerche svolte hanno come oggetto lo sviluppo e la validazione di metodi analitici innovativi basati sulla cromatografia liquida accoppiata alla spettrometria di massa tandem a bassa ed alta risoluzione per la determinazione multianalitica di sostanze naturali e di origine antropica in matrici di tipo ambientale, alimentare, vegetale e biologico.

L'attività scientifica può essere suddivisa in cinque principali linee di ricerca: proteomica e peptidomica (A), peptidomica di peptidi a catena corta (B), lipidomica (C), metabolomica (D) e analisi di piccole molecole in campo alimentare, ambientale e biologico (E).

### **Indicatori bibliometrici (Scopus, 25/02/2022)**

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Numero totale di lavori: 101

Articoli: 83

Review: 14

Conference paper: 2

Capitoli di libro: 1

Editorial: 1

Citazioni totali: 2321

h-index: 27

## ● **PREMI E RICONOSCIMENTI**

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### **Premi e riconoscimenti**

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Medaglia intitolata "**Gruppo Interdivisionale di Scienza delle Separazioni – Premio Giovane Ricercatore**" consegnata in occasione degli *Incontri di Scienza delle Separazioni*, Napoli, 28-29 novembre 2019.

**Premio Giovane Ricercatore Chimica Analitica** consegnato in occasione del *XXVI Congresso Nazionale della Società Chimica Italiana*, Paestum (SA), 10-14 settembre 2017.

**Premio Giovane Ricercatore Bioanalitica** consegnato in occasione delle *Giornate di Chimica Analitica in memoria del Prof. Francesco Dondi*, Ferrara, 10-11 luglio 2017.

**Premio per il miglior poster** al *Settimo Convegno Giovani Le frontiere della chimica nel nuovo millennio*, Roma, 14-15 giugno 2016.

**Premio Genzo Shimadzu Oral Award per la migliore comunicazione orale** al *40th International Symposium on Capillary Chromatography (ISCC) and 13th GCxGC Symposium (GCxGC)*, Riva del Garda, 29 maggio-03 giugno 2016.

**Premio per la miglior comunicazione orale** al *Quinto Convegno Giovani La Chimica per lo Sviluppo*, Roma, 12-13 giugno 2012.

## ● PROGETTI DI RICERCA FINANZIATI

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### Progetti di ricerca finanziati

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**2021 Progetto per Avvio alla Ricerca - Tipo 2:** Development of new materials for enrichment of peptides with post-translational modifications

Finanziamento: € 2200 (Università degli Studi di Roma "La Sapienza"-12 mesi) Ruolo: proponente

**2020 Progetto per Avvio alla Ricerca - Tipo 2:** Development of a Sample Preparation Workflow for Sulfopeptides, from Enrichment to Identification

Finanziamento: € 3000 (Università degli Studi di Roma "La Sapienza"-12 mesi) Ruolo: proponente

**2017 Finanziamento alla ricerca di base** riservato ai ricercatori universitari e professori associati universitari - **FFABR** – MIUR: € 3000

**2017 Progetto di ricerca medio:** Development of new materials for the enrichment of phosphopeptides in complex real matrices within the framework of shotgun phosphoproteomics

Finanziamento: € 11000 (+ assegno € 23750) (Università degli Studi di Roma "La Sapienza"-36 mesi) Ruolo: proponente

**2016 Progetto di avvio alla ricerca:** Development of innovative carbon composite materials for phosphopeptide enrichment

Finanziamento: € 3435 (Università degli Studi di Roma "La Sapienza"-12 mesi) Ruolo: proponente

**2015 Progetto di avvio alla ricerca:** Development of new separation technologies based on polydopamine coating

Finanziamento: € 3000 (Università degli Studi di Roma "La Sapienza"-12 mesi) Ruolo: proponente

**2013 Progetto di avvio alla ricerca:** Peptidomic study of naturally occurring peptides in serum

Finanziamento: € 2000 (Università degli Studi di Roma "La Sapienza"-12 mesi) Ruolo: proponente

**2012 Progetto di avvio alla ricerca:** Shotgun proteomics study of platelet microparticles

Finanziamento: € 2000 (Università degli Studi di Roma "La Sapienza"-12 mesi) Ruolo: proponente

## ● ATTIVITÀ DI INSEGNAMENTO

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### Attività di insegnamento

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A. A. 2019-2020: Chimica Analitica I con Laboratorio [1020315], Corso di Studi in Chimica L-27, Facoltà di Scienze Matematiche, Fisiche e Naturali, Università degli Studi di Roma "La Sapienza" (6 CFU su 9 CFU totali, relativi alla sola attività di laboratorio).

A. A. 2018-2019: Chimica Analitica I con Laboratorio [1020315], Corso di Studi in Chimica L-27, Facoltà di Scienze Matematiche, Fisiche e Naturali, Università degli Studi di Roma "La Sapienza" (9 CFU suddivisi in 3 CFU di didattica frontale e 6 CFU per attività di laboratorio).

A. A. 2017-2018: Chimica Analitica I con Laboratorio [1020315], Corso di Studi in Chimica L-27, Facoltà di Scienze Matematiche, Fisiche e Naturali, Università degli Studi di Roma "La Sapienza" (6 CFU su 9 CFU totali, suddivisi in 3 CFU di didattica frontale e 3 CFU di attività di laboratorio).

A. A. 2015-2016 e 2016-2017: 323/43 R – Scienze chimiche ed epidemiologiche – chimica generale ed inorganica, Tecniche della prevenzione nell'ambiente e nei luoghi di lavoro – Facoltà di Medicina e Psicologia Azienda Ospedaliera Sant'Andrea, Università degli Studi di Roma "La Sapienza" (2 CFU).

## ● PUBBLICAZIONI SU RIVISTE INTERNAZIONALI

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2010

### **1-Unsaturated beta-ketoesters as versatile electrophiles in organocatalysis**

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**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;

2011

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

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**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.

2012

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

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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

2012

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

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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

2013

### **5-Recent trends in matrix solid-phase dispersion**

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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

2013

### **6-Proteomic characterization of human platelet-derived microparticles**

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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

2013

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

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**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

2013

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

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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

2013

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

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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

2013

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

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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

2013

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

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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

2014

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

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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

2014

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### **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**

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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

2014

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

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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

2014

### **15-Analytical methods for characterizing the nanoparticle-protein corona**

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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

2014

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

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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

2014

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

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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

2014

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

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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

2014

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

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A.L. Capriotti, C. Cavaliere, **S. Piovesana**, R. Samperi, S. Stampachiachiere, 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

2015

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

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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

2015

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

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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

2015

## **22-Peptidome characterization and bioactivity analysis of donkey milk**

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**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

2015

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

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A.L. Capriotti, C. Cavaliere, **S. Piovesana**, S. Stampachiacchiere, 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

2015

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

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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

2015

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

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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

2015

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

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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

2016

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

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**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



2016

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

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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

2016

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### **29-Phosphopeptide enrichment: development of magnetic solid phase extraction method based on polydopamine coating and Ti<sup>4+</sup>-IMAC**

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**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 Ti<sup>4+</sup>-IMAC. *Analytica Chimica Acta*, 2016, 909:67-74. DOI: 10.1016/j.aca.2016.01.008

2016

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

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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

2016

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

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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

2016

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

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**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

2016

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

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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

2016

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**34-New magnetic graphitized carbon black TiO<sub>2</sub> composite for phosphopeptide selective enrichment in shotgun phosphoproteomics**

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**S. Piovesana**, A.L. Capriotti, C. Cavaliere, F. Ferraris, D. Iglesias, S. Marchesan, A. Laganà. New magnetic graphitized carbon black TiO<sub>2</sub> composite for phosphopeptide selective enrichment in shotgun phosphoproteomics. *Analytical Chemistry*, 2016, 88:12043-12050. DOI: 10.1021/acs.analchem.6b02345

2017

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

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

2017

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

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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

2017

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

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A.L. Capriotti, C. Cavaliere, A. Cavazzini, F. Gasparri, 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

2017

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**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**

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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

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**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**

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**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

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

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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

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

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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

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

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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

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

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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

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

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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

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**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**

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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

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

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**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

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

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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

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

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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

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

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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

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

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C. Cavaliere, C.M. Montone, A.L. Capriotti, G. La Barbera, **S. Piovesana**, M. Rotatori, F. Valentino, A. Laganà. Extraction of polycyclic aromatic hydrocarbons from polyhydroxyalkanoates before gas chromatography/mass spectrometry analysis. *Talanta*, 2018, 188:671-675. DOI: 10.1016/j.talanta.2018.06.038

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**51-Simultaneous preconcentration, identification, and quantitation of selenoamino acids in oils by enantioselective high performance liquid chromatography and mass spectrometry**

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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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**52-Delving into the polar lipidome by optimized chromatographic separation, high resolution mass spectrometry and comprehensive identification with Lipostar: microalgae as case study**

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G. La Barbera, M. Antonelli, C. Cavaliere, G. Cruciani, L. Goracci, C.M. Montone, **S. Piovesana\***, A. Laganà, A.L. Capriotti. Delving into the polar lipidome by optimized chromatographic separation, high resolution mass spectrometry and comprehensive identification with Lipostar: microalgae as case study. *Analytical Chemistry*, 2018, 90:12230–12238. DOI: 10.1021/acs.analchem.8b03482

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**53-Liquid chromatographic strategies for separation of bioactive compounds in food matrices**

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C. Cavaliere, A.L. Capriotti, G. La Barbera, C.M. Montone, **S. Piovesana**, A. Laganà. Liquid chromatographic strategies for separation of bioactive compounds in food matrices. *Molecules* 2018, 23:3091. DOI: 10.3390/molecules23123091

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**54-Investigation of free seleno-amino acids in extra-virgin olive oil by mixed mode solid phase extraction cleanup and enantioselective hydrophilic interaction liquid chromatography-tandem mass spectrometry**

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**S. Piovesana**, C.M. Montone, M. Antonelli, C. Cavaliere, G. La Barbera, S. Canepari, R. Samperi, A. Laganà, A.L. Capriotti. Investigation of free seleno-amino acids in extra-virgin olive oil by mixed mode solid phase extraction cleanup and enantioselective hydrophilic interaction liquid chromatography-tandem mass spectrometry. *Food Chemistry*, 2019, 278:17-25. DOI: 10.1016/j.foodchem.2018.11.053

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**55-Peptides from cauliflower by-products, obtained by an efficient, ecosustainable and semi-industrial method, exert protective effects on endothelial function**

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C. Caliceti, A.L. Capriotti, D. Calabria, F. Bonvicini, R. Zenezini Chiozzi, C.M. Montone, **S. Piovesana**, M. Zangheri, M. Mirasoli, P. Simoni, A. Laganà, A. Roda. Peptides from cauliflower by-products, obtained by an efficient, ecosustainable and semi-industrial method, exert protective effects on endothelial function. *Oxidative Medicine and Cellular Longevity*, 2019, 2019:1046504. DOI: 10.1155/2019/1046504

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**56-Sensitive untargeted identification of short hydrophilic peptides by high performance liquid chromatography on porous graphitic carbon coupled to high resolution mass spectrometry**

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**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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A.L. Capriotti, C. Cavaliere, **S. Piovesana\*** Liposome protein corona characterization as a new approach in nanomedicine. *Analytical and Bioanalytical Chemistry*, 2019, 411:4313-4326. DOI: 10.1007/s00216-019-01656-x

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**58-Investigation of free and conjugated seleno-amino acids in wheat bran by hydrophilic interaction liquid chromatography with tandem mass spectrometry**

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C.M. Montone, M. Antonelli, A.L. Capriotti, C. Cavaliere, G. La Barbera, **S. Piovesana**, A. Laganà. Investigation of free and conjugated seleno-amino acids in wheat bran by hydrophilic interaction liquid chromatography with tandem mass spectrometry. *Journal of Separation Science*, 2019, 42:1938-1947. DOI: 10.1002/jssc.201900047

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**59-Identification of bioactive short peptides in cow milk by high-performance liquid chromatography on C18 and porous graphitic carbon coupled to high-resolution mass spectrometry**

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C.M. Montone, A.L. Capriotti, A. Cerrato, C. M. Antonelli, G. La Barbera, **S. Piovesana**, A. Laganà, C. Cavaliere. Identification of bioactive short peptides in cow milk by high-performance liquid chromatography on C18 and porous graphitic carbon coupled to high-resolution mass spectrometry. *Analytical and Bioanalytical Chemistry*, 2019, 411:3395-3404. DOI: 10.1007/s00216-019-01815-0

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**60-Recent applications of magnetic solid phase extraction for sample preparation**

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A.L. Capriotti, C. Cavaliere, G. La Barbera, C.M. Montone, **S. Piovesana\***, A. Laganà. Recent applications of magnetic solid phase extraction for sample preparation. *Chromatographia*, 2019, 82:1251-1274. DOI: 10.1007/s10337-019-03721-0

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**61-Development of an analytical method for the metaproteomic investigation of bioaerosol from work environments**

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**S. Piovesana**, A.L. Capriotti, P. Foglia, C.M. Montone, G. La Barbera, R. Zenezini Chiozzi, A. Laganà, C. Cavaliere. Development of an analytical method for the metaproteomic investigation of bioaerosol from work environments. *Proteomics*, 2019, 19:e1900152. DOI: 10.1002/pmic.201900152

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**62-Enrichment procedure based on graphitized carbon black and liquid chromatography-high resolution mass spectrometry for elucidating sulfolipids composition of microalgae**

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M. Antonelli, B. Benedetti, C. Cavaliere, A. Cerrato, G. La Barbera, C.M. Montone, **S. Piovesana**, A. Laganà. Enrichment procedure based on graphitized carbon black and liquid chromatography-high resolution mass spectrometry for elucidating sulfolipids composition of microalgae. *Talanta*, 2019, 205:120162. DOI: 10.1016/j.talanta.2019.120162

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**63-Graphitized carbon black enrichment and UHPLC-MS/MS allow to meet the challenge of small chain peptidomics in urine**

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**S. Piovesana**, A.L. Capriotti, A. Cerrato, C. Crescenzi, G. La Barbera, A. Laganà, C.M. Montone, C. Cavaliere. Graphitized carbon black enrichment and UHPLC-MS/MS allow to meet the challenge of small chain peptidomics in urine. *Analytical Chemistry*, 2019, 91:11474-11481. DOI: [10.1021/acs.analchem.9b03034](https://doi.org/10.1021/acs.analchem.9b03034)

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**64-A novel magnetic molecular imprinted polymer for selective extraction of zearalenone from cereal flours before liquid chromatography-tandem mass spectrometry determination**

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C. Cavaliere, M. Antonelli, A. Cerrato, G. La Barbera, A. Laganà, M. Laus, **S. Piovesana**, A. Laura Capriotti. A novel magnetic molecular imprinted polymer for selective extraction of zearalenone from cereal flours before liquid chromatography-tandem mass spectrometry determination. *Toxins*, 2019, 11:E493. DOI: 10.3390/toxins11090493

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**65-A triple quadrupole and a hybrid quadrupole Orbitrap mass spectrometer in comparison for polyphenol quantitation**

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C. Cavaliere, M. Antonelli, A.L. Capriotti, G. La Barbera, C.M. Montone, **S. Piovesana**, A. Laganà. A triple quadrupole and a hybrid quadrupole Orbitrap mass spectrometer in comparison for polyphenol quantitation. *Journal of Agricultural and Food Chemistry*, 2019, 67:4885-4896. DOI: 10.1021/acs.jafc.8b07163

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**66-Effect of shell structure of Ti-immobilized metal ion affinity chromatography core-shell magnetic particles for phosphopeptide enrichment**

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A.L. Capriotti, M. Antonelli, D. Antonioli, C. Cavaliere, R. Chiarcos, V. Gianotti, **S. Piovesana\***, K. Sparnacci, M. Laus, A. Laganà. Effect of shell structure of Ti-immobilized metal ion affinity chromatography core-shell magnetic particles for phosphopeptide enrichment. *Scientific Reports*, 2019, 9:15782. DOI: 10.1038/s41598-019-51995-z

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**67-Peptidomic approach for the identification of peptides with potential antioxidant and anti-hypertensive effects derived from asparagus by-products**

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C.M. Montone, R. Zenenzini Chiozzi, N. Marchetti, A. Cerrato, M. Antonelli, A.L. Capriotti, C. Cavaliere, **S. Piovesana**, A. Laganà. Peptidomic approach for the identification of peptides with potential antioxidant and anti-hypertensive effects derived from asparagus by-products. *Molecules*, 2019, 24: E3627. DOI: 10.3390/molecules24193627

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**68-Phospholipidome of extra virgin olive oil: development of a solid phase extraction protocol followed by liquid chromatography - high resolution mass spectrometry for its software-assisted identification**

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M. Antonelli, B. Benedetti, C. Cavaliere, A. Cerrato, C.M. Montone, **S. Piovesana**, A. Laganà, A.L. Capriotti. Phospholipidome of extra virgin olive oil: development of a solid phase extraction protocol followed by liquid chromatography - high resolution mass spectrometry for its software-assisted identification. *Food Chemistry*, 2020, 310:125860. DOI: 10.1016/j.foodchem.2019.125860

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**69-A comprehensive analysis of liposomal biomolecular corona upon human plasma incubation: the evolution towards the lipid corona**

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G. La Barbera, A.L. Capriotti, G. Caracciolo, C. Cavaliere, A. Cerrato, C.M. Montone, **S. Piovesana**, D. Pozzi, E. Quagliarini, A. Laganà. A comprehensive analysis of liposomal biomolecular corona upon human plasma incubation: the evolution towards the lipid corona. *Talanta*, 2020, 209:120487. DOI: 10.1016/j.talanta.2019.120487

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**70-New insights in hemp chemical composition: a comprehensive polar lipidome characterization by combining solid phase enrichment, high-resolution mass spectrometry, and cheminformatics**

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M. Antonelli, B. Benedetti, G. Cannazza, A. Cerrato, C. Citti, C.M. Montone, **S. Piovesana**, A. Laganà. New insights in hemp chemical composition: a comprehensive polar lipidome characterization by combining solid phase enrichment, high-resolution mass spectrometry, and cheminformatics. *Analytical and Bioanalytical Chemistry*, 2020, 412:413-423. DOI: 10.1007/s00216-019-02247-6

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**71-A clean-up strategy for identification of circulating endogenous short peptides in human plasma by zwitterionic hydrophilic liquid chromatography and untargeted peptidomics identification**

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**S. Piovesana**, A. Cerrato, M. Antonelli, B. Benedetti, A.L. Capriotti, C. Cavaliere, C.M. Montone, A. Laganà. A clean-up strategy for identification of circulating endogenous short peptides in human plasma by zwitterionic hydrophilic liquid chromatography and untargeted peptidomics identification. *Journal of Chromatography A*, 2020, 1613:460699. DOI: 10.1016/j.chroma.2019.460699

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**72-A new software-assisted analytical workflow based on high-resolution mass spectrometry for the systematic study of phenolic compounds in complex matrices**

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A. Cerrato, G. Cannazza, A.L. Capriotti, C. Citti, G. La Barbera, A. Laganà, C.M. Montone, **S. Piovesana**, C. Cavaliere. A new software-assisted analytical workflow based on high-resolution mass spectrometry for the systematic study of phenolic compounds in complex matrices. *Talanta*, 2020, 209:120573. DOI: 10.1016/j.talanta.2019.120573

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**73-Magnetic molecularly imprinted multishell particles for zearalenone recognition**

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**74-Carbon nanostructure morphology templates nanocomposites for phosphoproteomics**

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**S. Piovesana**, D. Iglesias, M. Melle-Franco, S. Kralj, C. Cavaliere, M. Melchionna, A. Laganà, A.L. Capriotti, S. Marchesan. Carbon nanostructure morphology templates nanocomposites for phosphoproteomics. *Nano Research*, 2020, 13:380-388. DOI 10.1007/s12274-020-2620-4

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**75-Does the protein corona take over the selectivity of molecularly imprinted nanoparticles? The biological challenges to recognition**

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A.L. Capriotti, **S. Piovesana**, R. Zenezini Chiozzi, C.M. Montone, A.M. Bossi, A. Laganà. Does the protein corona take over the selectivity of molecularly imprinted nanoparticles? The biological challenges to recognition. *Journal of Proteomics*, 2020, 219:103736. DOI: 10.1016/j.jprot.2020.103736



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## **76-Development of a Sample Preparation Workflow for Sulfopeptide Enrichment: from Target Analysis to Challenges in Shotgun Sulfoproteomics**

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A.L. Capriotti, A. Cerrato, A. Laganà, C.M. Montone, **S. Piovesana\***, R. Zenezini Chiozzi, C. Cavaliere. Development of a Sample Preparation Workflow for Sulfopeptide Enrichment: from Target Analysis to Challenges in Shotgun Sulfoproteomics. *Analytical Chemistry*, 2020, 92:7964-7971. DOI: 10.1021/acs.analchem.0c01342

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## **77-Untargeted Characterization of Chestnut (*Castanea sativa* Mill.) Shell Polyphenol Extract: A Valued Bioresource for Prostate Cancer Cell Growth Inhibition**

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N.A. Cacciola, A. Cerrato, A.L. Capriotti, C. Cavaliere, M. Dapolito, C.M. Montone, **S. Piovesana**, G. Squillaci, G. Peluso, A. Laganà. Untargeted Characterization of Chestnut (*Castanea sativa* Mill.) Shell Polyphenol Extract: A Valued Bioresource for Prostate Cancer Cell Growth Inhibition. *Molecules*, 2020, 25:2730. DOI: 10.3390/molecules25122730

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## **78-Improved identification of phytocannabinoids using a dedicated structure-based workflow**

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C.M. Montone, A. Cerrato, B. Botta, G. Cannazza, A.L. Capriotti, C. Cavaliere, C. Citti, F. Ghirga, **S. Piovesana**, A. Laganà. Improved identification of phytocannabinoids using a dedicated structure-based workflow. *Talanta*, 2020, 219:121310. DOI: 10.1016/j.talanta.2020.121310

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## **79-A new opening for the tricky untargeted investigation of natural and modified short peptides**

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A. Cerrato, S.E. Aita, A.L. Capriotti, C. Cavaliere, C.M. Montone, A. Laganà, **S. Piovesana**. A new opening for the tricky untargeted investigation of natural and modified short peptides. *Talanta*, 2020, 219:121262. DOI: 10.1016/j.talanta.2020.121262

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## **80-Identification and antimicrobial activity of medium-sized and short peptides from yellowfin tuna (*Thunnus Albacares*) simulated gastrointestinal digestion**

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A. Cerrato, A.L. Capriotti, F. Capuano, C. Cavaliere, A.M.I. Montone, C. Maria Montone, **S. Piovesana**, R. Zenezini Chiozzi, A. Laganà. Identification and antimicrobial activity of medium-sized and short peptides from yellowfin tuna (*Thunnus Albacares*) simulated gastrointestinal digestion. *Foods*, 2020, 9:1185. DOI: 10.3390/foods9091185

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## **81-Developments and pitfalls in the characterization of phenolic compounds in food: from targeted analysis to metabolomics-based approaches**

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**S. Piovesana**, C. Cavaliere, A. Cerrato, C.M. Montone, A. Laganà, A.L. Capriotti. Developments and pitfalls in the characterization of phenolic compounds in food: from targeted analysis to metabolomics-based approaches. *TrAC Trends in Analytical Chemistry*, 2020, 133:116083. DOI: 10.1016/j.trac.2020.116083

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## **82-Comprehensive Identification of Native Medium-Sized and Short Bioactive Peptides in Sea Bass Muscle**

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A. Cerrato, S.E. Aita, C. Cavaliere, A. Laganà, C.M. Montone, **S. Piovesana\***, R. Zenezini Chiozzi, A.L. Capriotti. Comprehensive Identification of Native Medium-Sized and Short Bioactive Peptides in Sea Bass Muscle. *Food Chemistry*, 2020, 343:128443. DOI: 10.1016/j.foodchem.2020.128443

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## **83-A rapid and innovative extraction and enrichment method for the metaproteomic characterization of dissolved organic matter in groundwater samples**

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A.L. Capriotti, S.E. Aita, C. Cavaliere, A. Cerrato, C.M. Montone, **S. Piovesana**, A. Laganà. A rapid and innovative extraction and enrichment method for the metaproteomic characterization of dissolved organic matter in groundwater samples. *Journal of Separation Science*, 2020, online ahead of print. DOI: 10.1002/jssc.202001025

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## **84-Degradation of the polar lipid and fatty acid molecular species in extra virgin olive oil during storage based on shotgun lipidomics**

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A.L. Capriotti, A. Cerrato, S.E. Aita, C.M. Montone, **S. Piovesana**, A. Laganà, C. Cavaliere. Degradation of the polar lipid and fatty acid molecular species in extra virgin olive oil during storage based on shotgun lipidomics. *Journal of Chromatography A*, 2021, 1639: 461881. DOI: 10.1016/j.chroma.2021.461881

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## **85-In-depth cannabis fatty acid profiling by ultra-high performance liquid chromatography coupled to high resolution mass spectrometry**

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**S. Piovesana**, S.E. Aita, G. Cannazza, A.L. Capriotti, C. Cavaliere, A. Cerrato, P. Guarnaccia, C.M. Montone, A. Laganà. In-depth cannabis fatty acid profiling by ultra-high performance liquid chromatography coupled to high resolution mass spectrometry. *Talanta*, 2021, 228:122249.

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## **86-Untargeted metabolomics of prostate cancer zwitterionic and positively charged compounds in urine**

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A. Cerrato, C. Bedia, A.L. Capriotti, C. Cavaliere, V. Gentile, M. Maggi, C.M. Montone, **S. Piovesana**, A. Sciarra, R. Tauler, A. Laganà. Untargeted metabolomics of prostate cancer zwitterionic and positively charged compounds in urine. *Analytica Chimica Acta*, 2021, 1158, 338381. DOI: 10.1016/j.aca.2021.338381

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## **87-Phytocannabinomics: Untargeted metabolomics as a tool for cannabis chemovar differentiation**

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A. Cerrato, C. Citti, G. Cannazza, A.L. Capriotti, C. Cavaliere, G. Grassi, F. Marini, C.M. Montone, R. Paris, **S. Piovesana**, A. Laganà. Phytocannabinomics: Untargeted metabolomics as a tool for cannabis chemovar differentiation. *Talanta*, 2021, 230:122313. DOI: 10.1016/j.talanta.2021.122313

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## **88-Andean Blueberry of the Genus *Disterigma*: A High-Resolution Mass Spectrometric Approach for the Comprehensive Characterization of Phenolic Compounds**

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S.E. Aita, A.L. Capriotti, C. Cavaliere, A. Cerrato, B. Giannelli Moneta C.M. Montone, **S. Piovesana**, A. Laganà. Andean Blueberry of the Genus *Disterigma*: A High-Resolution Mass Spectrometric Approach for the Comprehensive Characterization of Phenolic Compounds. *Separations*, 2021, 8:58. DOI: 10.3390/separations8050058

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### **89-Production and Characterization of Medium-Sized and Short Antioxidant Peptides from Soy Flour-Simulated Gastrointestinal Hydrolysate**

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C. Cavaliere, A.M.I. Montone, S.E. Aita, R. Capparelli, A. Cerrato, P. Cuomo, A. Laganà, C.M. Montone, **S. Piovesana**, A.L. Capriotti. Production and Characterization of Medium-Sized and Short Antioxidant Peptides from Soy Flour-Simulated Gastrointestinal Hydrolysate. *Antioxidants*, 2021, 10:734. DOI: 10.3390/antiox10050734

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### **90-Optimal centrifugal isolating of liposome-protein complexes from human plasma**

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L. Digiacomio, F. Giulimondi, A.L. Capriotti, **S. Piovesana**, C.M. Montone, R. Zenezini Chiozzi, A. Laganà, M. Mahmoudi, D. Pozzi, G. Caracciolo. Optimal centrifugal isolating of liposome-protein complexes from human plasma. *Nanoscale Advances*, 2021, 3:3824-3834. DOI: 10.1039/D1NA00211B

2021

### **91-Profiling and quantitative analysis of underivatized fatty acids in *Chlorella vulgaris* microalgae by liquid chromatography-high resolution mass spectrometry**

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C.M. Montone, S.E. Aita, M. Catani, C. Cavaliere, A. Cerrato, **S. Piovesana**, A. Laganà, A.L. Capriotti. Profiling and quantitative analysis of underivatized fatty acids in *Chlorella vulgaris* microalgae by liquid chromatography-high resolution mass spectrometry. *Journal of Separation Science*, 2021, 44:3041-3051. DOI: 10.1002/jssc.202100306

2021

### **92-Targeted and untargeted characterization of underivatized policosanols in hemp inflorescence by liquid chromatography-high resolution mass spectrometry**

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C.M. Montone, S.E. Aita, G. Cannazza, C. Cavaliere, A. Cerrato, C. Citti, L. Mondello, **S. Piovesana\***, A. Laganà, A.L. Capriotti. Targeted and untargeted characterization of underivatized policosanols in hemp inflorescence by liquid chromatography-high resolution mass spectrometry. *Talanta*, 2021, 235:122778. DOI: 10.1016/j.talanta.2021.122778

2021

### **93-Recent applications of mass spectrometry for the characterization of cannabis and hemp phytocannabinoids: from targeted to untargeted analysis**

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A.L. Capriotti, G. Cannazza, M. Catani, C. Cavaliere, A. Cavazzini, A. Cerrato, C. Citti, S. Felletti, C.M. Montone, **S. Piovesana\***, A. Laganà. Recent applications of mass spectrometry for the characterization of cannabis and hemp phytocannabinoids: from targeted to untargeted analysis. *Journal of Chromatography A*, 2021, 1655:462492. DOI: 10.1016/j.chroma.2021.462492

2021

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

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C.M. Montone, S. Elsa Aita, C. Cavaliere, A. Cerrato, A. Laganà, **S. Piovesana**, A.L. Capriotti. High-resolution mass spectrometry and chemometrics for the detailed characterization of short endogenous peptides in milk by-products. *Molecules*, 2021, 26: 6472. DOI:10.3390/molecules26216472

## 95-Untargeted analysis of contaminants in river water samples: comparison between two different sorbents for solid-phase extraction followed by liquid chromatography-high-resolution mass spectrometry determination

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C. Cavaliere, C.M. Montone, B. Giannelli Moneta, S.E. Aita, F. Aulenta, A. Cerrato, S. Fazi, A. Laganà, V. Paolini, F. Petracchini, **S. Piovesana**, A.L. Capriotti. Untargeted analysis of contaminants in river water samples: comparison between two different sorbents for solid-phase extraction followed by liquid chromatography-high-resolution mass spectrometry determination. *Microchemical Journal*, 2022, 172(Part A):106979. DOI: 10.1016/j.microc.2021.106979

## 96-Fully Automated Detection of Phosphocholine-Containing Lipids through an Isotopically Labeled Buffer Modification Workflow

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A. Cerrato, S.E. Aita, A.L. Capriotti, C. Cavaliere, C.M. Montone, **S. Piovesana**, A. Laganà. Fully Automated Detection of Phosphocholine-Containing Lipids through an Isotopically Labeled Buffer Modification Workflow. *Analytical Chemistry*, 2021, 93:15042–15048. DOI: 10.1021/acs.analchem.1c02944

2022

## 97-Detailed investigation of the composition and transformations of phenolic compounds in fresh and fermented *Vaccinium Floribundum* berry extracts by high-resolution mass spectrometry and bioinformatics

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A. Cerrato, **S. Piovesana**, S.E. Aita, C. Cavaliere, S. Felletti, A. Laganà, C.M. Montone, C. Vargas-de-la-Cruz, A.L. Capriotti. Detailed investigation of the composition and transformations of phenolic compounds in fresh and fermented *Vaccinium Floribundum* berry extracts by high-resolution mass spectrometry and bioinformatics. *Phytochemical Analysis*, 2022, online ahead of print. DOI: 10.1002/pca.3105

2021

## 98-Characterization of the Trans-Epithelial Transport of Green Tea (*C. sinensis*) Catechin Extracts with In Vitro Inhibitory Effect against the SARS-CoV-2 Papain-like Protease Activity

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C.M. Montone, S.E. Aita, A. Arnoldi, A.L. Capriotti, C. Cavaliere, A. Cerrato, C. Lammi, **S. Piovesana**, G. Ranaldi, A. Laganà. Characterization of the Trans-Epithelial Transport of Green Tea (*C. sinensis*) Catechin Extracts with In Vitro Inhibitory Effect against the SARS-CoV-2 Papain-like Protease Activity. *Molecules*, 2021, 26, 6744. DOI:10.3390/molecules26216744

## Conference Proceedings and Editorials

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99-K. Sparnacci, D. Antonioli, V. Gianotti, M. Laus, A. Laganà, **S. Piovesana**. Multishell hybrid magnetic nanoparticles for phosphopeptide enrichment. *AIP Conference Proceedings* 2018, 1981: 020174. DOI: 10.1063/1.5046036

100-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

## Capitoli di libri

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Cerrato, A., Capriotti, A.L., Montone, C.M., Aita, S.E., Cannazza, G., Citti, C., **Piovesana, S.**, Aldo, L. (2021) Analytical Methodologies for Lipidomics in Hemp Plant. In: Hsu FF. (eds) Mass Spectrometry-Based Lipidomics. Methods in Molecular Biology, vol 2306, pp. 257-273. Humana, New York, NY. [https://doi.org/10.1007/978-1-0716-1410-5\\_17](https://doi.org/10.1007/978-1-0716-1410-5_17)

## ● COMUNICAZIONI ORALI A CONFERENZE

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### Comunicazioni orali a conferenze internazionali

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[1] **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 giugno 2016. **Premiato con il Genzo Shimadzu Oral Award come miglior comunicazione orale.**

[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" 6<sup>th</sup> EuCheMS Chemistry Congress, Siviglia, 11-15 settembre 2016.

[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 ottobre 2016. ISBN: 978-88-86208-92-5

[4] 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" 48<sup>TH</sup> International Symposium on High-Performance Liquid Phase Separations and Related Techniques, Milano, 16-20 giugno 2019.

[5] **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 novembre 2021. Conferenza virtuale.

## Comunicazioni orali a conferenze nazionali

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[1] **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, Roma, 12 dicembre, 2014.

[2] 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, Firenze, 26 giugno, 2015

[3] **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 settembre, 2015. ISBN: 978-88-907670-2-9

[4] 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 luglio, 2016

[5] 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 settembre 2016. ISBN: 978-88-86208-91-8

[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 luglio 2017. "**Premio Giovane Ricercatore Bioanalitica**"

[7] **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 settembre 2017. "**Premio Giovane Ricercatore Chimica Analitica**"

[8] **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 settembre 2018

[9] **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 settembre 2019

[10] **S. Piovesana. Keynote lecture** "Challenges and New Developments in Shotgun Phosphoproteomics for Complex Real-World Samples" Incontri di Scienza delle Separazioni, Napoli, 28-29 novembre 2019. **Medaglia "Gruppo Interdivisionale di Scienza delle Separazioni - Premio Giovane Ricercatore"**

[11] **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 settembre 2021. Conferenza virtuale

## Comunicazioni orali a conferenze locali

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[1] A.L. Capriotti, C. Cavaliere, A. Laganà, **S. Piovesana**, R. Samperi "Proteome characterization of platelet microparticles by nanoHPLC/high resolution mass spectrometry" Quinto Convegno Giovani - La chimica per lo sviluppo. Roma, 12-13 giugno 2012, Roma: Edizioni Nuova Cultura, p. 35-36, ISBN/ISSN: 9788861348226, doi: 10.448/8226-10.

## ● ABILITAZIONE SCIENTIFICA NAZIONALE

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28/03/2018 - 28/03/2027

### Abilitazione scientifica nazionale

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Abilitazione scientifica nazionale, II Fascia, settore concorsuale 03/A1, Chimica Analitica, Bando D.D. 1532/2016 (valido dal 28/03/2018 al 28/03/2027, art. 16, comma 1, Legge 240/10).

## ● EDITORIAL BOARDS E GUEST EDITORS

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2019 – ATTUALE

### Editorial boards e guest editors

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Luglio 2021-: Review Editor dell'Editorial Board di Environmental Analysis (specialty section of Frontiers in Analytical Science).

Ottobre 2019-: Section Editorial Board della rivista *Molecules* per la sezione Analytical Chemistry.

2019: Guest editor della rivista *Chromatographia* per la Topical collection "Recent Trends in Solid-Phase Extraction for Environmental, Food and Biological Sample Preparation" con guest editors Anna Laura Capriotti, Giorgia La Barbera, e Susy Piovesana. Editorial relativo a questa 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 della rivista *Applied Sciences* per lo Special Issue "Application of Nanomaterials/ Nanotechnology in Analytical Chemistry" con guest editors Chiara Cavaliere e **Susy Piovesana**.

2020: Guest editor della rivista *Molecules* per lo Special Issue "Advancements in Analytical Techniques for Proteomics" con guest editors **Susy Piovesana**, Carmela Maria Montone e Andrea Cerrato.

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

## ● ATTIVITÀ DI REFERAGGIO PER RIVISTE SCIENTIFICHE INTERNAZIONALI

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### Attività di referaggio per riviste scientifiche internazionali

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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-)

## ● **AFFILIAZIONE A SOCIETÀ**

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2012 - ATTUALE

**Membro della Società Chimica Italiana per la Divisione di Chimica Analitica e il Gruppo Interdivisionale di Scienza delle Separazioni.**

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*Autorizzo il trattamento dei miei dati personali presenti nel CV ai sensi dell'art. 13 d. lgs. 30 giugno 2003 n. 196 - "Codice in materia di protezione dei dati personali" e dell'art. 13 GDPR 679/16 - "Regolamento europeo sulla protezione dei dati personali".*