

## PERSONAL INFORMATION

Veronica Termopoli

## WORK EXPERIENCE

- 2018–Present **Post Doctoral Research Bursary**  
University of Urbino, Urbino (Italy)  
Implementation of LC-LEI-MS/MS
- 2012–2017 **Post Doc Position**  
University of Urbino, Urbino (Italy)  
Research project:  
CHEMICAL CHARACTERIZATION OF ENVIRONMENTAL RISK FACTORS IN THE SUDDEN INFANT DEATH SYNDROME (SIDS) AND SUDDEN INTRAUTERINE UNEXPLAINED DEATH (SIUD).  
*The aim of this project was to examine the association between natal/perinatal mortality and chronic exposure to Endocrine Disrupting Chemicals (EDCs) using standard GC-MS instrumentation and Direct-EI interface.*
- 2010–2012 **Post Doc research fellow**  
University of Urbino, Urbino (Italy)  
DEVELOPMENT OF A UNIVERSAL DETECTOR LC-MS FOR IDENTIFICATION OF SMALL MOLECULES.  
  - *Design and development of analytical instrumentation in the field of mass spectrometry and nano-HPLC.*
  - *Development and application of LC-MS techniques and methods in a wide range of research fields.*
  - *Development of analytical methods for sampling, purification, and pre-concentration of analytes in complex matrices of environmental, biological, and pharmaceutical interest.*
- 2007–2007 **Lab technician internship**  
CSA, Research Institute, Rimini (Italy)  
Extraction of organic pollutants in several matrices using several techniques: SPME, LLE, Soxhlet.

## EDUCATION AND TRAINING

- 09/2007–09/2010 **PhD in Chemical and Pharmaceutical Sciences**  
University of Urbino, Urbino (Italy)  
Dissertation title: Advances in LC-MS Interfacing for the Detection of Small Molecules: Instrumental Development, Performance and Applications.  
Advisor: Prof. Achille Cappiello

2000–2005 **B. Sc in Environmental Sciences, Atmospheric Chemistry**

University of Urbino, Urbino (Italy)

Dissertation Title: Development of new analytical methods of environmental matrices to characterize sea surface micro layer

**PERSONAL SKILLS**

Mother tongue(s) Italian

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B1	B2	B1	B1	B1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user  
 Common European Framework of Reference for Languages - Self-assessment grid

Communication skills Good social and communication skills, good attitude to work in a team acquired through the practice of team sports.

Organisational / managerial skills Good ability to organize work mainly acquired in the daily lab practice.

Job-related skills Excellent knowledge of analytical instrument software: Agilent Mass Hunter, Chromeleon, Chemstation. MEPS.

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem-solving
Proficient user	Proficient user	Independent user	Independent user	Proficient user

Digital skills - Self-assessment grid

Excellent knowledge of Microsoft Office™ tools (Word™, Excel™, PowerPoint™); Basic knowledge of graphic design applications (Adobe Illustrator™, PhotoShop™, Affinity).

## ADDITIONAL INFORMATION

### Courses

- National School of Analytical Methodologies in Mass Spectrometry, Parma, May 19th-23th 2008.
- GC-MS Workstation, Agilent Technologies, Milano, May 12th-18th 2012.
- Master Universitario di II livello in "Analisi Chimiche e Chimo-Tossicologiche Forensi". Attualmente in corso.

### Honours and awards

Winner of the "Canada-Italy Innovation Award 2018" from the Canadian Embassy in Italy.

### Honours and awards

Finalist of the "ITWIIN 2016" with a new Liquid EI interface.

### Publications

1. **Mass spectrometry analysis of drug of abuse: challenges and emerging strategies.** Borden, S, Palaty, J, Termopoli, V, Famigliani, G, Cappiello, A, Gill, C, Palma, P. *Mass Spec Reviews*, 2020, 00:1-42.
2. **Mass spectrometry-based approach for organic synthesis monitoring.** Termopoli, V, Torrisi, E, Famigliani, G, Palma, P, Zappia, G, Cappiello, A, Vandergrift, G, Zvekcic, M, Krogh, E, Gill, C. *Anal Chem*, 2019, 91, 11916-11922.
3. **Metal-Organic Frameworks in solid-phase extraction procedures for environmental and food analyses.** Rocio-Bautista, P, Termopoli, V. *Chromatographia*, 2019, 82:1191-1205.
4. **Evaluation of a liquid electron ionization liquid chromatography-mass spectrometry interface.** Termopoli, V, Famigliani, G, Palma, P, Piergiovanni, M, Cappiello, A, Saeed, M, Perry, S. *J Chrom A*, 2019, 1591: 120-130.
5. **Rapid, hydrolysis-free, dilute-and-shoot method for the determination of buprenorphine, norbuprenorphine and their glucuronides in urine samples using UHPLC-MS/MS.** Agostini, M, Renzoni, C, Pierini, E, Piergiovanni, M, Termopoli, V, Famigliani, G, Pierangela, P, Cappiello, A. *Journal of Pharm Biomed Anal*, 2019, 166: 236-243
6. **MS-Based Analytical Techniques: Advances in Spray-Based Methods and EI-LC-MS Applications.** Bianchi, F, Riboni, N, Termopoli, V, Mendez, L, Medina, I, Ilag, L, Cappiello, A, Careri, M. *Journal of Analytical Methods in Chemistry*, 2018(4):1-24.
7. **The effect of diethylene glycol on pollution from offshore gas platforms.** Mannozi, M, Famigliani, G, Cappiello, A, Maggi, C, Palma, P, Berducci, M.T, Termopoli, V, Tomambé, A, Manfra, L. 2018. *Environmental Chemistry*, 2018, 15(2) 74-82.
8. **Determination of benzodiazepines in beverages using green extraction methods and capillary HPLC-UV detection.** Piergiovanni, M, Cappiello, A, Famigliani, G, Termopoli, V, Palma P. 2018, *Journal of Pharm Biomed Anal*. 2018, 154:492-500.
9. **Ionization LC-MS: What Is It and Why Use It?** Famigliani, G, Palma, P, Cappiello, A, Termopoli, V, Fialkov A.V. (.), Amirav, A. *Comprehensive Analytical Chemistry*, 2018, 79, pp-1-28.
10. **High-Performance Liquid Chromatography/Mass Spectrometry Methods in Pesticide Analysis.** Cappiello, A., Palma P., Famigliani, G., Termopoli, V. 2017. *Encyclopedia of Analytical Chemistry*, pp-1-25. Chapter 1.
11. **Atmospheric pressure vaporization mechanism for coupling a liquid phase with electron ionization mass spectrometry.** Termopoli, V., Famigliani, G., Palma, P., Piergiovanni, M., Cappiello, A. 2017. *Analytical Chemistry*. 89(3), pp. 2049-2056
12. **Negative role of the environmental endocrine disruptors in the human neurodevelopment.** Roncati, L., Termopoli, V., Pusiol, T. 2016. *Frontiers in Neurology*. 7,143.
13. **Impact Assessment of Endocrine Disruptors on Sudden Intrauterine and Infant Death Syndromes.** Pusiol, T., Lavezzi, A., Matturri, L., Termopoli, V., Cappiello, A., Pisciole, F., Roncati, L. 2016. *European Journal of Forensic Science*, Vol 3, pp 1-8.
14. **Liquid chromatography-electron ionization tandem mass spectrometry with the Direct-EI**

**interface in the fast determination of diazepam and flunitrazepam in alcoholic beverages.**

Famiglini, G., Termopoli, V., Palma, P., Cappiello, A. 2016. *Electrophoresis*. 37(7-8), pp. 1048-1054.

**15. Condensed Phase Membrane Introduction Mass Spectrometry with Direct Electron Ionization: On-line Measurement of PAHs in Complex Aqueous Samples.**

Termopoli, V., Famiglini, G., Palma, P., (...), Krogh, E.T., Gill, C.G. 2016. *Journal of the American Society for Mass Spectrometry*. 27(2), pp. 301-308.

**16. Boosting the Detection Potential of Liquid Chromatography-Electron Ionization Mass Spectrometry Using a Ceramic Coated Ion Source.**

Magrini, L., Famiglini, G., Palma, P., Termopoli, V., Cappiello, A. 2016. *Journal of the American Society for Mass Spectrometry*. 27(1), pp. 153-160.

**17. Occurrence of specific environmental risk factors in brain tissues of sudden infant death and sudden intrauterine unexpected death victims assessed with gas chromatography-tandem mass spectrometry.**

Termopoli, V., Famiglini, G., Palma, P., Magrini, L., Cappiello, A. 2015. *Analytical and Bioanalytical Chemistry*. 407(9), pp. 2463-2472.

**18. Sudden infant death with area postrema lesion likely due to wrong use of insecticide.**

Lavezzi, A.M., Cappiello, A., Termopoli, V., Bonoldi, E., Matturi, L. 2015. *Pediatrics*. 136(4), pp. e1039-e1042.

**19. The rapid measurement of benzodiazepines in a milk-based alcoholic beverage using QuEChERS extraction and GC-MS analysis.**

Famiglini, G., Capriotti, F., Palma, P., Termopoli, V., Cappiello, A. 2015. *Journal of Analytical Toxicology*. 39(4), pp. 306-312.

**20. Pesticide exposure during pregnancy, like nicotine, affects the brainstem  $\alpha 7$  nicotinic acetylcholine receptor expression, increasing the risk of sudden unexplained perinatal death.**

Lavezzi, A.M., Cappiello, A., Pusioli, T., (...), Termopoli, V., Matturi, L. 2015. *Journal of the Neurological Sciences*. 348(1-2), pp. 94-100.

**21. Rapid LC-MS method for the detection of common fragrances in personal care products without sample preparation.**

Famiglini, G., Termopoli, V., Palma, P., Capriotti, F., Cappiello, A. 2014. *Electrophoresis*. 35(9), pp. 1339-1345.

**22. Determination of selected endocrine disrupting compounds in human fetal and newborn tissues by GC-MS.**

Cappiello, A., Famiglini, G., Palma, P., Termopoli, V., Maria Lavezzi, A., Matturi, L. 2014. *Analytical and Bioanalytical Chemistry*. 406(12), pp. 2779-2788.

**23. A new liquid chromatography-mass spectrometry approach for generic screening and quantitation of potential genotoxic alkylation compounds without derivatization.**

Cappiello, A., Famiglini, G., Palma, P., Termopoli, V., Trufelli, H. 2012. *Journal of Chromatography A*. 1255, pp. 286-290.

**24. Determination of natural pyrethrins by liquid chromatography-electron ionisation-mass spectrometry.** Cappiello, A., Tirillini, B., Famiglini, G., (...), Termopoli, V., Flender, C. 2012. *Phytochemical Analysis*. 23(3), pp. 191-196.

**25. Application of liquid chromatography-direct-electron ionization-MS in an in vitro dermal absorption study: Quantitative determination of trans -cinnamaldehyde.**

Cappiello, A., Famiglini, G., Termopoli, V., (...), Radici, L., Saib, O. 2011. *Analytical Chemistry*. 83(22), pp. 8537-8542.

**26. Direct-EI in LC-MS: Towards a universal detector for small-molecule applications.**

Cappiello, A., Famiglini, G., Palma, P., (...), Termopoli, V., Trufelli, H. 2011. *Mass Spectrometry Reviews*. 30(6), pp. 1242-1255.

**27. Profiling of non-esterified fatty acids in human plasma using liquid chromatography-electron ionization mass spectrometry.**

Trufelli, H., Famiglini, G., Termopoli, V., Cappiello, A. 2011. *Analytical and Bioanalytical Chemistry*, 400(9), pp. 2933-294.

**28. Electron ionization in LC-MS: Recent developments and applications of the direct-EI LC-MS interface.**

Palma, P., Famiglini, G., Trufelli, H., (...), Termopoli, V., Cappiello, A. 2011, *Analytical and Bioanalytical*

Chemistry, 399(8), pp. 2683-2693, 21

**29. LC-ESI-MS determination of diethylene glycol pollution in sea water samples collected around gas extraction platform plants.**

Cappiello, A., Famiglioni, G., Palma, P., (...), Di Mento, R., Mannozi, M. 2009, Talanta, 80(1), pp. 257-262, 4

**30. Single-step LC/MS method for the simultaneous determination of GC-amenable organochlorine and LC-amenable phenoxy acidic pesticides.**

Famiglioni, G., Palma, P., Termopoli, V., Trufelli, H., Cappiello, A. 2009, Analytical Chemistry, 81(17), pp. 7373-7378,

**31. Overcoming matrix effects in liquid chromatography-mass spectrometry.**

Cappiello, A., Famiglioni, G., Palma, P., (...), Termopoli, V., Trufelli, H. 2008 Analytical Chemistry, 80(23), pp. 9343-9348, 118.

#### Conferences

- 32<sup>nd</sup> International Symposium on capillary Chromatography and 5th GCxGC Symposium. Riva del Garda, 26-28 Maggio 2008. (poster presentation).
- XXI Congresso Nazionale delle Società National Symposium of the Italian Division of Analytical Chemistry, Arcavacata di Rende (CS), September 22-25, 2008 (oral presentation).
- Sigma Aldrich Young Chemists Symposium. Pesaro, October 20-22, 2008 (oral presentation).
- 57<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics. Philadelphia (USA), May 30-June 4, 2009 (poster presentation).
- 34<sup>th</sup> International Symposium on Capillary Chromatography and 7th GCxGC Symposium. Riva del Garda, May 1-4, 2010 (poster presentation).
- XXIII National Symposium of the Italian Division of Analytical Chemistry, Isola d'Elba (LI), September 16-20, 2012 (oral presentation).
- XXIV National Symposium of the Italian Division of Analytical Chemistry. Sestri Levante, September 15-19, 2013 (oral presentation).
- 38<sup>th</sup> International Symposium on capillary Chromatography and 5th GCxGC Symposium. Riva del Garda, May 20-23 2014. (oral presentation)
- 64<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics. San Antonio (USA), June 4-June 9, 2016 (poster presentation).
- 65<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics. Indianapolis (USA), June 1-5, 2017 (poster presentation)
- 66<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics. San Diego (USA), June 3-8, 2018 (oral presentation)
- 67<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics. Atlanta,(USA), 2-6 Giugno 2019 (oral presentation)
- XXVIII Congresso della Divisione di Chimica Analitica della Società Chimica Italiana, Bari 22-26 settembre 2019. Relatrice di un contributo ORALE.

#### Conferences as invited speaker:

- Tecniche e Criteri Anatomico-Patologici nella Diagnostica della Sindrome della Morte Inaspettata Fetale (SIUDS) e della morte improvvisa del Lattante (SIDS). Trento, October 24<sup>th</sup>, 2013. (oral presentation).
- 63<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics. St. LOUIS (USA), May 30<sup>th</sup>-June 4<sup>th</sup>, 2015 (poster and oral presentation).
- La problematica della patologia fetale, placentare e del neonato pretermine: incontro tra le varie discipline. Bolzano, April 7<sup>th</sup> 2016. (oral presentation)
- Visiting speaker su invito presso il Dipartimento di Chimica della British Columbia University con un seminario dal titolo: "Liquid-El Project: A new Frontier for Liquid Chromatography Electron Ionization Mass Spectrometry. V. Termopoli (presentazione orale)

#### Patent

MACCHINA PER ANALISI CHIMICA COMPRENDENTE LA COMBINAZIONE DELLA SPETTROMETRIA DI MASSA A IONIZZAZIONE ELETTRONICA CON LA CROMATOGRAFIA

LIQUIDA.

**N. 102017000115527**

Co-inventor.

[Related document\(s\): AOO\\_PIT.REGISTRO UFFICIALE.2020.0015318.pdf](#)

#### ATTACHMENTS

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- [AOO\\_PIT.REGISTRO UFFICIALE.2020.0015318.pdf](#)

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Roma, 17 gennaio

in se. AOO PIT. REGISTRO UFFICIALE. U. 0015318. 17-01-2020

*Ministero dello Sviluppo Economico*

Direzione generale per la tutela della proprietà industriale

Ufficio Italiano Brevetti e Marchi

## ATTESTATO DI BREVETTO PER INVENZIONE INDUSTRIALE

Il presente brevetto viene concesso per l'invenzione oggetto della domanda:

N. 102017000115527

TITOLARE/I: • UNIVERSITA' DEGLI STUDI DI URBINO "CARLO BO"  
Bosman Cesare

DOMICILIO: Studio Torta Sp.A.  
via Viotti 9  
10121 Torino

INVENTORE/I: • CAPIELLO ACHILLE  
• FAMGLINI GIORGIO  
• PIERGIOVANNI MAURIZIO  
• TERMOPOLI VERONICA

TITOLO: MACCHINA PER ANALISI CHIMICA COMPRENDENTE LA COMBINAZIONE DELLA  
SPETTROMETRIA DI MASSA A IONIZZAZIONE ELETTRONICA CON LA  
CROMATOGRAFIA LIQUIDA

CLASSIFICA: G01N

DATA DEPOSITO: 13/10/2017

Roma, 17/01/2020

Il Dirigente della Divisione  
*Loredana Guglielmetti*