

Curriculum vitae

PERSONAL INFORMATION

Name: Giacomo Musile

Scopus Author ID: 55363861000; ORCID: [0000-0002-6934-4333](https://orcid.org/0000-0002-6934-4333)

Date and place of birth: 28/05/1985; Messina, Italy

Nationality: Italian

Current Position: Research Fellow at the University of Verona

• EDUCATION

01 Jan 2012 – 21 Dec 2014: **PhD Forensic Medicine and Science** (curriculum Forensic Analytical Chemistry). Unit of Forensic Medicine. University of Verona. Italy. Title of the thesis: “*Determination of new psychoactive substances in complex matrices by using methods based on micro-analytical systems*”. Mentor Prof. Donata Favretto.

Oct 2007 - Apr 2010: **MSc Chemistry** (curriculum Analytical Chemistry). University of Turin. Italy. Title of the thesis: “*Comparison of methods SPME and SPE, to improve analysis of traces of Triacetone Triperoxide explosive by GC-MS and GC-MS/MS*”. Mentor Prof. Marco Vincenti. Final graduation mark: Full marks with great honour.

Oct 2004 - Oct 2007: **BSc Chemistry** (curriculum Analytical Chemistry). University of Messina. Italy. Title of the thesis: “*Determination of dust emitted by a cork factory*”. Mentor Prof. Agatino Casale. Final graduation mark: Full marks.

• PREVIOUS POSITIONS

01 Mar 2015 – 28 Feb 2021: **Post-Doctoral Researcher**. Unit of Forensic Medicine. University of Verona. Italy. Main activity: *Development and validation of original microfluidics analytical methods for forensic chemistry issues*.

01 Jun 2018 – 31 Dec 2020: **Senior Researcher**. Institute of Translational Medicine and Biotechnology”. Sechenov University (Moscow, Russia). Main activity: *Development and validation of original analytical methods using Liquid Chromatography and Mass Spectrometry for forensic toxicology issues*.

01 Jun 2011 – 17 Dec 2011: **Research fellowship**. Dept. of Public Health. University of Florence. Italy. Title of the project: *Analysis of urine samples according to ISO/IEC 17025 rules for the detection of cancerogenic compounds by using a HPLC-QQQ-MS*.

01 Gen 2011 – 31 May 2011: **Internship**. Theolab SpA (now Mérieux NutriSciences Group) Volpiano, Torino, Italy. Main activity: *Analysis of soil specimens according the US Environmental Protection Agency by using HPLC-QQQ-MS and HPLC-FL*.

• FELLOWSHIPS AND AWARDS

1. “**Travel Grant**” awarded by Royal Society of Chemistry (RSC) for attending the 72th Annual Scientific dell’ American Academy of Forensic Science (AAFS) held at Anaheim (CA, US) February 16-22, 2020. Contribution of the researcher: Oral communication entitled: “*Thanatochemistry at the crime scene: a microfluidic paper-based device for ammonium analysis in the vitreous humour*”.

2. “**FSF Henry C. Lee Scholarship**” awarded by the American Academy of Forensic Science (AAFS) for the “*Outstanding Presentation*” entitled: “*Thanatochemistry at the crime scene: a microfluidic paper-based device for ammonium analysis in the vitreous humour*” at the 72th Annual Scientific AAFS Meeting held at Anaheim (CA, US) February 16-22, 2020.

3. “**Prof. Marina Caligara and Dott. Fausto Gigli Award**” awarded by the Italian Group of Forensic Toxicologists (GTFI) for the oral communication entitled: “*Development of a point of care method for the determination of Carbohydrate-Deficient Transferrin (CDT)*” at the national meeting of the Youngs Section Italian Group of Forensic Toxicologists (GTFI) held at Torino (Italy) October 17-18, 2019.

4. “**Research Grant**” funded by the University of Verona (Verona, Italy) as part of the Cooperint Program. Grant assigned for supporting a research visit at the International Forensic Research Institute of the Florida International University (Miami, FL, US) in the frame of the project entitled: *Paper microfluidic systems for rapid and inexpensive presumptive detection of drugs and explosives (Principal Investigator: Prof Bruce McCord)*.

• SUPERVISING ACTIVITIES

Supervisor of a BSc Student of the University of Milano: BSc Environmental Toxicology. Thesis: Development and validation of a gas chromatography method for the quantification of ethanol in vitreous humor.

Supervisor of two MSc Students of the University of Verona: MSc Biotechnology. (1) Thesis: Characterization of the binding capacity of molecularly imprinted polymers for detecting cocaine. (2) Thesis: Development and validation of a cyclodextrin-based method for the chiral separation in capillary electrophoresis of methorphan enantiomers.

Supervisor of 3 PhD Students of the PhD Course in *Nano-sciences and advanced technologies of the University of Verona (Verona, Italy)*. (1) PhD Thesis: Electrophoretic methods in tubular micro compartments- Forensic applications of capillary electrophoresis (CE) and CE coupled to mass spectrometry (MS). Defense: May 2017; (2) PhD Thesis: *Development of spectrometric and spectrofotometric methods for forensic sciences*. Defense: May 2021; (3) PhD Thesis: *Microfluidics for Forensic Sciences: development and validation of innovative tools*. Defense: May 2022.

Supervisor of one Postdoctoral fellow at the *Unit of Forensic Medicine of University of Verona (Verona, Italy)*: Postdoc activity: *Determination of biomarker of chronic alcohol abuse: Development of analytical methods using the fluorescence resonance energy transfer (FRET) phenomenon*.

• PARTICIPATION RESEARCH PROJECTS

Collaboration as part of the FIRB 2012 project entitled “*Abuse of Smart Drugs: impacts on society, healthcare, law; damages in young athletes: epidemiology, pathology, biochemistry and toxicology*” funded by the Italian Minister of Research University and Instruction (FIRB2012 # RBFR12LD0W_003). Duration of the project: 48 months. (Principal Investigator unit: Prof. Federica Bortolotti). Role of the Post-doc researcher: ***Development of innovative Molecular Imprinted Polymers techniques for identifying ketamine in biological fluids***; March 01 2015 – February 28 2017

Collaboration as part of the entitled “*Mass spectrometry and related techniques for the analysis of biomarkers, pharmaceuticals and illicit drugs*” funded by Cariverona Foundation (Principal Investigator: Prof. Franco Tagliaro). Role of the Post-doc researcher: ***Development of new analytical methods based on Mass Spectrometry identifying illicit drugs in biological matrices***; March 01, 2018 – February 28, 2021

• TEACHING ACTIVITIES

PhD School in Nano-sciences and advanced technologies at University of Verona (Verona, Italy). Title of the course: ***Forensic Applications of Capillary Electrophoresis*** (2 ECTS credits). Professor in Charge: Franco Tagliaro.

Intensive School of Mass Spectrometry (2018) across the Mediterranean Sea. Title of the courses: ***Mass spectrometry applied to Forensic Sciences – Raman and Infrared spectroscopies applied to Forensic Sciences***. Organized by Italian Society of Mass Spectrometry (iMaSS) in collaboration with:

- Proteomic Centre, Université Aix Marseille, Marseille, France (Prof. Daniel Lafitte)
- Institute for Research in Biomedicine, Barcelona, Spain (Prof. Marta Vilaseca)
- Institute of Biochemistry and Proteins, CNR, Napoli, Italy (Dr. Gabriella Pocsfalvi)
- Department of Pathobiology and Medical Forensic Biotechnology (DiBiMEF) A.O.U.P. “P. Giaccone”, University of Palermo, Palermo, Italy (Prof. Francesca di Gaudio)

• ORGANISATION OF SCIENTIFIC MEETINGS

Chairman of the **International Symposium on Forensic Mass Spectrometry**. University of Verona, Verona, Italy. November 11th, 2016. Proceedings published as Review and Commentary: **Musile G** and Tagliaro F. *Forensic Mass Spectrometry*. *Forensic Science Review (R&C)* 2017; 29(1): 7 ([http://forensicsciencereview.com/Abstract/29\(1\)-\(R&C\)%20Full%20text.pdf](http://forensicsciencereview.com/Abstract/29(1)-(R&C)%20Full%20text.pdf))

• MEMBERSHIPS OF SCIENTIFIC SOCIETIES

- 2019 – present Associate Member of the **Royal Society of Chemistry (RSC)**.
- 2019 – present Associate Member of the **American Academy of Forensic Science (AAFS)**.
- 2018 – present Member of the **Italian Group of Forensic Toxicologists (GTFI)**.
- 2015 – present Member of the **Italian Society of Mass Spectrometry (IMASS)**.

• MAJOR COLLABORATIONS

- 2018 – present: Prof. **Svetlana Appolonova**. “Institute of Translational Medicine and Biotechnology”. Sechenov University (Moscow, Russia).;
- 2016 – present: Prof. **Bruce McCord**. “Department of Chemistry and Biochemistry”. Florida International University (Miami, FL, US).
- 2015 – 2018: Prof. **Alessandra Bossi**. “Department of Biotechnology”. University of Verona (Verona, IT).