

# Curriculum Vitae

**Dr. Amvrosios Orfanidis**

Assistant Professor  
of Forensic Medicine - Toxicology

*Ioannina, January 2025*

## 1. Education

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| <b>02/2019 – 09/2022</b>  | <b>Post Doctoral Researcher: Forensic Toxicology</b><br>School of Medicine, Aristotle University - Thessaloniki  |
| <b>Thesis:</b> “Analysis of drugs and pharmaceuticals in alternative biological matrices (brain, lung, kidney, spleen) and study of their stability in formalin-fixed tissues” [extension of the research carried out during the PhD thesis]. |  |
| <b>10/2014 - 06/2018</b>  | <b>Ph.D.: Forensic Toxicology</b><br>School of Medicine, Aristotle University - Thessaloniki<br>Grade: «Excellent»   |
| <b>Thesis:</b> “Psychotropic drugs and pharmaceutical analysis in alternative specimens and study of their stability in formalin-fixed tissues”.  |  |
| <b>09/2020 - 05/2022</b>  | <b>Master of Science: Clinical and Industrial Pharmacology – Clinical Toxicology (specialization Clinical Toxicology)</b><br>School of Medicine, Aristotle University - Thessaloniki<br>Grade: 9.66/ 10.00 «Excellent» |
| <b>Thesis:</b> “Determination of lidocaine in postmortem whole blood samples after unsuccessful cardiopulmonary resuscitation”.   |  |
| <b>11/2011 - 06/2013</b>  | <b>Master of Science: Chemical Analysis &amp; Quality Control</b><br>Department of Chemistry, National & Kapodistrian - Athens, Greece<br>Grade: 9.07/10.00 «Excellent»  |
| <b>Thesis:</b> "Development of a fast GC/MS method for the detection of 41 pharmaceuticals and illicit drugs in blood following alkaline extraction".   |  |
| <b>09/2004 – 07/2011</b>  | <b>Bachelor of Science: Chemistry</b><br>Department of Chemistry, Aristotle University - Thessaloniki, Greece<br>Grade: 6.51/10.00   |
| <b>Thesis:</b> “GC-MS analysis of hair for the detection of amphetamines and cocaine and their metabolites. A new modified methodology”.  |  |

## 2. Trainings – Seminars

- 11/2018, Mass Spectrometry Day (LC-MS/MS, LC triple TOF).
- 04/2016, Requirements analysis of the standard ISO/IEC 17025:2005.
- 12/2015, Visiting Researcher at the facilities of Waters Corporation (Wilmslow, UK).
- 06/2014, Leading the Way in GC-MS, GC-QQQ and GC-QTOF.
- 10/2012, Training of Agilent GC 7890A/MSD 5975C & Software MSD Chemstation.

### 3. Skills

- Validation of analytical methods and document/procedure management according to ISO 17025:2017.
- Technical support and maintenance of liquid and gas chromatography instruments coupled with mass spectrometry.
- **Languages:** English (Certificate of Proficiency in English).
- **PC:** ECDL diploma, databases (HMDB, ChemSpider, ChemAxon), analytical software (Agilent ChemStation & MassHunter, Waters MassLynx & TargetLynx, Sciex Analyst & OS), Mass Spectroscopy Data Analysis Software (AMDIS, DRS), other supplementary GC-MS software (RTLlocking Software), creation of mass spec NIST libraries.

### 4. Professional – Research Experience

- **08/2023 - today:** Assistant Professor of Forensic Medicine – Toxicology at the Faculty of Medicine, University of Ioannina, Greece.
- **2018 - 2019:** Participation in a funded scientific program. Research entitled “Study of alcohol toxicity at chronic and acute alcohol consumption, discovery and evaluation of biomarkers by applying metabolomic-based methods”.
- **2016 - present:** Teaching professor in the master’s program: "Clinical and Industrial Pharmacology – Clinical Toxicology", Medical School, Aristotle University of Thessaloniki (AUTH).
- **2012 – 07/2023:** Chemist – Forensic Toxicologist – Quality Control Manager (ISO 17025) of the Laboratory of Forensic Toxicology/ Forensic Service of Thessaloniki – Ministry of Justice.

### 5. Teaching Experience

- **02/2024 - present:** elective course "Selected Topics in Toxicology" at the Medical School of the University of Ioannina.
- **01/2024 – present:** postgraduate program entitled “Inorganic Biological Chemistry” (supervised by the Department of Chemistry, University of Ioannina).
- **09/2023 – present:** course "Forensic Medicine & Toxicology" at the Medical School, University of Ioannina.
- **2016 – present:** courses and laboratory exercises at the postgraduate program: "Clinical and Industrial Pharmacology – Clinical Toxicology", Medical School, Aristotle University of Thessaloniki.
- **2011-2012:** laboratory exercises in the terms of the courses "Instrumental Chemical Analysis" and "Separation Methods in Chemical Analysis" at the Analytical Chemistry Laboratory, Department of Chemistry, Aristotle University of Thessaloniki.

### 6. Clinical - Laboratory Experience

- **08/2023 - present** (Toxicology Unit, Medical School, University of Ioannina): toxicological analyses upon request of the authorities (judicial - police) and the doctors of

the clinics and outpatient departments of the University Hospital of Ioannina and the General Hospital of Ioannina "G. Chatzikosta".

- **2012 – 08/2023** (Forensic Service of Thessaloniki): toxicological examinations on post-mortem samples, upon request from the police departments of Western Thessaloniki, Pieria, Imathia, Kozani, Kilkis, Serres, Florina, Thessaly, the Sporades, and occasionally Piraeus, the Cyclades, and Crete.
- **2008 - 2023** (Laboratory of Forensic Medicine and Toxicology, Medical School, Aristotle University of Thessaloniki): as part of scientific collaboration, toxicological examinations were conducted on autopsy and clinical samples from cases in Intensive Care Units, Pediatric Clinics, Psychiatric Clinics, Pathological Clinics, and other Clinics of General Hospitals in Thessaloniki and generally in the Central Macedonia Region.

## 7. Research Experience

- Development and validation of bioanalytical methods focused on the toxicological investigation of forensic and clinical cases.
- Toxicological analysis of unconventional biological matrices for the detection of psychotropic substances and drugs, such as hair, bones/ bone marrow, tissues (liver, brain, spleen, lung, kidney, etc.), fresh and embalmed in formalin solution.
- Development of new extraction methods for biological samples.
- Metabolomic analysis

## 8. Collaborations

- Collaborator in the laboratory of the Clinical Research Unit of the Medical School of Aristotle University of Thessaloniki, which is part of the Biomedical Research and Education Special Unit for (B.R.E.S.U.) and is based at Papageorgiou Hospital in Thessaloniki, 2022-present.
- [Customer Communication within the framework of collaboration with Waters Corporation, 2020.](#)
- Department of Pharmaceutical Technology, Faculty of Pharmacy, Aristotle University of Thessaloniki, methods development and sample analysis for the scientific research entitled "Permeability studies: mechanistic studies." 2019-2020.
- Pharmacokinetic study of fentanyl in patients who underwent thoracic or cardiac surgery at the A.H.E.P.A. University Hospital of Thessaloniki, 2017-2018.
- Principal investigator in a collaborative study between Aristotle University of Thessaloniki and Waters Corporation, 2016.

## 9. Awards – Scholarships

- **Travel Grant** for participation in the annual international conference of Toxicology (TIAFT annual meeting), 2022, Versailles, France.
- **Research grant titled** "Study of alcohol toxicity at chronic and acute alcohol

consumption, discovery and evaluation of biomarkers by applying metabolomic-based methods” (2018-2019).

- **Best Poster Presentation Award**, 14th Panhellenic Congress of Clinical Chemistry, Panhellenic Congress (2016), Ioannina (Greece).
- **Best Poster Award** for Young Scientist, Mediterranean Mass Spectrometry Workshop - MEDMS III, Mediterranean Conference (2015), Athens (Greece).

## 10. Published Research

- **Doctoral Dissertation:** “Analysis of psychotropic substances and drugs in unconventional biological materials and study of their stability in preserved tissues”.
- **Publications** (23 in total):
  1. A broad-spectrum LC-MS/MS method for screening and quantification of 100 analytes in clinical and autopsy blood samples. Dimitra Florou, Mathew Di Rago, **Amvrosios Orfanidis**, Dimitri Gerostamoulos, Vassiliki A. Boumba, *Journal of Chromatography B*, 2024.
  2. GC-MS determination of nicotine and cotinine in urine. A study of the effect of passive smoking. Adamantios Krokos, **Amvrosios Orfanidis**, Orthodoxia Mastrogianni, Foteini Mitsa, Maria Avgeri, Maria Eboriadou, Georgios Theodoridis, Nikolaos Raikos, *Rapid Communications in Mass Spectrometry*, 2024.
  3. Injection of fentanyl patches – a deadly route. Maria Tereza Siavou, Aliko Fiska, Maria Valeria Karakasi, Orthodoxia Mastrogianni, **Amvrosios Orfanidis**, Nikolaos Raikos, Pavlos Pavlidis, *Topics in Biomedical Research and Education*, 2023.
  4. Development and validation of a single step GC/MS method for the determination of 41 drugs and drugs of abuse in postmortem blood. **Amvrosios Orfanidis**, Adamantios Krokos, Orthodoxia Mastrogianni, Nikolaos Raikos, Anastasia Alexandridou, Thomai Mouskeftara, Helen Gika, Georgios Theodoridis, *Forensic Sciences*, 2022.
  5. Analysis, stability and distribution of pharmaceuticals and drugs of abuse over a period of one year in formalin-fixed liver and formalin solutions. **Amvrosios Orfanidis**, Helen Gika, Georgios Theodoridis, Anastasia Chrysovalantou Chatziioannou and Nikolaos Raikos, *Journal of Analytical Toxicology*, 2022.
  6. Development and validation of an UPLC/MS/MS method for the determination of 25 psychoactive drugs in cerumen and its application to real postmortem samples. Orthodoxia Mastrogianni, **Amvrosios Orfanidis**, Evdokia Brousa, Dimitrios-Phaedon Kevrekidis, Heleni Zagelidou, Nikolaos Raikos, *Journal of Forensic Toxicology*, 2022.
  7. Determination of fentanyl and norfentanyl in cerumen in the setting of post-mortem investigation – a case study, Orthodoxia Mastrogianni, Dimitrios-Phaedon Kevrekidis, Evdokia Brousa, **Amvrosios Orfanidis**, Heleni Zagelidou, Nikolaos Raikos, *Journal of Forensic Sciences*, 2022.
  8. Detection and determination of C12, C14, C16-alkyldimethylamines in human blood by GC-MS, Evdokia Brousa, Orthodoxia Mastrogianni, **Amvrosios Orfanidis**, Eleni Zaggelidou, Nikolaos Raikos, Helen G Gika, *Rapid Communications in Mass Spectrometry*, 2022.

9. Determination of Lidocaine in Postmortem Whole Blood Samples after Unsuccessful Cardiopulmonary Resuscitation, **Amvrosios Orfanidis**, Nikolaos Raikos, Evdokia Brousa, Eleni Zangelidou, Orthodoxia Mastrogianni, Separations, 2021.
10. A metabolic phenotyping study in mice following acute and chronic exposures to ethanol, Olga Deda, Christina Virgiliou, Emily G Armitage, **Amvrosios Orfanidis**, Ioannis Taitzoglou, Ian D Wilson, Neil Loftus, Helen G Gika, Journal of Proteome Research, 2020.
11. Risk factors for fatal drowning in a Greek region: a retrospective case–control study, Dimitrios Phaedon Kevrekidis, Evdokia Brousa, Orthodoxia Mastrogianni, **Amvrosios Orfanidis**, Helen G Gika, Nikolaos Raikos, Injury Prevention, 2020.
12. Drug driving in northern Greece among drivers involved in road traffic accidents, Anastasia Tsocha, Adamantios Krokos, Helen Gika, Thomai Mouskeftara, Anastasia Alexandridou, **Amvrosios Orfanidis**, Orthodoxia Mastrogianni, Nikolaos Raikos, Romanian Journal of Legal Medicine, 2020.
13. Development of a UHPLC-MS/MS method for the determination of 84 pharmaceuticals and drugs of abuse in human liver, **Amvrosios Orfanidis**, Helen Gika, Georgios Theodoridis, Orthodoxia Mastrogianni, Nikolaos Raikos, Journal of Chromatography B, 2020.
14. A UHPLC–MS-MS Method for the Determination of 84 Drugs of Abuse and Pharmaceuticals in Blood, **Amvrosios Orfanidis**, Helen G Gika, Georgios Theodoridis, Orthodoxia Mastrogianni, Nikolaos Raikos, Journal of Analytical Toxicology, 2020.
15. A Simple Method for the Determination of Lacosamide in Blood by GC-MS, Thomai Mouskeftara, Anastasia Alexandridou, Adamantios Krokos, Helen Gika, Orthodoxia Mastrogianni, **Amvrosios Orfanidis**, Nikolaos Raikos, Journal of forensic sciences, 2019.
16. Study of Fecal and Urinary Metabolite Perturbations Induced by Chronic Ethanol Treatment in Mice by UHPLC-MS/MS Targeted Profiling, Olga Deda, Christina Virgiliou, **Amvrosios Orfanidis**, Helen Gika, Metabolites, 2019.
17. Alprazolam and zolpidem in skeletal tissue of decomposed body confirms exposure, **Amvrosios Orfanidis**, Helen Gika, Eleni Zaggelidou, Orthodoxia Mastrogianni, Nikolaos Raikos, Journal of forensic sciences, 2019.
18. Determination of drugs of abuse and pharmaceuticals in skeletal tissue by UHPLC-MS/MS, **Amvrosios Orfanidis**, Helen Gika, Orthodoxia Mastrogianni, Adamantios Krokos, Georgios Theodoridis, Eleni Zaggelidou, Nikolaos Raikos, Forensic Science International, 2018.
19. Fatal intoxication with antidepressants: a case with many culprits, Antonis Goulas, Nikolaos Raikos, Diamantis Krokos, Orthodoxia Mastrogianni, **Amvrosios Orphanidis**, Konstantinos Zisopoulos, Androniki Tsepa, Forensic Science Medicine and Pathology, 2018.
20. Fatal Ethylene Glycol Intoxication, **Amvrosios Orfanidis**, Eleni Zaggelidou, Nikolaos Raikos, Panagiotis Mylonakis, Orthodoxia Mastrogianni, Journal of Forensic Sciences & Criminal Investigation (JFSCI), 2017.
21. A GC–MS method for the detection and quantitation of ten major drugs of abuse in human hair samples, **Amvrosios Orfanidis**, Orthodoxia Mastrogianni, Alexia Koukou, Georgios Psarros, Helen Gika, Georgios Theodoridis, Nikolaos Raikos, Journal of Chromatography B, 2017.
22. Cannabis use and cardiovascular complications: are we aware enough? Angeliki Kyriazou, Fotios Chatzinikolaou, Dimitrios Koutsoukis, Antonios Goulas, **Amvrosios Orfanidis**, Nikolaos Raikos, Aristotle University Medical Journal, 2014.

23. Association of the CYP2B6 c.516G>T polymorphism with high blood propofol concentrations in women from northern Greece, Orthodoxyia Mastrogianni, Emma Gbandi, **Amvrosios Orphanidis**, Nikolaos Raikos, Evangelia Goutziomitrou, Efstratios Kolibianakis, Basil Tarlatzis, Antonis Goulas, Drug Metabolism and Pharmacokinetics, 2013.

#### **11. References to high impact foreign-language Toxicology books**

A Goulas, N Raikos, D Krokos, O Mastrogianni, **A Orphanidis**. Fatal intoxication with antidepressants: a case with many culprits, Forensic Science, Medicine and Pathology 14 (2), 225-228, 2018 reference at the **Disposition of Toxic Drugs and Chemicals in Man, R.C. Baselt**.

#### **12. Committees/ Scientific Societies**

- Alternate Member of the Drug Committee of the Ministry of Health (05/2024 – present).
- Member of «TIAFT» (The International Association of Forensic Toxicologists).
- Reviewer at scientific journals (indicatively: Journal of Chromatography B, Healthcare, International Journal of Molecular Sciences, Toxics, Molecules).
- Member of «Hellenic Mass Spectrometry Society».
- Member of «The Chromatographic Society».

#### **13. Conferences**

- Oral presentations at International/National Conferences (>9, 4 as an invited speaker, 1 travel grant)
- Participation in International Conferences (>17) & National Conferences (>14)
- Announcements at International Conferences (>34) & at National Conferences (>10)