

Nationality: Italian 1998 **Gender:** Female

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CORE COMPETENCIES

Research Support & Coordination: experience assisting in the supervision of students, contributing to laboratory organization, and managing day-to-day experimental activities.

Project Planning: ability to structure research tasks, organize timelines, and carry out activities efficiently while meeting expected deadlines.

Scientific Communication: confident in presenting research findings at conferences and in preparing written scientific materials.

Analytical Thinking: strong ability to interpret experimental data and evaluate methodologies with a critical, evidence-based approach.

Adaptability & Reliability: able to maintain accuracy and steady workflow in dynamic or demanding research environments.

Team Collaboration: proven track record of working effectively within multidisciplinary academic and research teams.

EDUCATION AND TRAINING

PhD in Environmental Life Sciences

Department of Life Sciences, University of Trieste (Italy) [11/2023 – Current]

Address: Piazzale Europa 1, 34127 Trieste (Italy) | **Website:** [PhD - ENVIRONMENTAL LIFE SCIENCES | UniTS](#) |

Field of study: Toxicology [BIO-14]

PhD project: Optimization and characterization of a biological functional assay for the detection of TTXs in mollusks, with the goal to provide a specific diagnostic tool for the detection of TTXs in seafood along the Italian coasts. The method is based on the toxins' mechanism of action (i.e. block of the voltage-gated Na⁺ channel) on human neuronal cells. Once optimized for a rapid and sensitive TTX detection, the assay will be characterized in terms of limit of detection (LOD), limit of quantitation (LOQ), working range, accuracy, precision, repeatability, cross-reactivity and matrix effect.

Master's degree in pharmacy

University of Trieste (Italy) [08/2017 – 03/2023]

Address: Piazzale Europa 1, 34127 Trieste (Italy)

Final grade: 107/110 | **Thesis:** Cutaneous *In Vitro* Effects of the Algal Toxin Ovatoxin-A on Human Keratinocytes |

Supervisor: Prof. Aurelia Tubaro

Effects of the Algal Toxin Ovatoxin-A on Human Keratinocytes

Evaluation of in vitro cutaneous toxicity on HaCaT keratinocytes by the algal toxin ovatoxin-A, a congener of palitoxin. Toxicity was assessed through assays considering different cellular parameters: cell viability (MTT assay), cytotoxicity (LDH assay), ROS production (NBT assay), and mitochondrial membrane potential dissipation (JC-1 assay). The test results were compared with those obtained for palitoxin.

High School Diploma

Liceo Classico "XXV Aprile" [08/2012 – 06/2017]

WORK EXPERIENCE

Warehouse worker

Pharmacy Dott.ssa Como Caterina [05/2023 – 10/2023]

Address: Via Vittorio Emanuele 32, 30025 Teglio Veneto (VE) (Italy)

Activities:

- Inventory management
- Expiry date monitoring
- Organization and restocking of pharmacy drawers and shelves
- Receiving and processing orders

Community Pharmacy internship

Farmacia Alla Minerva [07/2022 – 09/2022]

Address: Piazza Giotti Virgilio, 1, 34133 Trieste (Italy)

Activities:

- Organization of the pharmacy, warehouse, and laboratory
- Preparation of compounded medications in the pharmacy
- Use of pharmacy management software systems
- Procedures for the purchase, storage, and dispensing of medicines, with particular attention to narcotics
- Over-the-counter (OTC) drugs, herbal medicines, cosmetics, dietary supplements, and homeopathic products
- Storage methods for medicines and management of expired drugs
- The pharmacy as a service center (customer interaction and patient education on proper medication use, blood tests for glucose and lipid levels, resting ECG, and blood pressure monitoring)
- Entrepreneurial management of the pharmacy

Hospital Pharmacy internship

IRCSS materno infantile Burlo Garofolo [02/2022 – 06/2022]

Address: Via dell'Istria 65/1, 34144 Trieste (Italy)

Activities:

- Preparation of pediatric compounded medications
- Dispensing of drugs to hospital wards
- Pharmacovigilance
- Management of requests for off-label drug use

PUBLICATIONS

- (1) Cavion, F.; Sosa, S.; Kilcoyne, J.; **D'Arelli, A.**; Ponti, C.; Carlin, M.; Tubaro, A.; Pelin, M. Effects of Dinoflagellate Toxins Okadaic Acid and Dinophysistoxin-1 and -2 on the Microcrustacean *Artemia franciscana*. *Toxins* 2025, 17, 80. <https://doi.org/10.3390/toxins17020080>
- (2) **D'Arelli, A.**, Carlin, M., Sosa, S. *et al.* Cutaneous effects of ovatoxin-a: an in vitro study on human skin keratinocytes. *Arch Toxicol* (2025). <https://doi.org/10.1007/s00204-025-04229-3>

SCIENTIFIC CONTRIBUTIONS AT NATIONAL AND INTERNATIONAL CONGRESSES

Ottimizzazione del saggio Neuro-2a per il rilevamento della tossina marina tetrodotossina

Poster presented at the National Congress of the Young Italian Society of Pharmacology (SIF) 2025 (Bologna, Italy; 2025).

Authors: **Alessandra D'Arelli**, Marco Pelin, Silvio Sosa, Aurelia Tubaro

Optimization of the Neuro-2a assay for the detection of the marine toxin tetrodotoxin

Flash oral communication presented at the National Congress SETAC ITALIAN LANGUAGE BRANCH 4th Workshop (Napoli, Italy; 2025).

Authors: **Alessandra D'Arelli**, Marco Pelin, Silvio Sosa, Aurelia Tubaro

Pro-inflammatory potential of the algal toxin ovatoxin-a at the skin level

Co-author of poster presented at the International Congress EUROTOX 2025 (Atene, Greece; 2025).

Authors: Michela Carlin, **Alessandra D'Arelli**, Sosa Silvio, Michela Varra, Luciana Tartaglione, Valentina Miele, Valeria Tegola, Chiara Melchiorre, Carmela Dell'Aversano, Aurelia Tubaro, Marco Pelin

Optimization of the Neuro-2a assay for the detection of the marine toxin tetrodotoxin

Poster presented at the International Congress EUROTOX 2025 (Atene, Greece; 2025).

Authors: **Alessandra D'Arelli**, Marco Pelin, Silvio Sosa, Aurelia Tubaro

Ottimizzazione del saggio Neuro-2a per il rilevamento della tossina marina tetrodotossina

Poster and flash oral communication presented at the National Congress of the Italian Society of Toxicology (SITOX) 2025 (Bologna, Italy; 2025).

Authors: **Alessandra D'Arelli**, Marco Pelin, Silvio Sosa, Aurelia Tubaro

Characterization of the toxic effects by the marine toxin ovatoxin-a on human skin keratinocytes

Co-author of poster presented at the International Congress EUROTOX 2024 (Copenhagen; Denmark; 2024).

Authors: Carlin M., **D'Arelli A.**, Sosa S., Varra M., Tartaglione L., Miele V., Tegola V., Melchiorre C., Dell'Aversano C., Tubaro A., Pelin M.

Safety Assessment of Hexagonal Boron Nitride at the skin level: an in vitro study on 3D reconstructed human epidermis and HaCaT keratinocytes

Co-author of poster presented at International Congress SETAC 2024 (Siviglia, Spagna)

Authors: Michela Carlin, **Alessandra D'Arelli**, Ester Vázquez Fernandez-Pacheco, Sosa Silvio, Maurizio Prato, Aurelia Tubaro, Marco Pelin

TEACHING ACTIVITIES

[19/11/2024]

Seminar (2 h) entitled "Pesticides" for the course of Toxicology and Pharmacovigilance for the Master Degrees of Pharmacy and Pharmaceutical Chemistry & Technology of the University of Trieste.

[2024 – 2025]

Co-supervisor of 3 Master's Degree's students in Pharmacy.

[21-28/05/2025]

Teaching Tutor, Laboratory of Pharmacognosy, Pharmacy.

Tutoring for second-year students: in-class support, technical and didactic assistance, collaboration in assessment activities

[12/09/2025-02/12/2025]

Teaching Tutor, Laboratory of Microbiology, Biological Science and Technology.

Tutoring for second-year students: in-class support, technical and didactic assistance, collaboration in assessment activities.

[20/09/2025-08/12/2025]

Teaching and Mentoring Tutor – ICL (Contamination Lab), Innovators Community Lab.

Provided continuous academic and mentoring support to students enrolled in the ICL course, offering supervised and

personalized guidance throughout their learning and project development processes. Supported students by delivering technical and didactic assistance, facilitating knowledge transfer, and mentoring them in the development of their projects.

[12/11/2025]

Seminar (2 h) entitled "Pesticides" for the course of Toxicology and Pharmacovigilance for the Master Degrees of Pharmacy and Pharmaceutical Chemistry & Technology of the University of Trieste.

DIGITAL SKILLS

Microsoft Office (Outlook, Word, Excel, PowerPoint, Access) / Video Conferencing (MS Teams, Zoom, Skype, Google Meet) / Statistical Analysis Software (GraphPad Prism and R) / Images Processing and Analysis (ImageJ Fiji)

SCIENTIFIC SOCIETIES

[2023 – Current]

Member of the Italian Society of Pharmacology (SIF) <https://www.sifweb.org/>

[2023 – Current]

Member of the Italian Society of Toxicology (SITOX) <https://www.sitox.org/>

[2025 – Current]

Member (and **Secretary**) of the Board of the Junior Italian Society of Toxicology (SITOX Junior)

SCIENTIFIC AWARDS

[15/10/2025]

Best Flash Oral Communication at the National Congress SETAC ITALIAN LANGUAGE BRANCH 4th Workshop (Napoli, Italy; 2025).

[14/02/2025]

Best Poster Award at the National Congress of the Italian Society of Toxicology (SITOX) 2025 (Bologna, Italy; 2025).

LANGUAGE SKILLS

Mother tongue(s): **Italian**

Other language(s): **English**

LISTENING B2 READING B2 WRITING B2 SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user

I authorize the processing of personal data contained in my curriculum vitae in accordance with Article 13 of Legislative Decree 196/2003 and Article 13 of GDPR 679/16.

Trieste, 07/04/2026