

Curriculum Vitae

FULL NAME AND DATE:

Surname, given name: Zellino, Carolina
Gender: Female
Date of writing this CV: 10/2022

EDUCATION AND DEGREES AWARDED:

DEGREE TITLE REQUIRED TO APPLY TO THE PH.D. ADMISSION EXAM:

- **2018-2020: Master's degree / Second cycle degree in ENVIRONMENTAL SCIENCES** (LM-75 - Environmental and Land Sciences)

Department of Science and High Technology (DiSAT), University of Insubria, Via Valleggio 11 - 22100 Como (CO).

The master's degree in Environmental Sciences is based on a multidisciplinary learning activity which is focused on protection, administration, and preservation of the environment in each of its elements and branches, starting from the evaluation of natural and man-made risks on a local and global scale.

Details of the programme at the following link: www.uninsubria.it/ugov/degree/6326#collapse1-4

Date of graduation: 20 October 2020

Final vote: 110/110 and honors

Title of thesis: Approccio probabilistico alla valutazione del rischio dei nanomateriali: caso di studio per l'esposizione professionale ai nanotubi di carbonio. (Probabilistic approach to risk assessment of nanomaterials: case study for occupational exposure to carbon nanotubes.)

Supervisor: Dott. Andrea Spinazzè

OTHER TITLE:

- **2013-2017: Bachelor's degree in "CHEMICAL SAFETY AND TOXICOLOGICAL ENVIRONMENTAL SCIENCES"** (L-29 – Pharmacy)

Department of Pharmaceutical Sciences (SF), University of Milan, Via Festa del Perdono, 7 - 20122 Milan (MI).

The main objectives of the course in Chemical-Toxicological Sciences and Environmental Safety (SSCTA) are: to learn traditional and new analytical approaches in the areas of chemistry, biology, microbiology and toxicology. Methods are developed, according to certified procedures or new protocols, to measure pollutants in the environment (water, air, soil) and contaminants in food. These activities provide appropriate and innovative tools for prevention and education authorities.

Details of the programme at the following link: https://www.unimi.it/it/corsi/altre_offerte/aa-2016/2017/scienze-e-sicurezza-chimico-tossicologiche-dellambiente-classe-l-29-immatricolati-dallaa-2009/2010

Date of graduation Date: 21 March 2017

Final vote: 110/110

Title of thesis: Valutazione dello stato ecologico di due laghi piemontesi, Lago di Candia e Lago di Mergozzo, secondo la direttiva quadro sulle acque 2000/60/CE. (Assessment of the ecological status of two Piedmont

lakes, Lake Candia and Lake Mergozzo, according to the Water Framework Directive 2000/60/EC.)

Supervisor: Prof.ssa Patrizia Restani

Co-Supervisor: Dott. Pietro Volta (Resercher at ISE Istituto per lo Studio degli Ecosistemi, Largo Tonolli, 50 - 28922 Verbania Pallanza (VCO))

OTHER EDUCATION AND TRAINING, QUALIFICATIONS AND SKILLS:

- **Scholarship:** *"Development of an epidemiological surveillance network of Nasal and Paranasal Sinuses tumours through the strengthening of the ReNaTuNS national registry for the prevention of the disease".*
 - o Period: January-June 2022
 - o Hosting Institution: Fondazione IRCCS "Ca' Granda Ospedale Maggiore Policlinico" Milan- Italy; Malignant Mesotheliomas and Nasal and Paranasal Sinuses Registry of Lombardy (U.O. Epidemiology) Via S. Barnaba 8, 20122 Milano.
 - o Objectives and activities: Support of Expert Scientist in carrying out their activities at the Regional Registries of Malignant Mesotheliomas (MM) and Tumours of the Nasal and Paranasal Sinuses (TUNS) of Lombardy: collaboration in the preparation of the dossier that collects the health documentation and information on exposure to carcinogens in the occupational and extra-occupational contexts of each individual case of cancer (MM and TUNS); interaction with doctors and technical staff of the ATS (Prevention and Safety Services in the workplace) that collaborate with the registers to complete the collection of clinical and/or exposure information of the patients; administration of standardised questionnaires regarding the occupational and extra-occupational history to subjects affected by malignant mesothelioma or to family members; participation in plenary case assessment meetings with occupational physicians to assess exposure to carcinogens in the occupational and environmental spheres (risk assessment, risk evaluation); updating (data entry) of the computerised archive of malignant mesothelioma cases (ReNaM) and of cases of nasal and paranasal sinus cancer (ReNaTuns) using the criteria contained in the National Registers' Guidelines.

- **Scholarship:** *"One-year scholarship as part of the three-year training programme titled "Research on biomarkers associated with asbestos exposure and clinical features in malignant mesothelioma".*
 - o Period: January-December 2021
 - o Hosting Institution: Fondazione IRCCS Istituto Nazionale dei Tumori, via Giacomo Venezian, 1 20133 Milano; Activity carried out in collaboration with Fondazione IRCCS "Ca' Granda Ospedale Maggiore Policlinico" Milano, Registry of Malignant Mesotheliomas and Nasal and Paranasal Sinuses of Lombardy (U.O. Epidemiology) - Via S. Barnaba 8, 20122 Milano.
 - o Objectives and activities: Activity at the Regional Registries of Malignant Mesotheliomas (MM) and Tumours of the Nasal and Paranasal Sinuses (TUNS) of Lombardy: collaboration in the preparation of the dossier that collects the health documentation and information on exposure to carcinogens in the occupational and extra-occupational contexts of each individual case of cancer (MM and TUNS); interaction with doctors and technical staff of the ATS (Prevention and Safety Services in the workplace) that collaborate with the registers to complete the collection of clinical and/or exposure information of the patients; administration of standardised questionnaires regarding the occupational and extra-occupational history to subjects affected by malignant mesothelioma or to family members; participation in plenary case assessment meetings with occupational physicians to assess exposure to carcinogens in the occupational and environmental spheres (risk assessment, risk evaluation); updating (data entry) of the computerised archive of malignant mesothelioma cases (ReNaM) and of cases of nasal and paranasal sinus cancer (ReNaTuns)

using the criteria contained in the National Registers' Guidelines.

- **Work contract for occasional self-employed work.**

- Period: October 2017-March 2018:
- Hosting Institution: Istituto per lo Studio degli Ecosistemi ISE, Largo Tonolli 50 - 28922 Verbania Pallanza (VCO)
- Objectives and activities: Participation in ongoing projects: IDROLIFE15NAT/IT/000823 and IttiOrta. The IDROLIFE15NAT/IT/000823 project aims to improve the conservation status of the local populations of autochthonous aquatic species in Natura 2000 sites of Verbano Cusio Ossola Province, contributing to halt the loss of aquatic biodiversity. The Project interests the water corridors of Toce river and San Bernardino stream and Mergozzo lake, acting concretely with both structural interventions and faunal actions. In particular, my activities concerne reproduction and repopulation of target species (e.g., Salmo trutta marmoratus and Cottus gobio), control of invasive exotic species (e.g., Silurus glanis, Ameiurus melas, Gymnocephalus cernuus, Lepomis gibbosus, Carassius carassius). The work involved hatchery activities and restocking in the field. IttiOrta project: an applied ecology project that aims to restore Lake Orta to good ecological status in accordance with the latest environmental regulations (DM 260/2010). Reintroduction of pelagic fish fauna (Coregonus lavaretus and Alosa agone) that disappeared in 1926 due to heavy industrial chemical pollution. The work involved hatchery activities and repopulation in the field.

LINGUISTIC SKILLS:

MOTHER TONGUE: Italian

OTHER LANGUAGES: English (B2)

CURRENT POSITION:

PhD Student in Chemical and Environmental Science; University of Insubria, Via Valleggio 11 - 22100 Como (CO).

SCIENTIFIC PUBLICATIONS AND PARTICIPATION TO SCIENTIFIC MEETINGS:

PUBLICATIONS:

- 1) Spinazzè A, Consonni D, Borghi F, Rovelli S, Cattaneo A, **Zellino C**, Dallari B, Pesatori A.C, Kromhout H, Peters S, Riboldi L, Cavallo D.M, Mensi C. Asbestos Exposure in Patients with Malignant Pleural Mesothelioma included in the PRIMATE Study, Lombardy, Italy. Int. J. Environ. Res. Public Health 2022, 19, 3390.
- 2) Spinazzè A, Consonni D, Borghi F, Mazzucchelli LA, Rovelli S, Cattaneo A, **Zellino C**, Dallari B, Pesatori AC, Kromhout H, Peters S, Riboldi L, Mensi C, Cavallo DM, Development of a Crosswalk to Translate Italian Occupation Codes to ISCO-68 Codes, Annals of Work Exposures and Health, 2022.
- 3) Binazzi B, Mensi C, Miligi L, Di Marzio D, Zajacova J, Galli P, Camagni A, Calisti R, Balestri A, Murano S, Piro S, D'Errico A, Bonzini M, Massacesi S, Sorasio D, Marinaccio A, **ReNaTuNS Working group**. Exposures to IARC carcinogenic agents in working settings nottraditionally associated with sinonasal cancer risk: the experience of the Italian National Sinonasal Cancer Registry. Submittedat Int. J. Environ. Res. Public Health 2021, 18.
- 4) Mensi C, **Zellino C**, Polonioli M, Dallari B, Pesatori A.C, Riboldi L, Consonni D. Pleural mesothelioma in a circus worker. J Occup Health. 2021; 63: e1 2250.
- 5) Spinazzè A, **Zellino C**, Borghi F, Campagnolo F, Rovelli S, Keller M, Fanti G, Cattaneo A, Cavallo DM. Carbon Nanotubes: Probabilistic Approach for Occupational Risk Assessment. Nanomaterials 2021, 11(2), 409.

- 6) Foglini C, Sala P, **Zellino C**, Volta P. Autoecology of the bullhead *Cottus gobio* in the Province of Verbano Cusio Ossola. Progetto LIFE15 NAT/IT/000823: action A2, Collection of abiotic, hydromorphological and biological information necessary to plan concrete actions. 2018.

ABSTRACTS AT NATIONAL AND INTERNATIONAL CONGRESSES:

- 1) D'Avenil A., Stella S, Dallari B, Barile R., Rugarli S, **Zellino C**, Cerchiaro E, Riboldi L, Verusio C, Consonni D, Ceresoli G.L, Mensi C. Second primary cancers in a population-based mesothelioma registry. World Conference on Lung Cancer IASLC. Vienna 6-9 Agosto 2022.
- 2) Binazzi A , Di Marzio D , Mensi C , Miligi L , Zajacovà J , Galli P , Calisti R , Romeo E , Murano S , Eccher S, Zorzi M , Madeo G , Tallarigo F , Marinaccio A e **ReNaTuNS Working group**. Gender Differences in Sinonasal Cancer in Italy: data from the Italian National Sinonasal Cancer Registry. 10° Congresso Società Internazionale di Medicina generale. Padova 16-17 Settembre 2022.
- 3) Mensi C , Stella S , Dallari B , Rugarli S, **Zellino C** , Pesatori A.C, Riboldi L, Consonni D. I tumori naso-sinusali in Lombardia: incidenza sopravvivenza ed eziologia. 84° Congresso Nazionale di Medicina del Lavoro SIML. Genova 28-30 Settembre 2022.
- 4) Consonni D, Dallari B, Rugarli S, Stella S, **Zellino C**, D'Angelo N, Pesatori A.C, Riboldi L, Mensi C. Incidenza del mesotelioma maligno in Lombardia: accuratezza dei modelli previsionali. 84° Congresso Nazionale di Medicina del Lavoro SIML.Genova 28-30 Settembre 2022.
- 5) Mensi C, Stella S, Dallari B, Rugarli S, **Zellino C** , Pesatori A.C, Riboldi L, Consonni D. Sopravvivenza dei soggetti con mesotelioma in Lombardia, 2000-2021. 46°convegno dell'Associazione italiana di epidemiologia AIE; 29 Giugno-1 Luglio 2022.
- 6) Consonni D, Stella S, Dallari B, Rugarli S, **Zellino C**, D'Angelo N, Pesatori A.C, Riboldi L, Mensi C. Incidenza del mesotelioma maligno in Lombardia: confronto tra previsioni e dati osservati, 2013-2018. 46°convegno dell'Associazione italiana di epidemiologia AIE; 29 Giugno-1 Luglio 2022.
- 7) Mensi C ,Dallari B, Rugarli S, Stella S , **Zellino C** , Luisetti G, Pesatori A.C , Riboldi L, Consonni D. Sopravvivenza dei soggetti con tumore naso-sinusale in Lombardia, 2008-2021. 46°convegno dell'Associazione italiana di epidemiologia AIE; 29 Giugno-1 Luglio 2022.
- 8) Binazzi A, Di Marzio D, Mensi C, Miligi L, Zajacovà J, Galli P, Calisti R, Romeo E, Murano S, Eccher S, Marinaccio A e **Gruppo di lavoro ReNaTuNS**. Differenze di genere nell'incidenza ed eziologia dei tumori naso-sinusali in Italia. 46°convegno dell'Associazione italiana di epidemiologia AIE; 29 Giugno-1 Luglio 2022.
- 9) Spinazzè A, Consonni D, Borghi F, Rovelli S, Cattaneo A, **Zellino C**, Dallari B, Pesatori AC, Riboldi L, Cavallo DM, Mensi C. Esposizione ad asbesto in pazienti con mesotelioma pleurico maligno (progetto PRIMATE). Atti del 38° Congresso Nazionale di Igiene Industriale e Ambientale - Associazione Italiana degli Igienisti Industriali. Cagliari, 22-24 Giugno 2022. ISBN 978-88-86293-43-3.
- 10) Mensi C, Dallari B, **Zellino C**, Rugarli S, Pesatori A.C, Riboldi L, Consonni D. Observed versus predicted mesotelioma cases in Lombardy, Italy, 2013-2017. ICOH – 33th International Congress on Occupational Health. “Sharing solution in occupational health through and beyondthe pandemic” Melbourne 6-10 February 2022, Australia – Virtual Conference.
- 11) Mensi C, **Zellino C**, Dallari B, Rugarli S, Pesatori A.C, Riboldi L, Consonni D. Andamento temporale del mesotelioma in Lombardia: accuratezza dei modelli previsionali. 54 Congresso Nazionale Società Italiana di Igiene; Lecce, 3-6 novembre 2021.
- 12) Spinazzè A, Consonni D, Borghi F, Rovelli S, Cattaneo A, **Zellino C**, Dallari B, Peters S, Cavallo DM, Mensi C. A tool to translate Italian occupation codes to ISCO-68 codes. IOHA2021 - The 12th IOHA International Scientific Conference. “Bridging gaps in OH Development, Opening New Horizons” 11-15 September 2021, Korea - Virtual Conference

ADDITIONAL TITLES, EXPERIENCES AND QUALIFICATIONS:

UNIVERSITY INTERNSHIP:

- **University internship** (i.e., internship for degree thesis)
 - o Period: October 2019-June 2020
 - o Hosting Institution: Department of Science and High Technology (DiSAT) – University of Insubria. Via Valleggio 11 – 22100 Como (Italy)
 - o Objectives and activities: Application of a probabilistic approach for health risk assessment to carbon nanotubes for occupational inhalation exposures; BMD approach, use of BMDs. In this study, a probabilistic approach for RISK ASSESSMENT in the occupational environment was applied for engineered nanomaterials (carbon nanotubes-NTCs). An initial literature search allowed the reconstruction of a Hazard Identification where sub-chronic and chronic inhalation NTC exposure studies were selected. To define the Dose-Response Relationship, the BMD, Benchmark dose approach was used, thanks to which it was possible to quantify a guide value (BMCh, Benchmark concentration human). For the Exposure Assessment, an exposure scenario related to a modern up-scaling factory producing single-walled NTC films was selected from the literature. Three different work events (EL) were considered in the context. For each EL, a probability distribution function was assumed considering the exposure expressed as mass concentration derived from 3 different measurement techniques. Finally, the magnitude of the risk was calculated using the Risk Characterisation Ratio defined as the ratio of the exposure distributions to the BMCh distribution.

- **University internship** (i.e., internship for degree thesis)
 - o Period: June 2016-February 2017:
 - o Hosting Institution: Istituto per lo Studio degli Ecosistemi ISE, Largo Tonolli 50 - 28922 Verbania Pallanza (VCO).
 - o Objectives and activities: Sampling of the freshwater fish fauna in Lake Candia (TO) and Lake Mergozzo (VCO) by means of benthic and mesopelagic multi-mesh nets and electrofishing, scalimetric analysis for age assessment (cycloid and ctenoid scales) and related population structure study, hatchery activities with particular focus on the species of whitefish (*Coregonus lavaretus*) and whitefish (*Cottus gobio*), preparation of samples for C and N isotopic analyses (¹³C and ¹⁵N), participation in the ISE-CNR IttiOrta project (reproduction and repopulation of whitefish in Lake Orta)

TRAINING COURSES:

- 1) 22-25 November 2021
Basic course for RSPP and ASPP (module A). Corso di formazione Responsabile/Addetto del Servizio di Prevenzione e Protezione - Ai sensi dell'art.32 comma 2 D.Lgs 81/08 e Accordo Stato Regioni 07/07/2016 (Modulo A - 28 ore) Associazione Ambiente e Lavoro, Via Privata della Torre, Milan (online course).

- 2) 09-10 June 2021
Training course: Professional paths for environmental protection: ARPA Lombardia laboratories (7 hours). School for the Environment-Polis Lombardia, Via Taramelli, 12/F Milan. (online)

- 3) 21 June 2019

Refresher course for prevention and protection service manager, non-conventional chemical risks (4 hours). AIFOS-Associazione Italiana Formatori ed operatori della Sicurezza sul Lavoro. Via Branze 45 Brescia (course in Como).

- 4) 05 June 2018: Training course on low risk for sectors: Offices and services, commerce, crafts, tourism (8 hours). Studio SOS AMBIENTE, Via Giannutri, 35 Portoferraio (LI).