PERSONAL INFORMATION

Chiara Giusto

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Female Gender | Date of birth 07/11/1995 | Nationality Italian

PROFESSIONAL OBJECTIVE

Environmental Researcher

I would like to be able to apply the knowledge acquired in environmental monitoring and rehabilitation studies and natural sciences, dealing with aspects related to both biotic communities and the abiotic environment, in the context of anthropization and climate change.

PROFESSIONAL EXPERIENCE

01/04/2021 - 01/06/2021

Curricular Internship

ENEA - Agency for New Technologies, Energy and the Environment, Division for the Protection and Enhancement of the Territory and Natural Capital, Laboratory of Biodiversity and Ecosystem Services (BES)

Via Anquillarese, 301, 00123, Rome (RM), Italy

- Macroinvertebrate sampling in river environments (kick sampling)
- Specific recognition of macroinvertebrates
- Macroinvertebrate breeding in the laboratory
- Exposure of macroinvertebrates to xenobiotics in aqueous matrix (controlled conditions)
- Evaluation of Genotoxicity by Comet Assay in Animal and Plant Cells

Activity or sector Environmental protection

12/01/2021 – 12/03/2021

Curricular Internship

University of Rome "La Sapienza", Department of Environmental Biology, Laboratory of Experimental Botany

P.le Aldo Moro, 5, 00185, Rome (RM), Italy

- Use of laboratory instruments (flow hoods, autoclave, centrifuge, etc.)
- In vitro propagation of plant cultures (callogenesis, morphogenesis, micropropagation, etc.)
- Preparation of thin layers of plant tissue for histological analysis (microtome)
- Electrophoresis and PCR for the analysis of environmental and biological samples
- Genetic Manipulation of Plants

Activity or sector Environmental protection

03/03/2019 – 30/06/2019

Curricular Internship

University of Rome "La Sapienza", Department of Biology and Biotechnology "Charles Darwin", Biotechnology Laboratory

P.le Aldo Moro, 5, 00185, Rome (RM), Italy

- Use of laboratory instruments (flow hood, autoclave, centrifuge, etc.)
- Preparation of agar culture media
- Handling Bacterial Cultures
- In vitro nematode breeding
- Controlled exposure of nematodes to xenobiotics

Activity or sector Environmental protection

EDUCATION AND FORMATION

Basic and Advanced Short Course - Statistics with R

University of Tuscia – Department of Ecological and Biological Sciences (DEB), L.go dell'Università, 01100, Viterbo (VT), Italy

Short Course – Laboratory Ecotoxicological Tests

University of Tuscia – Department of Ecological and Biological Sciences (DEB), L.go dell'Università, 01100, Viterbo (VT), Italy

Short course – eDNA metabarcoding

Research Center in Biodiversity and Genetic Resources (CIBIO), University of Porto - Campus de Vairão, Rua Padre Armando Quintas 7, 4485-661 Vairão, Portugal

Corso breve – Nature-based Solutions (NbS)

University of Tuscia – Department of Ecological and Biological Sciences (DEB), L.go dell'Università, 01100, Viterbo (VT), Italy

01/01/2023 – ONGOING

Ph.D. in Ecology and Sustainable Management of Environmental Resources

University of Tuscia – Department of Ecological and Biological Sciences (DEB), L.go dell'Università, 01100, Viterbo (VT), Italy

- Topic: Innovative approaches to biological and environmental monitoring for the assessment of ecosystem quality and functionality
- Summary of the Research Project: Evaluating the biodiversity of Freshwaters Macrobenthos, integrating different biomonitoring techniques: morphological recognition, DNA barcoding, and the most recent eDNA metabarcoding. The survey covers several protected areas, to assess the actual influence of the management of these areas on biodiversity.

3/10/2019 - 20/05/2022

Master's Degree in Environmental Monitoring and Remediation (LM-75)

University of Rome "La Sapienza", P.le Aldo Moro, 5, 00185, Rome (RM), Italy

- Thesis title: Ecotoxicological evaluation of the presence of Bismuth in environmental matrices by means of plant and animal bioindicators
- Average exam average: 29.79 (presentation mark: 109.21)
- Final grade: 110/110 laude
- Speakers: Valentina Iannilli, Massimo Zacchini
- Subject: Ecotoxicology
- Keywords: Environment, Xenobiotics, Pollution, Toxicology, Multispecies
- Age at graduation: 26

- Official duration of the course of study: 2 years
- GRADUATE IN PROGRESS with the acquisition of 24 CFU for teaching

03/08/2014 – 17/10/2019

Bachelor's Degree in Natural Sciences

University of Rome "La Sapienza", P.le Aldo Moro, 5, 00185, Rome (RM), Italy

- Thesis title: The nematode *Caenorhabditis elegans* as a bioindicator for atmospheric particulate matter
- Average exams: c.a. 28 (presentation mark c.a. 106)
- Final grade: 110/110 laude
- Speaker: Daniela Uccelletti
- Subject: Toxicology
- Keywords: Road Dust, Pollution, Ecotoxicology, PM
- Age at graduation: 23
- Official duration of the course of study: 3 years

PERSONAL SKILLS

Native language: Italian

Other languages

	COMPREHENSION		SPOKEN		WRITTEN PRODUCTION
	Listening	Reading	Interaction	Speaking	
English	B2	C1	B2	B2	C1
	Replace with the name of the language certificate you acquired. Enter the layer, if known				
French/Spanish	A2	A2	A2	A1	A1
	Replace with the name of the language certificate you acquired. Enter the layer, if known				

Levels: A1/A2: Basic User - B1/B2: Intermediate User - C1/C2: Advanced User
Common European Framework of Reference for Languages

Communication skills

- Good communication skills
- Good adaptability to different social and work contexts

Organizational and managerial skills

- Good experience in group management (I was the student representative during the LM course)
- Great sense of organization
- Leadership Skills

Professional Skills

- Excellent manual skills and autonomy in the laboratory, in particular: manipulation of plant cultures in vitro and in vivo, use of flow hoods, preparation of culture media, preparation of exposure solutions, acid digestion of environmental and biological samples, atomic spectroscopy analysis (ICP-MS AND AFS), performance of the Comet assay on animal and plant cells, breeding and cultivation of organisms under controlled conditions, controlled exposures of organisms to xenobiotics.
- Sampling in a freshwater environment.
- Ecotoxicological evaluations and monitoring using plant and animal bioindicators.
- Good use of the Office suite.
- Good use of the Geographic Information System (GIS), Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA).
- Basic skills in the use of the 'R' software (basic commands, graphs, statistical tests, data extraction, PCA, etc..).

Digital skills

SELF-EVALUATION				
Information Processing	Communication	Content Creation	Safety	Troubleshooting
Advanced	Intermediate	Advanced	Base	Intermediate

Levels: Basic User - Intermediate User - Advanced User
Digital Skills - Self-Assessment Form

- Good command of the tools of the Office suite (Word, Excel, Powerpoint)
- Good use of the Geographic Information System (GIS)
- Basic use of the ImageJ image processing program
- Basic use of the statistical analysis program of the R data
- Image and video post-production (amateur level)

Other competencies

- Nature Collectibles (Leisure)
- Trekking (university education)
- Drawing and sculpture (high school education)
- Photography (Leisure)
- Special Effects Makeup (training)

Driver's license

B - automunita
A2

PUBBLICATIONS

Oral communication
19/09/2023 – 22/09/2023

Titolo: 'Long-therm changes in the macrobenthos community of a central Italian river (Mignone, Latium) over 40 years (1980 – 2023): implications for effective biodiversity monitoring'
Authors: Chiara Giusto, Adriana Bellati, Carlo Belfiore
Organization: Italian Zoological Union
Luogo: Palermo, Italy
82nd National Congress of the Italian Zoological Union
https://www.uzionlus.it/82-congresso-uzi-2023/index.html

Journal article
19/06/2023

Titolo: 'Bismuth exposure affects morpho-physiological performances and ionomic profile in garden cress (Lepidium sativum L.) plants'
Authors: Laura Passatore, Fabrizio Pietrini, Serena Carloni, Lorenzo Massimi, Chiara Giusto, Massimo Zacchini, Valentina Iannilli
Rivista: Frontiers in Environmental Science, Volume 11 (2023)
Sezione: Toxicology, Pollution and the Environment
0: 10.3389/fenvs.2023.1221573

Conference partecipation
12/06/2022 – 17/06/2022

8th European Bioremediation Conference (EBC-VIII)
Organization: Technical University of Crete, University of Bologna
Location: Chania, Greece
www.ebc-viii.tuc.gr/en/home

Titolo della presentazione orale: 'BISMUTH EXPOSURE IN PLANTS: AN ECOTOXICOLOGICAL AND GENOTOXIC STUDY IN A MULTI- SCALE EXPERIMENTAL APPROACH'
Authors: Fabrizio Pietrini, Laura Passatore, Serena Carloni, Lorenzo Massimi, Chiara Giusto, Valentina Iannilli, Massimo Zacchini.
ISBN 978-618-5558-01-7

Conference partecipation
12/05/2022 – 13/05/2022

16th International Scientific Conference: THE VITAL NATURE SIGN
Organizzazione: University of Lithuania
Luogo: Kaunas, Lithuania
vns.microsep.org/

Titolo della presentazione orale: 'Plant-Based Assays to Evaluate the Ecotoxicity and Genotoxicity of Bismuth in Different Environmental Matrices'
Authors: Massimo Zacchini, Fabrizio Pietrini, Laura Passatore, Serena Carloni, Lorenzo Massimi, Chiara Giusto, Valentina Iannilli.
ISSN: 2335-8653, ONLINE ISSN: 2335-8718

Journal article
29/03/2022

Titolo: 'Morpho-physiological and molecular responses of Lepidium sativum L. seeds induced by bismuth exposure'
Rivista: Science of Total Environment, Volume 831 (2022), 154896
Publisher: Elsevier
Abstract: Bismuth (Bi) is considered a "green metal" as its toxicity has been reported to be lower than other metals, particularly lead. Even though the low presence in the environment, an increase of Bi concentrations in soil and wastewater is predictable due to its enhanced uses for many industrial and medical applications. Therefore, given the little literature on the matter, particularly in plants, information on the effects of Bi on living organisms is needed. In this study, seeds of garden cress (Lepidium sativum L.), a model plant for ecotoxicological assays (OECD), were exposed to increasing Bi concentrations (0 to 485 mg L−1 $Bi(NO3)_3 \cdot 5H2O$ in deionised water) in petri plates. After 72 h, the percent germination index (GI%) revealed no effects at the lowest Bi concentrations, while a slight toxicity occurred at 242 and 485 mg L^{-1} Bi nitrate. A significant reduction of the root length was observed in Bi-treated seedlings, especially at the highest Bi concentrations. Consistently, the Alkaline Comet Assay revealed a genotoxic effect induced by Bi exposure in garden cress seedlings. A Bi concentration-dependent metal accumulation in plantlets was also observed, with a Bi concentration higher than 1200 mg kg−1 found in plantlets at the highest Bi concentration assayed. The toxicity effects observed in the study were discussed, as contribution to the expansion of knowledge on Bi ecotoxicity and genotoxicity in plants.
dx.doi.org/10.1016/j.scitotenv.2022.154896

ATTACHMENTS

- PDF publications
- Certificates of publication
- Abstract of the conference in Greece
- Abstract Lithuania conference
- UZI conference abstract + certificate of attendance
- Bachelor's Degree Certificate
- Master's Degree Certificate
- Grades of LM exams (educational path)
- Certificates for short courses

Personal data

I authorize the processing of my personal data pursuant to Legislative Decree 30 June 2003, n. 196 "Code regarding the protection of personal data".