



# SETAC ITALIAN LANGUAGE BRANCH 3<sup>rd</sup> Workshop

## Milan, 7-8 October 2024

Hosted by



UNIVERSITÀ  
DEGLI STUDI  
DI MILANO

Sala Napoleonica, Via S. Antonio 12, Milano

**in-person Workshop**

**(max 100 participants)**

### Sessions

- A) Environmental chemistry and exposure assessment: analysis, monitoring, fate and modeling.
- B) Environmental and human toxicology: from molecules to organisms, from omics to *in vivo*.
- C) Ecological and human health risk assessment of chemicals, mixtures and stressors and risk mitigation strategies.
- D) Moving Beyond - Cross Cutting Themes, Emerging and Transdisciplinary.
- E) Ecotoxicology becomes stress ecology: from populations to ecosystems and landscapes.

### PROGRAM

#### **7<sup>th</sup> October**

12.30-14.00 Registration

14.00-14.15 Welcome greetings from Prof. Marina Brambilla, Rector of the University of Milan, and Dr. Sabine Apitz, President of SETAC Europe. Opening of the workshop by Prof. Ilaria Corsi (University of Siena, President of SETAC ILB) and Prof. Andrea Binelli (University of Milan, local committee).

14.15-16.00

**Best Young Italian Scientist Award (pitches; 5 min.)**

**Coordinator:** *Claudia Vaj*

**Chairs:** *Laura Marziali, Stefano Magni*

- 1) **Andrea Masseroni (UNIMIB).** Ecological fitness impairments induced by chronic exposure to polyvinyl chloride nanospheres in *Daphnia magna*.

- 2) **Emma Ferrari (UNISI)**. Antarctic Threads: Textile Microfibers and Chemical Additives in the wild scallop *Adamussium colbecki* from the Ross Sea.
- 3) **Patrizia Romano (UNISI)**. Ecological risk assessment of manufactured nanomaterials: investigating the role of protein-corona formation in the coelomic fluid of the sea urchin *Paracentrotus lividus*.
- 4) **Lorenzo Federico (UNIMIB)**. A new ecological screening tool based on the aggregation of the terrestrial isopod *Porcellionides pruinosus* for assessing soil quality.
- 5) **Davide Rotondo (UNIUPO)**. Impact of Short-Chain Perfluoropropylene Oxide Acids on Biochemical and Behavioural Parameters in *Eisenia fetida* (Savigny, 1826).
- 6) **Jacopo Fabrello (UNIPD)**. Effects of BPA analogues-contaminated diets in the crab *Carcinus aestuarii*.
- 7) **Andrea Ferrari (UNIMI)**. From molecules to bees: multi-level approach reveals negative effects of sewage sludge trace elements on honeybees.
- 8) **Sara Accardo (ENEA)**. A Deep insight into Eco(toxico)logical Risk posed by Metal Contamination in the Alento River.
- 9) **Alessandra Narciso (IRSA-CNR)**. Bioassays for evaluating toxicity of binary, ternary, quaternary mixtures of antibiotics and copper and effects from a contaminated soil.
- 10) **Chiara De Carolis (UNIROMA)**. Evaluation of the effects of antibiotic and copper mixture on a plant-microbiome metaorganism.
- 11) **Antonio Morgillo (UNISI)**. Unveiling the Effects of Emerging Contaminants on Marine Organism Embryogenesis.
- 12) **Davide Gualandris (UNIUPO)**. Investigating Sublethal Responses of Earthworms in PFAS-Contaminated Soils: A Comprehensive Study at Trelleborg fire fighting site in Sweden.
- 13) **Marco Evangelista (UNINSUBRIA)**. *In Silico* Prediction of the Human Transthyretin Binding Affinity.
- 14) **Isabella Calattini (UNISI)**. A holistic strategy for assessing the health and services of freshwater ecosystems.
- 15) **Silvia Signorini (UNIMI)**. A multi-level approach to investigate potential adaptive mechanisms to ocean acidification in the limpet *Patella caerulea*.

16.00-17.30

### SESSION A Environmental chemistry and exposure assessment: analysis, monitoring, fate and modeling

*Chairs: Sara Castiglioni, Antonio Di Guardo*

- 16.00-16.15 **Cristina Cremonesi (UNIMI)**. Temporal Variability of Floating Plastic Contamination in Lake Maggiore (Northern Italy): Implications for Sampling Strategies.
- 16.15-16.30 **Giulia Cesarini (IRSA-CNR)**. First evidence of microplastics in three invasive crayfish species in Lake Maggiore.
- 16.30-16.45 **Isabella Gambino (UNINSUBRIA)**. Textile chemicals of environmental relevance: from production to surface water.
- 16.45-17.00 **Stefano Tasselli (IRSA-CNR)**. Polluting while cleaning: the case study of Polycyclic Musk Fragrances.
- 17.00-17.15 **Elisa Terzaghi (UNINSUBRIA)**. PAH hydroxy-metabolites on plant leaves: where do they come from? From field data to laboratory experiments.
- 17.15-17.30 **Matilda Porro (IRSA-CNR)**. DDT in Lake Maggiore: temporal variation from 1998 to 2023.

17.30-18.30

### POSTER SESSION

- 1) **Antonio Calisi (UNIUPO)**. Cytotoxicity and genotoxicity of Ether Perfluoro Carboxylic Acid PFAS Congeners in *Eisenia foetida* Coelomocytes.
- 2) **Aurora Mancini (ISS)**. The application of Ecotoxicology in the Health Impact Assessment; a new legislative development relevant for the protection of human health.
- 3) **Barbara Billé (UNIME)**. Evaluating the embryotoxic potential of the pesticide thiram in the sea urchin *Arbacia lixula*.
- 4) **Cristina Cavone (IRSA-CNR)**. Bioaugmentation and Plant-assisted bioremediation for contaminated environment recovery.
- 5) **Giulia Tesoriere (UNIROMA)**. *Drosophila melanogaster* a new ecotoxicological method for air pollutants.
- 6) **Ilaria Bernardini (UNIPD)**. Integration of RNA and 16S rRNA Amplicon Sequencing for risk evaluation of pharmaceuticals on non-target species.
- 7) **Ilaria Savino (IRSA-CNR)**. Tire Rubber Leachate: A Threat to the Gamete Quality of the Mediterranean Mussel *Mytilus galloprovincialis*.
- 8) **Jana Krišković (University of Zagreb)**. Investigation of the effects of 1,3-diphenylguanidine on *Daphnia magna*.
- 9) **Laura Giovanetti (UNISI)**. A blood-based multi-biomarker approach reveals different physiological responses of common kestrels to contrasting environments.

- 10) **Luisa Albarano (UNINA)**. It is not a party for the sea!
- 11) **Mario Carere (ISS)**. Effect-Based Methods in the EU Water Framework Directive: a new approach for the detection of mixtures.
- 12) **Melissa Barra (ISS)**. Pollinator Pioneers: Bee Ecotoxicology Unveiling Effects of Air Pollutants.
- 13) **Roberta De Angelis (ISPRA)**. An integrated approach for the management of beach and recreational use of water.
- 14) **Serena Greco (ISS)**. *In silico* screening for Safe and Sustainable by Design chemicals: a focus on pesticide carcinogenicity assessment.
- 15) **Silvia Casini (UNISI)**. Assessing the effectiveness of mitigation measures on pollinator decline: an integrated multi-biomarker approach (æm-polly project).
- 16) **Tommaso Campani (UNISI)**. Evaluation of toxicological effects of fungicides used in vineyards agroecosystem using *Apis mellifera* as a model species.
- 17) **Tommaso Zoli (UNIMI)**. *Aedes koreicus*: could an invasive mosquito be used as sentinel of heavy metal pollution?

## **8<sup>th</sup> October**

9.00-11.30

### **SESSION B Environmental and human toxicology: from molecules to organisms, from omics to in vivo**

*Chairs: Sonia Manzo, Giovanni Libralato*

- 9.00-9.15 **Lara Nigro (UNIMI)**. Investigating the Effects of Some Water-Soluble Polymers on *Daphnia magna*: From Proteomic Changes to Transgenerational Epigenetic Inheritance.
- 9.15-9.30 **Giada Caorsi (UNIMI)**. Exploring the Impact of Commercial PVA-based Dishwater Pods: A Multi-Tier Analysis on *Danio rerio* Embryos.
- 9.30-9.45 **Riccardo Sbarberi (UNIMI)**. Evaluation of adverse effects induced by virgin and sampled plastics on *Chironomus riparius*.
- 9.45-10.00 **Stefano Magni (UNIMI)**. Effects of tire rubber-derived contaminants on aquatic and terrestrial organisms.
- 10.00-10.15 **Teresa Balbi (UNIGE)**. SSRI antidepressants in non-target marine invertebrates: multiple mechanisms of action of fluoxetine in the hemocytes of *Mytilus galloprovincialis*.
- 10.15-10.30 **Stefania Gorbi (UNIVPM)**. Mechanisms of molecular and cellular responses of human pharmaceuticals mixtures in non-target model species.
- 10.30-10.45 **Mariachiara Galati (UNIME)**. Impact of environmental doses of dexamethasone on the reproductive health of the Mediterranean mussel *Mytilus galloprovincialis*.
- 10.45-11.00 **Giuseppe De Marco (UNIME)**. Tissue and molecular alterations caused by the emerging contaminant dexamethasone in marine mussels and the use of ulvans to counteract its harmful effects.
- 11.00-11.15 **Marialuisa Vannuccini (UNITUS)**. On the safe usage of copper sulphate in organic farming: evidence for genotoxic and enzymatic effects on a non-target species, the Mediterranean stick insect *Bacillus rossius*.
- 11.15-11.30 **Safa Melki (UTM-Tunis)**. Effects of mercury exposure on oxidative stress biomarkers and the ovarian morphology of the ascidian *Ciona intestinalis* adults.

11.30-11.45

### **Award ceremony for the Best Young Italian Scientist**

11.45-13.00

### **SESSION C Ecological and human health risk assessment of chemicals, mixtures and stressors and risk mitigation strategies**

*Chairs: Paola Grenni, Mario Carere*

- 11.45-12.00 **Giovanna Meregalli (CORTEVA)**. Spot applications to control thistles in sugar beet fields – how to link the actual practice to the GAP table and the environmental risk assessment? An example case study.

- 12.00-12.15 **Maura Benedetti (UNIVPM)**. Stress priming tool: memory mechanisms to mitigate organisms vulnerability to multiple stressors.
- 12.15-12.30 **Silvia Franzellitti (UNIBO)**. A meta-analysis of levels and physiological effects of pharmaceuticals in marine invertebrates.
- 12.30-12.45 **Simona Vezzoli (UNIBS)**. Employment of rapid bioassays for detection of toxicity following exposure to different organic substrates.
- 12.45-13.00 **Francesca Mauro (ISPRA)**. Public engagement in the industrial odour management under the framework of Directive 2010/75/EU.

**13.00-14.20**

**Free Lunch**

**14.30-15.45**

### **SESSION D Moving Beyond - Cross Cutting Themes, Emerging and Transdisciplinary**

*Chairs: Camilla Della Torre, Stefania Gorbi*

- 14.30-14.45 **Arianna Sgariboldi (UNINSUBRIA)**. *In silico* screening of hazardous properties of Pharmaceuticals and Personal Care Products, and their associated potential risk after water treatment.
- 14.45-15.00 **Walter Cristiano (ISS)**. Listening to nature: how soundscapes can inform us about the health of fragmented habitats.
- 15.00-15.15 **Silvia Simonetti (UNISI)**. Adaptation/resistance to ocean acidification: the potential role of ATP-binding cassette transporters investigated in the polychaetes *Platynereis dumerilii* and *Platynereis cfr massiliensis*.
- 15.15-15.30 **Francesco Dondero (UNIUPO)**. Development of a behavioral test in the terrestrial oligochaetes *Eisenia fetida* exposed to Per and poly fluoro alkyl substances (PFAS).
- 15.30-15.45 **Camilla Puccinelli (ISS)**. Do diatom teratological forms work as a sentinel of antibiotic pollution in the aquatic ecosystem?

**15.45-16.45**

### **SESSION E Ecotoxicology becomes stress ecology: from populations to ecosystems and landscapes**

*Chairs: Andrea Binelli, Antonio Finizio*

- 15.45-16.00 **Agata Di Noi (UNISI)**. Biomarkers and cognitive analysis to assess the effects of a commercial fungicide and an herbicide, alone and in combination, on *Apis mellifera*.
- 16.00-16.15 **Laura Marziali (IRSA-CNR)**. Legacy mercury contamination in the Toce River (North Italy): from sediments to the terrestrial ecosystem.
- 16.15-16.30 **Renata Pacifico (ISPRA)**. EMAS tool for environmental risk management.
- 16.30-16.45 **Lucia Rigamonti (POLIMI)**. Life Cycle Assessment studies to support projects of waste treatment plants.

**16.45-17.00**

**Closing ceremony**

Wrap up and closing remarks from Prof. Andrea Binelli (University of Milan, local committee), Prof. Ilaria Corsi (University of Siena, President of SETAC ILB) and Dott. Stefania Marcheggiani (ISS, Vice-President of SETAC ILB).

### **Scientific and Local Committee**

**Andrea Binelli** (Univ. of Milan)  
**Camilla Della Torre** (Univ. of Milan)  
**Stefano Magni** (Univ. of Milan)  
**Ilaria Corsi** (Univ. of Siena)  
**Stefania Marcheggiani** (ISS)

**Claudia Vaj** (Corteva Agriscience)  
**Federica Cacciatore** (ISPRA)  
**Silvia Franzellitti** (Univ. of Bologna)

## **ILB Council**

**Ilaria Corsi** University of Siena - President  
**Stefania Marcheggiani** ISS, Vice-President  
**Silvia Casini** University of Siena, Past President  
**Claudia Vaj** Corteva agriscience, External advisor  
**Paola Grenni** IRSA-CNR, External advisor

**Anna Barra Caracciolo** IRSA-CNR, **Chiara Neri** LabAnalysis, **Maria Cristina Fossi** University of Siena, **Elena Romano** ISPRA, **Federica Cacciatore** ISPRA, **Ester Papa** University of Insubria, **Elena Semenzin** University Ca' Foscari Venezia, **Livia Mariani** IRSA-CNR, **Ginevra Molto** ISPRA, **Camilla Della Torre** University of Milan, **Stefano Magni** University of Milan, **Sonia Manzo** ENEA, **Maura Benedetti** Polytechnic University of Marche, **Silvia Franzellitti** University of Bologna, **Maria Maisano** University of Messina, **Antonio Franco** JRC, **Chiara Maria Vitale** Procter & Gamble, **Camilla Puccinelli** ISS

## **Platforms and posters guidelines**

**Oral presentations:** 12 min (+ 3 min for Q/A) (either in Italian or in English). Allowed file formats are ppt or pdf.

**Best Young Scientist Award:** an interactive pitch (5 min) during the workshop (3 slides, pdf or ppt). Pitches should be presented preferably in Italian with slides in English.

**Posters:** max dimensions 84.1 cm x 118.9 cm (33 x 47 inches), **portrait layout**. English language. Posters will be displayed on stands outside the Sala Napoleonica.

**Info** Web site: [italianbranch.setac.org](http://italianbranch.setac.org); e-mail: [setac.ilb.2024@gmail.com](mailto:setac.ilb.2024@gmail.com)