Agata Di Noi

Date of birth: 04/12/1995

Nationality: Italiana

E-mail: agata.dinoi2@unisi.it

CURRENT POSITION

08/02/2024 – to date, Siena, Italy

FIXED-THRM RESEARCH TECHNOLOGIST – University of SIENA – Santa Chiara Lab

EDUCATION AND TRAINING

01/10/2019 – 19/06/2023 Siena, Italia

Ph.D. IN LIFE SCIENCES -- XXXV CICLE University of Siena -

Department of Life Sciences - Siena, Italy

Degree grade – Excellent cum laude

Thesis - Assessment of the ecotoxicological health status of *Apis mellifera* using a multi-tier approach based on biomarkers, proteomic analysis and quality and origin of bee products.

01/11/2017 – 23/10/2019 Siena, Italia

MASTER'S DEGREE IN ECOTOXICOLOGY AND ENVIRONMENTAL SUSTAINABILITY University of Siena – Department of Physical, Earth and Environmental Sciences - Siena, Italy

Degree grade - 110/110 L

Thesis - Studio degli effetti di contaminanti emergenti e di vecchia generazione in *Caretta caretta* (Linneo, 1758) attraverso biomarker e proteomica funzionale: esperimenti in vitro.

01/10/2014 – 23/10/2017 Siena, Italia

BACHELOR DEGREE IN ENVIRONMENTAL AND NATURAL SCIENCES University of Siena - Department of Physical, Earth and Environmental Sciences - Siena, Italy

Degree grade - 108/110

Thesis - Biomarkers non distruttivi per il monitoraggio dello stato di salute ecotossicologico di esemplari di *Caretta caretta*

LANGUAGE SKILLS

Mother tongue: ITALIAN

Other languages: ENGLISH, B2 level

DIGITAL SKILLS

Microsoft Office (Word, Excel, PowerPoint, …), PDQuest, Komet 5.5

PERIODS ABROAD

01/02/2022 – 31/07/2022

Benaki Phytopathological Institute - Athens (Greece)

Tutors: Dr. Kyriaki Machera (General Director) and Dr. Konstantinos Kasiotis

SCHOLARSHIPS/RESEARCH GRANTS

01/02/2023 – 31/01/2024

Scholarship – University of SIENA – Department of Physical, Earth and Environmental Sciences

Development of biomarkers for the assessment of multiple stressors and the effects of emerging contaminants on marine and terrestrial organisms

TEACHING ACTIVITIES

a.a. 2021-2022 e a.a. 2022-2023

Subject Expert for Teaching "Effetti biologici degli inquinanti 1° mod. di Ecologia applicata 2" in the Bachelor's Degree in Environmental and Natural Sciences (SSD BIO/07 Ecology)

THESIS CO-SUPERVISOR

10/12/2024

Studi ecotossicologici basati su biomarker biochimici e cellulari per la valutazione dello stato di salute di *Caretta caretta* nel Mediterraneo

University of Siena - Department of Physical, Earth and Environmental Sciences – Master's degree in Ecotoxicology and Environmental Sustainability

Student: Carmen Renzi
Supervisor: Prof. Silvia Casini
Co-supervisors: Dr. Ilaria Caliani
Dr. Agata Di Noi
Dr. Giovanni Furii

10/12/2024

Valutazione dello stato di salute di *Apis mellifera* in relazione all'utilizzo di fitofarmaci in viticoltura tramite un approccio multi-biomarker

University of Siena - Department of Physical, Earth and Environmental Sciences – Bachelor's degree in Environmental and Natural Sciences

Student: Ginevra Manieri
Supervisor: Dott. Tommaso Campani
Co-supervisors: Prof. Silvia Casini
Dr. Ilaria Caliani
Dr. Agata Di Noi

10/12/2024

Biomarker di genotossicità e immunotossicità per valutare lo stato di salute di *Apis mellifera* campionate in diverse aree di un'azienda vinicola

University of Siena - Department of Physical, Earth and Environmental Sciences – Master's degree in Ecotoxicology and Environmental Sustainability

Student: Leonardo Menci

Supervisor: Prof. Silvia Casini
Co-supervisors: Dr. Ilaria Caliani
Dr. Agata Di Noi
03/03/2023

Biomarkers in esemplari di *Osmia bicornis* esposti ad un insetticida ed un fungicida, singolarmente ed in combinazione.

University of Siena - Department of Physical, Earth and Environmental Sciences – Bachelor's degree in Environmental and Natural Sciences

Student: Gennaro Scognamiglio
Supervisor: Dott.ssa Ilaria Caliani
Co-supervisors: Prof. Silvia Casini
Dr. Agata Di Noi
14/12/2022

L'impatto dei fungicidi Fantic® e Ramedit®, usati nei vigneti, su *Apis mellifera*: valutazione degli effetti tossicologici tramite un approccio multibiomarkers in esemplari esposti in condizioni di laboratorio e di campo.

University of Siena - Department of Physical, Earth and Environmental Sciences – Master's degree in Ecotoxicology and Environmental Sustainability

Student: Debora Vaselli
Supervisor: Dott. Tommaso Campani
Co-supervisors: Prof.ssa Silvia Casini
Dr. Ilaria Caliani
Dr. Agata Di Noi
27/04/2022

Monitoraggio ecotossicologico di colonie di *Apis Mellifera* (Linnaeus, 1758) situate nei pressi di frutteti attraverso l'utilizzo di un set di biomarker

University of Siena - Department of Physical, Earth and Environmental Sciences – Bachelor's degree in Environmental and Natural Sciences

Student: Filippo Terenzani
Supervisor: Prof.ssa Silvia Casini
Co-supervisors: Dr. Ilaria Caliani
Prof. Giampiero Cai
Dr. Agata Di Noi
27/04/2022

Valutazione dello stato di salute ecotossicologico di *Apis mellifera* (Linnaeus, 1758) tramite biomarker e IBR: studi di laboratorio e monitoraggio in natura

University of Siena - Department of Physical, Earth and Environmental Sciences – Master's degree in Ecotoxicology and Environmental Sustainability

Student: Filippo Tosoni
Supervisor: Prof. Silvia Casini
Co-supervisors: Dr. Ilaria Caliani
Dr. Agata Di Noi
Dr. Daniele Calabrese
27/04/2022

Apis mellifera e i suoi prodotti: valutazione dell'esposizione a pesticidi mediante proteomica funzionale e studio delle proprietà chimico-fisiche e melissopalinologiche di mieli

University of Siena - Department of Physical, Earth and Environmental Sciences – Master's degree in Ecotoxicology and Environmental Sustainability

Student: Samuele Rodini
Supervisor: Prof. Giampiero Cai
Co-supervisors: Prof. Silvia Casini
Dr. Ilaria Caliani
Dr. Agata Di Noi

14/06/2021

Proteomica funzionale e biomarker in esemplari di *Apis mellifera* (Linnaeus, 1758) esposti a contaminanti ambientali: studi di laboratorio e monitoraggio in natura

University of Siena - Department of Physical, Earth and Environmental Sciences – Master's degree in Ecotoxicology and Environmental Sustainability

Student: Matteo Vitale
Supervisor: Dr. Ilaria Caliani
Co-supervisors: Prof. Silvia Casini
Prof. Giampiero Cai
Dr. Agata Di Noi

16/12/2020

Utilizzo di un set di biomarkers per il monitoraggio ecotossicologico di *Apis mellifera* (Linneo, 1758) in aree a diverso impatto agricolo

University of Siena - Department of Physical, Earth and Environmental Sciences – Bachelor's degree in Environmental and Natural Sciences

Student: Samuele Caloni
Supervisor: Prof. Silvia Casini
Co-supervisors: Dr. Ilaria Caliani
Prof. Giampiero Cai
Dr. Agata Di Noi

SUMMER SCHOOL

16/09/2023 – 20/09/2023 - Salerno

FoodSystem 5.0 – Agrifood Future

Summer school on sustainability, culture, and markets related to the future of food.

PUBLICATIONS

Minimizing Stress in White Sharks: Non-Invasive Epidermal Biopsies for Isotopic and Vitellogenin Analyses – 2025

Guia Consales, Tommaso Campani, Agata Di Noi, Marco Garofalo, Eduardo Di Marcantonio, Francesca Romana Reinero, Silvia Casini, Luigi Dallai, Emilio Sperone, Letizia Marsili, Primo Micarelli. Biology, 14, 192.

Apis mellifera as a Model Species to Evaluate Toxicological Effects of Fungicides Used in Vineyard Agroecosystems – 2025

Tommaso Campani, Ginevra Manieri, Ilaria Caliani, Agata Di Noi and Silvia Casini. Journal of Xenobiotics, 15, 18.

Parasitological investigation and potential effects of parasitism on hematological, genotoxic and immune parameters in free ranging sea turtles rescued along the Southern Adriatic coast (Eastern Mediterranean Sea) – 2024

Marianna Marangi, Roberto Amerigo Papini, Giovanni Furii, Lorenzo Gordigiani, Agata Di Noi, Maria Cristina Fossi, Silvia Casini, Ilaria Caliani. Marine Pollution Bulletin, 209, 117274.

Assessing the effects of a commercial fungicide and an herbicide, alone and in combination, on *Apis mellifera*: Insights from biomarkers and cognitive analysis – 2024

Agata Di Noi, Ilaria Caliani, Antonella D'Agostino, Giampiero Cai, Marco Romi, Tommaso Campani, Federico Ferrante, David Baracchi, Silvia Casini. Chemosphere, 359, 142307.

Metal accumulation in female green sea turtles (*Chelonia mydas*) from Eastern Atlantic affects their egg quality with potential implications for embryonic development – 2024

Inês F.C. Morão, Tiago Simões, Roger B. Casado, Sara Vieira, Betânia Ferreira-Airaud, Ilaria Caliani, Agata Di Noi, Silvia Casini, Maria C. Fossi, Marco F.L. Lemos, Sara C. Novais. Science of the Total Environment, 931, 172710.

Brodifacoum Levels and Biomarkers in Coastal Fish Species following a Rodent Eradication in an Italian Marine Protected Area: Preliminary Results – 2023

Ilaria Caliani, I., Di Noi, A., Amico, C., Berni, R., Romi, M., Cai, G., Guarnier, M., Navone, A., Spano, G., Howald, G.R., Sposimo, P., Marsili, L. Life, 13, 415.

Biochemical responses, feeding and survival in the solitary bee *Osmia bicornis* following exposure to an insecticide and a fungicide alone and in combination – 2022

Martins, C. A. H., Caliani, I., D'Agostino, A., Di Noi, A., Casini, S., Parrilli, M., Azpiazu C., Bosch, J., Sgolastra, F. Environmental Science and Pollution Research, 1-14.

A Novel Ex Vivo Approach Based on Proteomics and Biomarkers to Evaluate the Effects of Chrysene, MEHP, and PBDE-47 on Loggerhead Sea Turtles (*Caretta caretta*) – 2022

Bianchi, L., Casini, S., Vantaggiato, L., Di Noi, A., Carleo, A., Shaba, E., Armini, A., Bellucci, F., Furii, G., Bini, L., Caliani, I. International journal of environmental research and public health, 19(7), 4369.

First application of an Integrated Biological Response index to assess the ecotoxicological status of honeybees from rural and urban areas – 2021

Caliani, I., Campani, T., Conti, B., Cosci, F., Bedini, S., D'Agostino, A., Giovanetti, L., Di Noi, A., Casini, S. Environmental Science and Pollution Research, 28(34), 47418-47428.

Review on Sublethal Effects of Environmental Contaminants in Honey Bees (*Apis mellifera*), Knowledge Gaps and Future Perspectives – 2021

Di Noi, A., Casini, S., Campani, T., Cai, G., Caliani, I. International Journal of Environmental Research and Public Health, 18(4), 1863.

Multi-biomarker approach and IBR index to evaluate the effects of different contaminants on the ecotoxicological status of *Apis mellifera* – 2021

Caliani, I., Campani, T., Conti, B., Cosci, F., Bedini, S., D'Agostino, A., Ammendola, A., Di Noi, A., Gori, A., Casini, S. Ecotoxicology and Environmental Safety, 208, 111486.

PUBLICATIONS WITHOUT IMPACT FACTOR

2021

Biomarker study shows health effects of fungicide on honeybees, including DNA damage.

Caliani I., Campani T., Conti B., Cosci F., Bedini S., D'Agostino A., Giovanetti L., Di Noi A., Casini S. Science for environment policy, Issue: 556, 10th February 2021.

AWARDS

14/09/2023 – Cortona (AR)

Ph.D. Thesis Award 2023 – Società Italiana di Mutagenesi e Genomica (S.I.M.A.G.)

15-19/05/2022

SETAC Italian Language Branch grant for students in 2021 – SETAC Italian Language Branch

Evaluating the effects of fungicide and herbicide alone and in binary mixture on *Apis mellifera* by a multibiomarker approach.

NATIONAL AND INTERNATIONAL CONFERENCES AND SEMINARS

26/11/2024 – 28/11/2024 – Livorno

XI Edizione delle giornate di studio. Ricerca e applicazione di metodologie ecotossicologiche

- Casini S., Campani T., Caliani I., Manieri G., Franchi A., Di Noi A., Giovanetti L., Mazzei M., Cabiddu L., Lenzi L., Lami F., Costantino R., Sgolastra F. Assessing the effectiveness of mitigation measures on pollinator decline: an integrated multi-biomarker approach (ÆM-POLLY project).
- Cabiddu L., Lupi D., Casini S., Mapelli F., Crotti E., Basiglio S., Holzer E., Patriarca F., Caliani I., Campani T., Di Noi A., Giovanetti L., Lenzi L., Mazzei M.P., Lami F., Sgolastra F. POLYPOLL: an interdisciplinary approach to unravel the effects of combined exposure to chemical pollutants on insect pollinators.
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07/10/2024 – 08/10/20204 – Milano

3rd Workshop SETAC Italian Language Branch

- **Speaker.** Di Noi A.*, Caliani I., D'Agostino A., Cai G., Romi M., Campani T., Ferrante F., Baracchi D., Casini S. Biomarkers and cognitive analysis to assess the effects of a commercial fungicide and an herbicide, alone and in combination, on *Apis mellifera*.
- Casini S., Campani T., Caliani I., Manieri G., Franchi A., Di Noi A., Giovanetti L., Mazzei M., Cabiddu L., Lenzi L., Lami F., Costantino R., Sgolastra F. Assessing the effectiveness of mitigation measures on pollinator decline: an integrated multi-biomarker approach (ÆM-POLLY project).

23/09/2024 – 26/09/2024 – Roma

XXXIII Congresso della Società Italiana di Ecologia – Siena

- **Speaker.** Di Noi A.*, Caliani I., Franci N., Giovanetti L., Casini S., Campani T. Investigating population dynamics and ecotoxicological effects in two apiaries under different levels of human-induced stress.
- Casini S., Campani T., Caliani I., Manieri G., Franchi A., Di Noi A., Giovanetti LK., Mazzei M., Cabiddu L., Lenzi L., Lami F., Costantino R., Sgolastra F. Assessing the effectiveness of mitigation measures on pollinator decline: an integrated multi-biomarker approach (ÆMPOLLY project).

- Campani T., Caliani I., Di Noi A., Giovanetti L., Manieri G., Franchi A., Fiaschi T., Angiolini C., Romi M., Cai G., Casini S. The role of beekeeping in fostering an integrated model of ecologically sustainable and multifunctional agriculture. The API project.

16/09/2024 – 19/09/20224 – Tallinn (Estonia)

Eurbee 10th Congress of Apidology

- **Poster.** Di Noi A.*, Caliani I., Franci N., Giovanetti L., Casini S., Campani T. Exploring the population dynamics and ecotoxicological impacts on two apiaries facing varying levels of anthropogenic pressures.
- Campani T., Caliani I., Di Noi A., Giovanetti L., Casini S. (2024). A multi-biomarkers approach to evaluate the toxicological effects of plant products in honeybee as model species for pollinator insects.
- Lupi D., Casini S., Mapelli F., Crotti E., Basiglio S., Holzer E., Patriarca F., Caliani I., Campani T., Di Noi A., Giovanetti L., Cabiddu L., Lenzi L., Mazzei M.P., Lami F., Sgolastra F. (2024). POLYPOLL: an interdisciplinary approach to unravel the effects of combined exposure to chemical pollutants on insect pollinators.
- Caliani I., Campani T., Di Noi A., Giovanetti L., Cai G., Romi M., Casini S. (2024). Evaluation of the ecotoxicological status of honey bees (Apis mellifera) from environments with different anthropogenic impact, using a multibiomarker approach.
- Casini S., Campani T., Caliani I., Manieri G., Franchi A., Di Noi A., Giovanetti L., Mazzei M, Cabiddu L., Lenzi L., Lami F., Costantino R., Sgolastra F. (2024). Assessing the effectiveness of mitigation measures on pollinator decline: an integrated multi-biomarker approach (ÆM-POLLY project).

11/10/2023 – 11/10/2023 – Roma

2nd Workshop SETAC Italian Language Branch

Poster. Di Noi A.*, Caliani I., Cai G., Del Casino C., Romi M., Campani T., Casini S. Ecotoxicological health status of honey bee colonies using a complementary approach based on biomarker responses, proteomics and honey analysis.

23/09/2024 – 26/09/2024 – Roma

XXXII Congresso della Società Italiana di Ecologia Sostenibilità ecologica: scienza, scenari e partecipazione - Catania

Campani T., Caliani I., Di Noi A., Vaselli D., Casini S. (2023). Evaluation of sublethal toxicological effects of two fungicides used in vineyard on Apis mellifera.

22/09/2023 – 22/02/2023 – Ferrara

REMTECH 2023 Sessione Zero Pollution: Ecotoxicology for safe and sustainable remediation. SETAC ILB

14/09/2023 – 16/09/2023 – Cortona (AR)

Joint Meeting AGI_SIMAG 2023

Speaker. Di Noi A.*, Caliani I., Casini S., Cai G. Assessment of the ecotoxicological health status of Apis mellifera using a multi-tier approach based on biomarkers, proteomic analysis and quality and origin of bee products.

15/09/2022 – 15/09/2022 – Siena

1st Workshop SETAC Italian Language Branch

13/09/2022 – 15/09/2022

Adattamenti degli Ecosistemi alle Pressioni dell'Antropocene - XXXI Congresso della Società Italiana di Ecologia – Siena

- **Speaker.** Di Noi A.*, Casini S., Caliani I., Campani T., Del Casino C., Romi M., Cai G. Evaluation of honey bee colonies ecotoxicological health status using a multi-tier approach, based on biomarkers, proteomic analysis and quality and origin of bees' products.
- Casini, S., Di Noi, A., Campani, T., Cai, G., Caliani, I. State of the art, knowledge gaps and future perspectives of honey bees ecotoxicological studies.

28/08/2022 – 31/08/2022

32nd Congress ESCPB – Napoli

Campani, T., Caliani, I., Di Noi, A., Casini, S. Evaluating the toxicological effects of anthropic contamination in an ecologically relevant species: *Apis mellifera*.

05/06/2022 – 09/06/2022

Ninth International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2022) and SECOTOX Conference – Mykonos

Speaker. Di Noi A.*, Casini S., Campani T., Romi M., Cai G., Caliani I. Evaluation of the ecotoxicological status of honey bees (*Apis mellifera*) from environments with different anthropogenic impact, using a multibiomarker approach.

15/05/2022 – 19/05/2022

SETAC Europe 32nd Annual Meeting – Towards a reduced pollution society - Copenhagen

Speaker. Di Noi A.*, Casini S., Campani T., Romi, M., Cai G., Caliani I. Evaluating the effects of fungicide and herbicide alone and in binary mixture on *Apis mellifera* by a multi-biomarker approach.

25/10/2021 – 27/10/2021

Ecology for an Ecological Transition – XXX Congresso della Società Italiana di Ecologia - Lecce

Poster. Di Noi A.*, Casini S., Campani T., Cai G., Caliani I. Multibiomarker approach and IBRv2 index to assess the ecotoxicological status of *Apis mellifera* (Linnaeus, 1758): laboratory experiment and field monitoring.

20/07/2021 – 24/07/2021

Eighth International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2021) and SECOTOX Conference - Thessaloniki

Speaker. Di Noi A.*, Casini S., Campani T., Cai G., Caliani I. Evaluation of sub-lethal effects of two different fungicides on *Apis mellifera* using a multi-biomarker approach and IBRv2 index.

03/05/2021 – 06/05/2021

SETAC Europe 31st Annual Meeting - Virtual Conference

Caliani I., Di Noi A., Campani T., Bini L., Bianchi L., Casini S. In vitro studies using blood and skin biopsies to evaluate toxicity of PBDE-47, DEHP and chrysene in *Caretta caretta* (Linnaeus, 1758).

13/04/2021 – 15/04/2021

XVII incontro dei dottorandi e dei giovani ricercatori in ecologia e scienze dei sistemi acquatici - Napoli

Speaker. Di Noi A.*, Casini S., Campani T., Cai G., Caliani I. Review sugli effetti sub-letali dei contaminanti ambientali nelle api da miele (*Apis mellifera*), gap conoscitivi e prospettive future.

03/05/2020 – 07/05/2020

SETAC Europe 30th Annual Meeting - Dublino - Virtual Meeting

Caliani I., Campani T., Ammendola A., Conti B., Bedini S., Cosci F., Di Noi A., Gori A., Bellucci F., Giovanetti L., Casini S. A multibiomarker approach to evaluate the impact of anthropogenic contaminants on the ecotoxicological status of honey bees, *Apis mellifera*.

10/09/2019 – 12/09/2019

XXIX Congresso della Società Italiana di Ecologia – Ferrara

- Casini S., Caliani I., Pozzuoli C., Poggioni L., Di Noi A., Campani T. Can agricultural fungicides be a source of stress for non-target soil organisms? An ecotoxicological study on *Eisenia fetida* (Savigny, 1826).
- Casini S., Campani T., Ammendola A., Conti B., Bedini S., Cosci F., Di Noi A., Caliani I. Evaluation of the ecotoxicological stress induced by anthropogenic contaminants in *Apis mellifera*.

10/06/2019 – 14/06/2019

50° Congresso della Società Italiana di Biologia Marina (SIBM) - Livorno

Poster. Caliani I., Di Noi A.*, Bellucci F., Vitale M., Fossi M.C., Fratini S., Pretti C., Casini S. Risposte biochimiche nel granchio *Pachygrapsus marmoratus* per la valutazione della contaminazione ambientale del porto di Livorno (Italia).

16/04/2019 – 16/04/2019 – Siena

Convegno "Agrobiodiversità in Toscana dalla conoscenza alla valorizzazione"

09/10/2018 – 09/10/2018 – Siena

Workshop conclusivo progetto PIF "Cereali Sovicille e dintorni". Sottomisura 16.2 INNOVACEREALI "Tecnologie innovative per le filiere avanzate di frumento duro e tenero"

25/01/2018 – 25/01/2018 – Siena

Workshop progetto PIF "Cereali Sovicille e dintorni". Risultati del primo anno del progetto Sottomisura 16.2 INNOVACEREALI "Tecnologie innovative per le filiere avanzate di frumento duro e tenero"

28/11/2017 – 28/11/2017 – Siena

"Giornata incontro teorico pratica sulla gestione delle micotossine" per il PIF "Cereali Sovicille e dintorni", progetto Sottomisura 16.2 INNOVACEREALI

PARTICIPATION IN RESEARCH PROJECTS

Tecnologie innovative per le filiere avanzate di frumento duro e tenero. INNOVACEREALI

Research project funded by the Tuscany Region under the Bando Programma di sviluppo rurale 2014-2020 – Progetti integrati di filiera (PIF fase 2) – PIF "Cereali Sovicille e dintorni" Sottomisura 16.2. The main role of the UNISI partner in the project was to assess the toxicological risk related to the use of fungicides on agricultural ecosystems affected by wheat crops. The research was conducted using soil organisms such as earthworms as bioindicators, and a set of biomarkers was tested on them. The study aimed to provide recommendations for biodiversity conservation in agricultural areas. Scientific Leader: Prof. Silvia Casini."

La Bottega Alimentare della Sostenibilità – Identità – Qualità. BASIQ

Research project funded by Tuscany Region (PSR 2014-2020). The role of the UNISI research group was to assess the presence of persistent and non-persistent pollutants and biotoxins in the products of the short supply chain involved in the project. Scientific Leader of the research unit: Prof. Silvia Casini.

An interdisciplinary approach to unravel the effects of combined exposure to chemical pollutants on insect pollinators – POYPOLL

Research project PRIN 2023-2025 (prot. 2022MWASET). The role of the UNISI research group is to assess the effects of various agricultural compounds on three pollinator species exposed in the laboratory. Scientific Leader: Prof. Fabio Sgolastra (University of Bologna). The project involves three partners: University of Bologna, University of Milano, and University of Siena.

Assessing the effectiveness measures on pollinator decline: an integrated multi-biomarker approach - AEM-POLLY

Research project PRIN 2023-2025 (prot. P2022YWSSX). The role of the UNISI research group is to assess the effectiveness of mitigation measures by evaluating the health status of wild pollinator species. Scientific Leader: Prof. Silvia Casini (University of Siena). The project involves the University of Bologna.

REVIEWER FOR JOURNALS

Ecotoxicology and Environmental Safety

Environmental Toxicology and Chemistry

ANALYTICAL TECHNIQUES

- Assessment of the presence and effects of micro and macroplastics in biota
- Evaluation of total antioxidant capacity (TAS), presence of intracellular free radicals (respiratory burst), and immune system activity through lysozyme activity in animal matrices using a spectrophotometric plate method (Multiskan Skyhigh Thermo Scientific)
- Assessment of enzymatic activity of type B esterases (acetylcholinesterase, butyrylcholinesterase) using a spectrophotometric cuvette method (Perkin Elmer, Lambda EZ 201) and plate method (Multiskan Skyhigh Thermo Scientific)
- Evaluation of glutathione-S-transferase (GST) enzymatic activity using spectrophotometric cuvette (Perkin Elmer, Lambda EZ 201) and plate (Multiskan Skyhigh Thermo Scientific) methods
- Assessment of oxidative stress by evaluating lipid peroxidation (LPO) using a spectrophotometric method (Perkin Elmer, Lambda EZ 201)
- Evaluation of polycyclic aromatic hydrocarbon (PAH) metabolites in bile and enzymatic activity of ethoxyresorufin-O-deethylase (EROD) through fluorimetric testing (Perkin Elmer LS50B)
- Determination of Vitellogenin (Vtg) and Zona Radiata Proteins (Zrp) concentrations using the Enzyme-Linked Immunosorbent Assay (ELISA), indirect method
- Genotoxic damage assessment using comet assay and cytogenetic techniques (Olympus BX41)
- Genotoxic damage evaluation through the Erythrocytic Nuclear Abnormalities (ENA) assay using cytogenetic techniques (Olympus BX41)
- Quantitative evaluation of total proteins via spectrophotometric method (Perkin Elmer, Lambda EZ 201)
- Extraction of porphyrins from liver, excreta, and blood, and fluorimetric determination of acidic porphyrins: coproporphyrins, uroporphyrins, and protoporphyrins (Perkin Elmer LS50B)
- Protein extraction from plant and animal tissues and electrophoretic analysis (one-dimensional and two-dimensional)
- Qualitative and quantitative determination of proteins via Dot-blotting
- Protein presence analysis through Western blot
- Extraction of antioxidants, polyphenols, and flavonoids from food matrices, determination of antioxidants using FRAP (Ferric Ion Reducing Antioxidant Power), polyphenol determination via the Folin-Ciocalteau method with spectrophotometric reading

- Thermal stress assessment on pollen and thermal and saline stress on seeds
- DNA extraction from plant and animal tissues, quantitative and qualitative analysis of the extraction product, PCR, and gel analysis of amplification products
- PCR Real-Time analysis for the presence/absence of a component in food matrices
- Pesticide residue analysis in animal and food matrices using LC-MS/MS and GC-MS/MS
- Knowledge of hydroponic plant cultivation for research purposes

Autorizzo il trattamento dei miei dati personali presenti nel CV ai sensi dell'art. 13 d. lgs. 30 giugno 2003 n. 196 - "Codice in materia di protezione dei dati personali" e dell'art. 13 GDPR 679/16 - "Regolamento europeo sulla protezione dei dati personali".

Siena, 14/02/2025 Agata Di Noi