



Ph.D. WINTER SCHOOL

of the Italian Society of Agricultural Chemistry

The role of agricultural chemistry to reconcile soil and environmental quality with food needs

Palermo, Italy, 11 – 14 February 2019

School aims

The incoming edition of the Ph.D. Winter School organized by the Italian Society of Agricultural Chemistry will focus on the role of the agricultural chemistry in promoting a sustainable use of the natural resources by ensuring, at the same time, agricultural productions of high quality. The school aims at promoting Agricultural Chemistry among Ph.D. students in a friendly and casual environment. This initiative also aims to provide an occasion for young scientists to exchange and extend their knowledge on subjects related to the soil, plants, environment and their interactions in natural and agricultural ecosystems, including methodological approaches used. The School will include four sessions. The first session will introduce the soil-microbe-plant system as the basis of all agricultural ecosystems. The second and third sessions are mainly dedicated to soil processes, soil biochemical quality and waste water treatment; moreover, some innovative techniques for soil metal investigation will be introduced and discussed. The fourth session will be dedicated to methods for the traceability of agricultural productions.

At last, a practical section will be organized to focus on some biochemical (microbial biomass, activity and community structure) and physico-chemical (NMR, surface area and pore size analysis) methods, very useful to investigate fundamental soil properties.

School Venue

Department of Agricultural, Food and Forestry Sciences
University of Palermo
Viale delle Scienze – building 4
90128 Palermo – Italy
Website: www.unipa.it

PROGRAM

11.02.2019

- 14.30 – 15.15 The Organizing Committee
Introduction to the School and Presentation of participants
- 15.15 – 16.00 Daniel Said Pullicino, University of Torino
The soil environment: linking processes to functions
- 16.00 – 16.20 Coffee break
- 16.20 – 17.05 Antonello Gelsomino, University of Reggio Calabria
Soil organisms: who they are, what they do
- 17.05 – 17.50 Laura Zanin, University of Udine
Cross-talk among nutritional pathways as a strategy to improve nutrient acquisition in plants
- 18.00 - get together

12.02.2019

- Chairman:** Daniela Pezzolla, University of Perugia
- 9.00 – 10.00 Roland Bol, Forschungszentrum Jülich (FZJ), Institute of Bio- and Geosciences (Jülich, Germany)
Isotopic process sourcing of soil N₂O emissions
- 10.00 – 10.45 Roberto Terzano, University of Bari
Application of X-ray analytical and microanalytical tools to study environmental and food samples
- 10.45 – 11.15 Coffee break
- 11.15 – 12.00 Giorgio Mannina, University of Palermo
Advances in waste water treatment for environmental sustainability
- 12.00 – 12.45 Ivana Puglisi, University of Catania
Microalgae: environmental and agricultural applications
- 12.45 – 14.30 Lunch
- 14.30 - 15.30 Roland Bol, Forschungszentrum Jülich (FZJ), Institute of Bio- and Geosciences (Jülich, Germany)
Phosphate fertilizer an opaque resource?
- 15.30 – 18.00 Fabrizio Araniti – Pellegrino Conte – Vito Armando Laudicina – Silvia Rita Stazi (University of Reggio Calabria, of Palermo, of Viterbo)
Laboratory activity (sequential extraction of phytochemicals, ¹H NMR, microbial biomass and activity, sample treatments for heavy metals determination)
(parallel session)

13.02.2019

- Chairman:** Youry Pii, Free University of Bolzano
- 9.00 – 10.00 Irene Murgia, University of Milano
Biofortification: from soil to consumers. Issues and challenges for plant scientists
- 10.00 – 10.45 Michela Schiavon, University of Padova
Crop biofortification with selenium: effects on plant metabolism and content in nutraceuticals
- 10.45 – 11.15 Coffee break
- 11.15 – 12.15 Silvia Celletti, Free University of Bolzano
The exploitation of the crosstalk between sulfur and iron to achieve micronutrient-rich crops
- 12.15 – 13.00 Marco Landi, University of Pisa
Iodine biofortification of crops: effectiveness and effects on plant's metabolism

13.00 – 14.30 Lunch

13.02.2019 **Chairman:** Roberto Terzano, University of Bari and Anita Zamboni, University of Verona

14.30 – 16.00 Trainees presentations

16.00 – 16.20 Coffee break

16.20 – 18.00 Trainees presentations

14.02.2019 **Chairman:** Fabrizio Araniti, University of Reggio Calabria

9.00 – 10.00 Luana Bontempo, Fondazione Edmund Mach

Bulk and compound-specific isotopic analysis for the traceability in agriculture and related food supply chains

10.00 – 10.45 Antonio Caporale, University of Napoli

Multi-element, Sr-isotope and NIR-spectroscopy fingerprints to authenticate the provenance of food products

10.45 – 11.15 Coffee break

11.15 - 12.00 Luigi Lucini, University of Piacenza

Authenticity and traceability of agricultural productions using metabolomics

12.00 - The Organizing Committee

Student feedbacks, poster awards, closing the school

Registration to the School

*The deadline for registration is **31.12.2018**.*

The number of Trainees is limited to 50 participants (PhD students, post docs, scientists, technicians).

Registration fee is 70 € and includes participation to scientific sessions (lectures and practical sessions), coffee breaks, lunches and a digital copy of the book of abstracts.

To complete the registration, Trainers have to pay the participation fee by bank transfer using the following coordinates:

Recipient: Università degli Studi di Palermo, Piazza Marina, 61 – 90133 Palermo (Italy)

Bank: UNICREDIT S.p.A (Via Roma, 185 – 90133 Palermo)

IBAN: IT09A0200804682000300004577

SWIFT: UNCRITMMPAE

Applicants are kindly request to send a copy of the bank transfer, along with their abstract, to Dr. Vito Armando Laudicina at the following address: vitoarmando.laudicina@unipa.it

Poster and abstract presentation

Deadline for abstract submission is **31 December 2018**. Abstract should not exceed one-word page (single spaced, times new roman 12 pt) and authors' names and affiliations should be indicated.

Each participant is asked to present a poster during the School. Posters should match the following size: (80 (w) x 100 (h) cm). Posters will be discussed (5+2 minutes) by each participant during a dedicated poster session on Tuesday afternoon. The Scientific Committee will select the three best posters to be awarded with a prize of € 100.00 each. Selection will be done according to scientific content, novelty and presentation quality and immediacy.

Abstract has to be sent as word file to vitoarmando.laudicina@unipa.it.

How to reach Palermo

The Falcone e Borsellino Airport is about 35 km far from Palermo.
(<http://www.gesap.it/index.php?livello=Gesap&sezione=189&lang=en>)

To reach Palermo from the Airport and vice versa:

by Bus

Autolinee Prestia e Comandè (The bus is outside the Airport Arrivals Area – right side). Step off the bus at the Terminal Central Station (last stop). The bus timetable is:

- from the Airport first trip 05.00 - from 6.30 to 23.30 - every half hour - last trip 00:15
- from Palermo - first trip 4.00 last trip 22.30 - every half hour

One-way ticket price: € 6.30

Return ticket (at the airport): € 10.00

by Taxi sharing

The airport's taxi service is in operation from 06.00 to 24.00 and the taxi rank is to be found outside the Arrivals Area. Fares from the Airport to Palermo (Central Station) or vice versa is about € 7.00 (the taxi will leave when it is full).

Accommodation

Trainers and trainees can book by themselves a single or double room at the Camplus Guest of Palermo (website <https://www.camplusguest.it/hotel/palermo/>). A special fee is reserved for the participants to SICA Ph.D. Winter School as follows:

Standard Double - € 74.00 per room, per night, buffet breakfast included.

Double single use (DUS) - € 54 per room per night, buffet breakfast included.

City tax € 1.50 per person per night, to be paid directly at the hotel.

(Requests and Reservations in Superior Room: Double € 84 - DUS € 64)

To book a room:

- by phone at +39 091 7789000 by naming the event "SICA 2019";
- by mail to: palermo.guest@camplus.it indicating in the subject of the mail the event "SICA 2019";

The Camplus Guest is very closed to the School venue (5 minutes by walking).

Other accommodations are available at:

Hotel de France (€ 30.00 and € 50.00 for a single or double room, respectively) and Hotel Goliardo (€ 20.00 and € 35.00 for a single or double room, respectively). Both hotels are 25 minutes by walking from the school venue. To book a room please send an email to residenze@ersupalermo.gov.it (only few rooms are available).

Organizing committee

Vito Armando Laudicina, *University of Palermo*

Fabrizio Araniti, *University of Reggio Calabria*

Daniela Pezzolla, *University of Perugia*
Youry Pii, *Free University of Bolzano*

Daniel Said Pullicino, *University of Torino*

Laura Zanin, *University of Udine*

Scientific committee

Teodoro Massimo Miano, *University Aldo Moro of Bari*

Stefano Cesco, *Free University of Bolzano*

Roberto Pinton, *University of Udine*

Maria Rosa Abenavoli, *University of Reggio Calabria*

Maria Antonietta Rao, *University Federico II of Napoli*

Luca Espen, *University of Milano*

Giovanni Gigliotti, *University of Perugia*

Claudio Zaccone, *University of Foggia*

Vito Armando Laudicina, *University of Palermo*

Fabrizio Araniti, *University of Reggio Calabria*

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