Unione Zoologica Italiana

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UZI2018
Unione Zoologica Italiana
Lecce 25 - 28 Settembre 2018

COST ACTION 16203 – MARISTEM

– 1st International Training School -

An integrated approach to marine invertebrate biodiversity: evolutionary and functional adaptations

Venue: Avamposto MARE -Tricase porto (Lecce) ITALY

(member of MARS – European network of marine research institutes and stations)

http://www.biodiversitymaretricase.org/avamposto-mare

https://www.facebook.com/AvampostoMARE/

1-6 October 2018

Aims

Invertebrates represent the largest component of biodiversity and the widest evolutionary adaptive radiation on our planet, with more than 2,000,000 morpho-species formally described (95% of the overall animal biodiversity). They include aquatic organisms with relatively simple body plans such as sponges or cnidarians as well as morphologically complex taxa, such as molluscs, echinoderms and protochordates. By investigating life cycles and functional adaptations of marine invertebrates, scientists can learn on the evolution of Metazoa. Moreover, many taxa have been established or are currently emerging as laboratory model systems, simple versions of more complex organisms, contributing to the elucidation of various biological problems. Remarkable examples goes back to experiments on phagocytosis in sea star larvae, the first studies on biological chimeras in corals, the importance of the sea urchin to understand the molecular basis of development, including the “gene regulatory networks” and the discovery of cyclins as molecular controls of cell proliferation, the studies on primitive immunity in colonial organisms (sponges, hydrozoans, corals, urochordates, bryozoans), the plasticity of development, the use of aquatic flatworms for regeneration studies, and the discovery of green fluorescent protein in cnidarians, among many others. Research on marine invertebrates led to some of the greatest scientific advances. Studies on squid biology led to the comprehension of the molecular basis of synaptic transmission; investigations on sea urchin were fundamental for the understanding of sexual reproduction and early development; polychaetes provided key information on the evolution and development of centralized nervous systems; cnidarians offered fundamental insights on aging, stem cell biology and the molecular mechanisms controlling cell differentiation; sponges, placozoans and ctenophora are groups for tracing back the evolution of multicellularity. Furthermore, marine invertebrates are considered an untapped source of new bioactive compounds.

In-depth knowledge of adaptive strategies and developmental patterns of marine invertebrates is mandatory for the comprehension of the organism-environment interactions, their intra-specific and inter-specific relationships, and the functioning of marine communities. The summer school is organized in the framework of a joint agreement of academic cooperation between the Universities of Milan, Padova, Palermo, and Salento (Lecce) and with the support of the CA 16203 MARISTEM. The scientific themes will cover comparative analysis of main adaptive strategies across several invertebrate phyla to raise interest on invertebrate biology and evolution. Finally, this international school will provide the opportunity for exchanges between students of different European universities and can be credited as a Master Course Program, acknowledged by 4 credits (ECTS) through a specific final verification test.

Course structure

Lessons will in English and will consist of lectures, field and laboratory activities and tutorials addressing to morphology, anatomy, ecology, developmental biology (including eco-devo and evo-devo approaches) of selected marine invertebrate groups in the general framework of their reciprocal evolutionary relationships, with focus on their adaptive strategies to various environments, life cycle adjustments, environmental stress responses, and immunobiology.
Active participation will be essential as students will make observations on living invertebrates, carry on experimental bench work, analyse results, and discuss recent bibliography. In addition, communication skills will be developed, including informal interactions with trainers, collaborative work with other participants, oral presentations of their interests, written reports describing the experiments and results analysis.

•Fieldwork: The seaside location (directly on the Strait of Otranto) of the new marine laboratory Avamposto MARE and the availability of the University of Salento research boat "Pelagia" will offer the opportunity for invertebrate sampling by plankton tows, snorkelling, diving (only patented divers).

•Practical work: Students will work on microscopes and dissecting microscopes throughout the course to carry on direct observations of features presented by lecturers.

Contents (Main taxa, Topics, Models)

• Porifera, Cnidaria, Xenacoelamorpha, Annelida, Echinodermata, Hemichordata, Tunicata

• Morphological and functional adaptations (sensory-motor integration, respiration, nutrition, locomotion and reproduction), life cycles and life histories

• Regeneration, aging, reverse development, stem cells

• Stress responses, immunobiology, self-recognition, chimerism.

This course has been endorsed by the Unione Zoologica Italiana

Trainers

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Venue

Avamposto Mare is a new marine laboratory jointly established by the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM), the Municipality of Tricase (Lecce), and the University of Salento (Lecce) at Tricase Porto (map)

HOW TO REACH LECCE

The nearest airport is BRINDISI CASALE airport, connected by regular flights by ALITALIA with the two main national hubs of Milano and Rome and with direct connection to several European cities by low cost companies (RYAN AIR, EASY JET, TUI, VOLOTEA, HELVETIC, JETAIRFLY).

Time planning of shuttle buses connecting Brindisi airport to Lecce (€ 8.00 tickets can be purchased on board) can be found at BUS AIRPORT - LECCE - AIRPORT (http://www.eliostours.it/ita/pagina.asp?id=136).

Airport shared shuttle taxi transportation to Lecce (€ 20 per person) can be booked at SHUTTLE TAXI AIRPORT - LECCE (http://www.airshuttle.it/index_eng.asp)

Direct flights to BARI airport (170 km North of Tricase) can be suitable too by planning a train connection to Lecce. The airport of BARI is connected to Bari train station by an underground train line every 30 min. From Bari central station several southward train throughout the whole day can be suitable to reach Lecce, but not all will make possible to reach Tricase on the same day. Contact the organisation for insights and further instructions.

HOW TO REACH TRICASE PORTO

Train and bus transportation from Lecce to Tricase are available. The organization will help you to find the most suitable and cheapest travel. Limited free transportation by car will be made available (please contact us asap). Participants will need to provide their travel schedule to/from Lecce to the course organisation not later than September 15th.

For Further info please contact our Local Organizer:

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– 1st International Training School –

1-6 October, 2018

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evolutionary and functional adaptations

Registration and deadline

Deadline for registration within August 31st, 2018

Please send applications to: loriano.ballarin@unipd.it, stefano.piraino@unisalento.it and Cc to luisa.talamo@unipd.it

Applications should include full department address, phone, fax, e-mail (see form below) together with a short curriculum vitae, description of the applicant's current research interest, and a letter of presentation written by a tutor from applicant's home institution.

Applications will be evaluated and all applicants will be notified by e-mail.

Maximum number of trainees: 20.

Trainees must be engaged in an official research programme as a PhD Student or postdoctoral fellow or can be employed by, or affiliated to, an institution, organisation or legal entity which has within its remit a clear association with performing research
According to the COST rules, trainees from countries participating in the COST Action 16203 – MARISTEM will be preferred.

COST will cover the expenses of the materials and of lunches break. A support to travel and accommodation expenses will be given to participants of the COST countries in the form of a grant of 150 euros. A special price of 30 euros per night has been agreed at the Hotel Adriatico, in Tricase, for trainees, in double or triple rooms, breakfast included.

All attendees eligible to be reimbursed (both trainers and trainees) at approved Training Schools must sign the meeting attendance list on each day that they attend the event.

All attendees eligible to be reimbursed must also register for an e-COST profile at https://e-services.cost.eu
Each participant must add their bank details to their e-COST profile prior to receiving their e-COST invitation.

Trainees not eligible to be reimbursed:
1. Trainees from COST Partner Members.
2. Trainees from Approved IPC Institutions.
3. Trainees from Approved IO, EU Commission, Bodies, Offices and Agencies.
4. Other Trainees not specifically mentioned as being eligible.

MARISTEM – 1st International Summer School

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01-6 October 2018

APPLICATION FORM

To be sent together with a CV

Please fill all fields

Surname, name:.....

Date and birthplace: .....

Tax code / health service code.....

Address: .....

.....

ID Card / Passport number ID Card / Passport expiry date .....

.....

Mobile phone Cell. .....

E-mail address: .....

Job position.....

Affiliation (*or home address)* .....

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