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Natural products in antiparasitic drug discovery: experimental and computational approaches

Tuesday 18 June – Thursday 20 June 2024

Department of Pharmacy-University of Naples Federico II

Via D. Montesano 49, 80131, Naples, Italy

Training School of the COST Action CA21111 One Health drugs against parasitic vector borne diseases in Europe and beyond OneHealthdrugs

The event is open to PhD, young innovators and senior scientists from both academia and pharma

Description. Natural products and their (semi)synthetic derivatives have played a significant role in the discovery of antiparasitic drugs. Plants and marine organisms have been identified to be sources for the isolation and identification of natural products with very high degree of chemical diversity, making them a generous source of hit structures for drug discovery. The identification of new hits as well as the subsequent hit to lead optimization process rely on both computational and experimental approaches. The focus of this training school will be to explore the principles underlying i) methods for isolation and structural characterization of antiparasitic metabolites from plants and marine organisms, ii) in silico methods for hit identification and optimization, and iii) green synthetic approaches for structural optimization. A combination of lectures and practical work sessions will

provide an engaging experience and help the participants to prepare for playing a leading role in the future research efforts in this field.

Programme

Day 1 (Tuesday 18 June 2024)	
9:00-10:00	Registration
10:00-10:30	Opening
10:30-11:30	Invited Speaker from COST Action
11:30-12:00	Break
12:00-13:00	Lecture1: Bioprospecting and diversity-oriented synthesis (DOS)
13:00-14:00	Lunch
14:00-15:00	Lecture2: Bioprospecting and diversity-oriented synthesis (DOS)
15:00-16:00	Lecture1: Computer aided drug discovery
16:00-16:30	Break
16:30-17:30	Lecture2: Computer aided drug discovery
Day 2 (Wednesday 19 June 2024)	
9:00-13:00	Practical Work, Demonstrations & Group Activities (Bioprospecting and DOS)
13:00-14:00	Lunch
14:00-18:00	Practical Work, Demonstrations & Group Activities (Computer aided drug discovery)
Day 3 (Thursday 20 June 2024)	
9:00-10:00	Invited Speaker from COST Action
10:00-11:30	Challenge-Based Learning: flash-presentations from the Selected Training School attendees
11:30-12:00	Break
12:00-13:30	Challenge-Based Learning: flash-presentations from the Selected Training School attendees
13:30-14:00	Closing remarks

You are invited to **submit your filled Application Form** ([download it here](#)) together with your short CV (no longer than one page) and **an endorsement letter from the supervisor on institutional head paper by 30/04/2024** at the following address: Prof. Marco Persico (marco.persico@unina.it).

Successful applicants will need to create an e-COST account (<https://e-services.cost.eu>) and will receive an official invitation.