

Advancing OneHealthdrugs: Scientific Achievements and Future Perspectives

2-4 September 2026 CET

University of Valletta, Valletta, Malta

Workshop of the COST Action CA21111

OneHealthdrugs and the ecotox paradigm shift towards better drugs in the pipeline

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

The meeting is organized as a half-day workshop on **2 September**, titled "*Scientific Achievements and Pathways for the Future*". This event is part of our thematic meeting focusing on green chemistry topics for antiparasitic drug development.

The **3rd and 4th of September** will be dedicated to open discussions and presentations covering the various topics developed by the OHD COST Action during its final year and reviewing overall achievements.

The primary outcomes of the meeting will be the completion of reporting documents, deliverables, and publications.

This event is organized by the University of Malta, acting as the local organizer. The workshop is coordinated by Professor David Magri in collaboration with OneHealthdrugs.

The University is located at the Valletta Campus, Old University Building.

City: Valletta

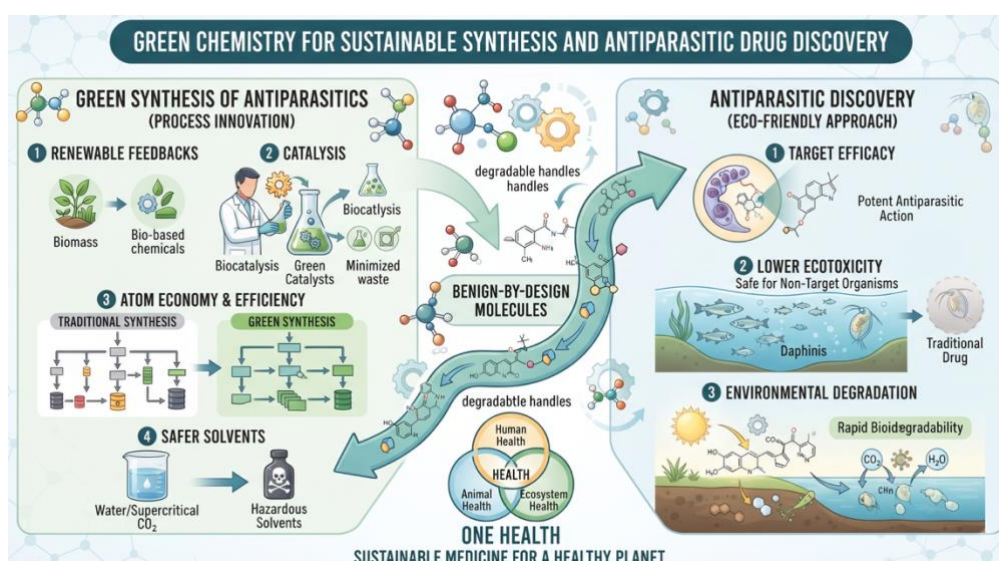
URL - <https://universityofmalta.zoom.us/j/92185670121>

Registration link. Here is the Google Form link to register: Online registration:
<https://docs.google.com/forms/d/1LnPjI0T27IUdBBKebRtwYDkCOPUyLxpy0gMYMdXej7Q/edit>

Introducing the Workshop 2 September 2026

Antiparasitic Drug Discovery

Green chemistry provides a transformative framework for modern pharmaceutical research, aligning the synthesis of active pharmaceutical ingredients (APIs) with environmental protection and sustainability goals. In the context of antiparasitic drug discovery, particularly for tropical and neglected parasitic diseases, integrating green chemistry principles ensures that the race to save human and animal lives does not come at the expense of ecological health. In this workshop presentations on chemical topics and discussion about the Action future will be presented.



Core Principles of Green Chemistry in Drug Discovery

Applying green chemistry to drug pipelines involves redesigning chemical syntheses from the ground up to minimize hazardous waste and resource depletion. Key principles include:

Benign-by-Design Molecular Architecture: Designing molecules that maintain high therapeutic efficacy against parasites while ensuring they readily degrade into non-toxic, innocuous substances once released into the environment.

Atom Economy: Maximizing the incorporation of all materials used in the chemical process into the final product, drastically minimizing chemical waste and byproduct formation.

Alternative Solvents and Reagents: Replacing hazardous, volatile organic solvents (such as chlorinated hydrocarbons) with safer alternatives like water, supercritical fluids, bio-based solvents, or solvent-free conditions.

Energy Efficiency: Optimizing reaction conditions (e.g., utilizing microwave-assisted organic synthesis, photochemistry, or biocatalysis) to operate at lower temperatures and pressures, thereby reducing carbon footprints.

Synergy with the OneHealthdrugs Paradigm

Traditional antiparasitic drug development has historically focused strictly on in vivo efficacy and human or veterinary safety, often leaving ecological degradation (such as the persistence of veterinary antihelminthics or antiparasitics in soil and aquatic ecosystems) as an unaddressed side effect.

Merging green chemistry with the **OneHealthdrugs** approach establishes a dual-benefit framework:

Reduction of Environmental Load: By employing clean synthetic routes, the manufacturing footprint of the drug is drastically reduced.

Prevention at the Source: Designing molecules that are inherently susceptible to environmental degradation prevents bioaccumulation in non-target organisms (such as dung beetles, aquatic species, and soil microbiota), supporting the core tenets of the One Health triad (human-animal-ecosystem health).

Future Directions and Impact

Adopting green chemistry metrics early in the lead discovery and optimization phases allows researchers to filter out problematic compounds before heavy capital is invested in scale-up. Ultimately, this approach drives the pharmaceutical sector toward sustainable innovation, satisfying regulatory expectations while delivering next-generation antiparasitic candidates that protect global health without destabilizing fragile ecosystems.

Presentations on results achievements, discussion and reporting documents finalization. Team work will be organized and presentations for each activity topics will be performed.

PROGRAM Wendsday 2 September 2026

13:30 – 14:30	Registration
14:30 – 14:40	Welcome remarks and introduction (David Magri and Maria Paola Costi)
14:55 – 15:15	<i>Chair presentation of the COST Action : From Action to evidence – OHD Forward look</i>
15:30 – 16:00	Lecture 1: Prof. Giovanna Bosica
16:05 – 16:35	Lecture 2: Dr. Theodora Calogeropoulou
16:35 – 16:55	Coffee Break
17:00 – 17:30	Lecture 3 Invited Speaker
17:30 – 18:00	Lecture 4: Presentation of the OHD position paper: <i>From Action to evidence – OHD Forward look</i>
18:00 – 18:15	Closing of the day
20:00	Group dinner

PROGRAM Thursday 3 September 2026

09:00 - 09:30	<i>Presentation 1 – WG1 and comments</i>
09:35 - 10:05	Discussion and teamwork
10:05 - 10:20	Coffee Break and Group photo
10:20 - 10:50	Discussion and teamwork
10:50 - 12:00	<i>Presentation 2 – WG2</i>
12:00 - 12:30	Discussion and teamwork
12:30 - 13:30	Rich coffee break
13:30 - 14:00	Discussion and teamwork
14:00 - 14:30	<i>Presentation 3 – WG3</i>
14:30 - 15:30	Discussion and teamwork
15:30 - 16:00	Coffee Break
16:00 - 16:30	<i>Presentation 4 – WG4</i>
16:30 - 17:00	Discussion and teamwork
17:00 - 18:00	Discussion and teamwork and closure of the day
20:00	Group dinner

PROGRAM Friday 4 September 2026

09:00 - 09:30	<i>Presentation 5 – WG1 and comments</i>
09:35 - 10:05	Discussion and teamwork
10:05 - 10:20	Discussion and teamwork
10:20 - 10:50	Coffee Break
10:50 – 12:30	Reporting presentations
12:30 - 13:30	Rich coffee break
13:30 - 14:30	Deliverable presentation and meeting closure



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