

Newsletter

SEPTEMBER 2025

Hello!

We are at the end of year 4th of our onehealthdrugs action!

below what happened in July and September

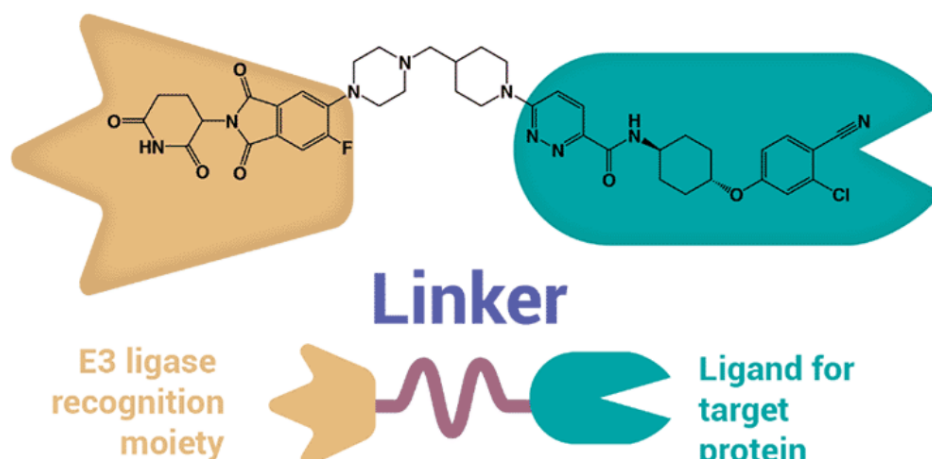
More details on the website www.onehealthdrugs.com

Good reading.

Forthcoming EVENTS

1. 7TH ONEHEALTHDRUGS TRAINING SCHOOL

SYNTHETIC CHEMISTRY OF ANTIMICROBIAL DRUGS AND PROTAC'S STRATEGY -
DRAFT PROGRAM



Abstract:

Training School on Synthesis of Antimicrobials and PROTAC Strategy

Co-organization of University of Modena and Reggio Emilia and University of Bologna

This training school offers an overview of one pivotal and emerging fields in modern medicinal chemistry: the **synthesis of novel antimicrobial agents** and example of the revolutionary **PROTAC (Proteolysis-Targeting Chimera) strategy**. In an era of escalating antimicrobial resistance, the demand for innovative therapeutic approaches is critical. This program will equip participants with the theoretical knowledge and practical insights necessary to address the synthetic aspects and the challenge.

The program is designed for early-career researchers, Ph.D. students, and post-doctoral fellows in medicinal chemistry, chemical biology, and related disciplines. Key topics will include advanced synthetic methodologies for developing new small-molecule antimicrobials, the fundamental principles of PROTAC design, and the application of this groundbreaking technology to combat infectious diseases. We will explore how PROTACs can redirect a cell's own machinery to degrade disease-causing proteins, a paradigm-shifting approach that differs from traditional inhibition. The compounds design and synthesis will be in proposed in the context of greener approaches, including considerations for the ecotoxicity indicators.

Through lectures and interactive sessions, attendees will learn to critically evaluate potential drug targets and design molecules for both antimicrobial activity and targeted protein degradation. The goal of this training is to foster the next generation of drug discoverers by providing the skills needed to innovate and contribute to the fight against global health threats.

Outcome from July-September 2025 events!

1st EVENT

MODENA MEETING 1-2 September FOR THE PREPARATION OF YEAR 4 OF OHD COST ACTION



1. AGENDA

1. WG and HG Leaders present Objectives, Deliverables and planned activities for the YEAR 4

2. Setting specific goals for each WG, in collaboration with HGs
3. Planning in presence and on-line events (2 per each WG, better if co-organised by 2 or more WGs/HGs)
4. Schedule WG/HG meetings
5. Draft of 4th WBP
6. SCIENTIFIC PLANNING/STRATEGIES/WHO DOES WHAT

2nd EVENT

ON LINE workshop

Advanced Technologies Integration into Medicinal Chemistry Programs

June 30th, 2025

Online, from 14:00 to 16:30 CET

Description. This workshop aims to showcase how advanced technologies—such as AI-driven drug design, high-throughput screening, and omics integration—can be strategically applied in medicinal chemistry pipelines. Emphasis will be placed on supporting the OneHealthdrugs mission: coordinating the discovery of drugs that effectively combat vector-borne infections in both human and veterinary medicine, while adhering to optimal efficacy profiles across species. Participants will explore tools that enhance target specificity, accelerate development, and reduce environmental impact, fostering cross-disciplinary collaboration aligned with One Health principles.

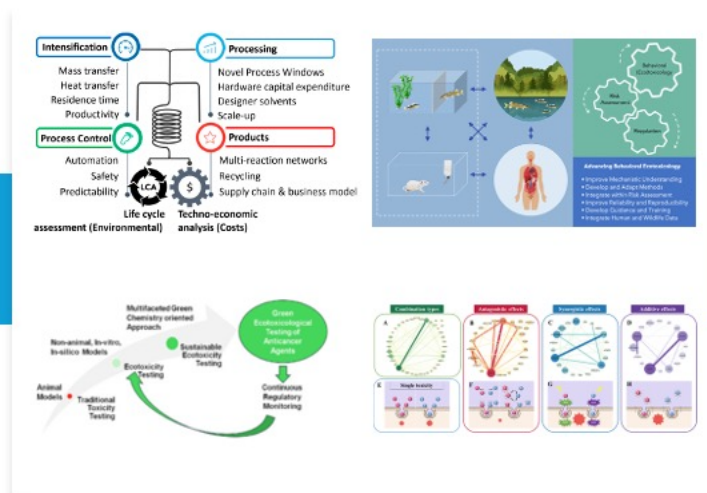
More information on the meeting outcome at:

<https://onehealthdrugs.com/events/scientific-meeting/next-meeting/>

Advanced Technologies Integration into Medicinal Chemistry Programs

online OneHealthdrugs workshop

June 30th, 2025
Online, from 14:00 to
16:30 CET



3rd Event

3–4 July 2025:
COST21111 Workshop: Integrating Chemoinformatics and Ecotoxicology for Sustainable Drug Discovery (<https://molekule.net/css2025/programme.html>)

Organised in collaboration with the Erasmus Mundus Chemoinformatics+ (EMJM) project, this hybrid event features leading experts in cheminformatics, toxicology, and sustainable drug discovery.

Hackathon event: Maria Paola Costi announced an upcoming hackathon, starting next week, involving Daniela, Lorenzo Marchetti, other master's students, and Sharath. The hackathon has focused on “10 Targets for medicinal chemistry projects” protein targets involved in parasitic medicinal chemistry projects. The results of this hackathon will be discussed, and while not many results are expected immediately, it's considered a starting point for future discussions. The activities can also be followed remotely.

4th event

Meeting on Nantes



MINUTES

The 33rd Annual GP2A (Group for the Promotion of Pharmaceutical chemistry in Academia) Conference was officially opened with a warm welcome to all participants at Nantes Université. This year's edition was marked by a significant milestone, as GP2A proudly partnered with the COST Action OneHealthdrugs and the Paul Ehrlich Euro-PhD Network. This joint initiative successfully fostered new collaborations, broadened perspectives, and laid the groundwork for future directions in pharmaceutical research.

A notable highlight was the Thursday morning session dedicated to COST Action OneHealthdrugs, which was met with strong interest and attendance.

Upholding GP2A's ethos of promoting early-career scientists, the conference provided a platform for 25 oral communications by young researchers, alongside 25 flash poster presentations and 77 posters presented across three sessions. These contributions were considered for various conference awards and were critical in promoting dialogue between junior and senior researchers. More than 100 participants to the COST session! The Organising Committee extends its heartfelt appreciation to all speakers, participants, and sponsors for their enthusiastic support and engagement in making the joint Conference a resounding success.

Participants are invited to save the date for the 34th Annual GP2A Conference, which will take place in Gothenburg, Sweden, from August 26th to 28th, 2026!

5rd event

HG4 meeting for young researchers and investigators will have a new format!

Organization of **interactive learning session focused on vector-borne parasitic diseases**, with a special emphasis on the active involvement of young researchers. The core idea is to provide a platform for early-career scientists to present their own real case studies around key thematic areas (Computational, Medicinal and Green Chemistry, Pharmacology and Parasitology, Ecotoxicology...), fostering peer-to-peer learning and encouraging interdisciplinary dialogue.

5.1 OHD Young Researchers' Interactive Learning Session

Chemoinformatics Approaches to Vector-Borne Parasitic Diseases in a One-Health Context

Date: 24 July 2025

Time: 15:00 – 16:30 (CEST)

5.2 OHD Young Researchers' Interactive Learning Session:

“Green Chemistry Strategies and Sustainable Approaches in Medicinal Chemistry”

Date: 25 Sept 2025

Time: 10:00 – 11:30 (CEST)

Online Meeting

Key aspects discussed include:

- Purpose: The session aims to foster cooperation and collaboration, allowing participants to learn and interact with individuals from diverse backgrounds and expertise. It's described as a "win-win situation" where everyone benefits from the exchange of knowledge. The overall goal is to help solve "real complex problems."
- Logistics: Elisa Uliassi plans to send an email with a Doodle poll to determine the most suitable day for the session, ensuring maximum participation.
- Expected Outcomes: It is hoped that the session will generate "some new ideas" and help "improve our work."
- Participation: Elisa Uliassi expressed her hope that the group's young researcher members, estimated to be about 100, would attend these sessions, highlighting that their contribution is "highly valuable."

- **YRI learning session**

A discussion was held on how to organize YRI learning sessions. The sessions will be organized to actively engage young researchers in interdisciplinary learning focused on vector-borne parasitic diseases. Early-career scientists will present real-world case studies under thematic areas such as Computational, Medicinal and Green Chemistry, Pharmacology and Parasitology, and Ecotoxicology. This formed the core of Interactive Activity: *Case Study Presentations*, encouraging peer-led learning and diverse scientific perspectives. Each presentation will be followed by a structured *Peer Review & Feedback* segment, promoting critical thinking, constructive dialogue, and collaborative problem-solving. The format successfully will empower YRI to refine their communication skills while fostering cross-disciplinary insights, as well as increase young researchers' participation across all activities.

6th event

6th OHD TRAINING SCHOOL

Expression, purification and basic characterization of target protein samples for drug binding studies

Monday 8 September – Wednesday 10 September 2025

Latvian Institute of Organic Synthesis, Riga, Latvia

OHD website

<https://onehealthdrugs.com/events/training-schools/>

biochemical and biophysical studies that can lead to the characterization of the potency and binding mode of potential inhibitors, substrates or ligands. This training school aims to provide basic knowledge and hands-on experience on protein expression protocols using bacterial cells, protein purification methods, and biophysical techniques for the rapid assessment of protein stability and purity. The course will feature a combination of lectures and practical laboratory activities.

It was organized by Emilio Parisini and Team.

Thank you Emilio and all Team!



TRAINING SCHOOL Expression, purification and basic characterization of target protein samples for drug binding studies



Monday 8 September
Wednesday 10 September
2025 Latvian Institute of
Organic Synthesis, Riga, Latvia



7th Event

Imaging and biosensor strategies in drug discovery for Vector-Borne Diseases

<https://onehealthdrugs.com/events/scientific-meeting/next-meeting/>

Friday, 26th September 2025 14:00-17:00 (CET)



We are pleased to announce the upcoming online event, "**Imaging and biosensor strategies in drug discovery for Vector-Borne Diseases**," scheduled for **September 26, 2025**. This meeting, chaired by Theodora Calogeropoulou and Guy Caljon, will bring together experts to explore the latest advancements in combating vector-borne diseases.

The program is designed to provide a comprehensive overview of cutting-edge research and collaborative initiatives. We will begin with an update on the **OneHealthdrugs COST Action**, highlighting the progress and future of this important work.

The core of our discussion will feature three main topics:

- **Target Identification:** Eva Gluenz will open the scientific talks by presenting her research on Leishmania proton pumps, a potential new avenue for drug targeting.
- **Novel Tools & Techniques:** Mourad Elhabiri will showcase how "bioinspiration" can lead to functional fluorescent tools for parasite cell imaging, while Konstanina Stavropoulou will discuss the synthesis of fluorescent probes designed for a specific InhA inhibitor.
- **Nanoscale Characterization:** We will also explore the microscopic level of drug interaction with Maryam Ali's presentation on using photothermal spectroscopic imaging to characterize antimicrobial effects in a model system.

This event is a fantastic opportunity for researchers, students, and professionals to engage with the latest interdisciplinary strategies in drug discovery. We look forward to a dynamic and informative session.