



## **Newsletter December 2023 - a reflection notice on the past and new year of our OHD COST ACTION**

Dear All,

I am sending the Newsletter December 2023 to call your attention to some important results of our first year as OneHealthdrugs COST Action. Herein the key outcomes from the first working period, emphasizing the completion of the financial reporting, which had been submitted by the deadline of October 30 and introduction to the Grant period 2 (YEAR 2 of the COST Action) in the same level will be presented.

This letter reflects the Core Group meeting held on the 1st of December 2023.

### **Focus on the goals and plans for the upcoming Second Grant Period (end GP 1)**

During this session, financial aspects were meticulously reviewed. Each point of the agenda was breakdown, including features and justifications. Notably, expenses for various meetings were scrutinized, with particular attention given to instances where funds were allocated but not expended. For those activities requiring financial support, detailed expenditure reports were presented. The total expenditure amounted to approximately €152.341 euros.

A noteworthy point is the return of €1,872.69 to the COST Action. Despite attempts to redistribute this amount among institutions hosting workshops, 1.4% was given back to the COST administration. This should be avoided for the future and actions will be taken to prevent the return of the grant. The work budget plan was submitted by October 30<sup>st</sup>, but for the following year remains flexible, subject to adjustment based on the evolving situation within certain reasonable limits. We had to submit a precise events Calendar with motivation, dates, hours of the event.

The new financial plan let us the expenditure of 190.000 euros for YEAR 2

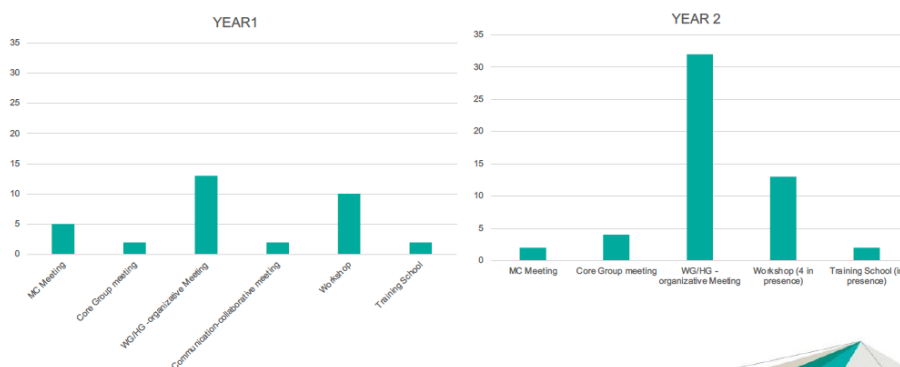
Looking ahead, the financial plan may require adjustments based on actual expenses. An example is the Short-Term Scientific Missions (STSM). Last year the initial plan was almost €27,000, but the actual expenditure was €20,000, leading to a reallocation of funds. Part of these funds were used for the Giessen in presence meeting.

### **Events planned and under planning represent the huge effort by our Leadership teams**

Reflecting on the inaugural year, it is pointed out the organization of 34 events in the first Grant Period (YEAR 1 of the Action), inclusive of several minor ones. All these events were recorded on the COST platform as official activities, encompassing MC meetings, Core Group meetings, and collaborative organizational meetings. Responding to suggestions from the COST officer, for the Year 2 (Y2) there was a proposal to augment the number of Working Group (WG) operational meetings, especially those of an organizational nature, to closely monitor the development of activities within each WG. This was seen as a strategic approach to ensure positive progress toward established goals.

A focal point was the need to review the allocation of grants. During Year 1, ten awarded grants (STSM and conference participation grants) had been distributed based on project evaluations and not through competition. This was due to the late starting of the Action in Y1. In the upcoming 2nd Year, the distribution has already shifted towards a competitive evaluation process. The two conference grants, one for dissemination and the second one dedicated to ITC, will remain the same as for YEAR 1.

## EVENTS YEAR 1 and YEAR 2



**Training schools** were successfully requested by many applicants from different Countries and attended as planned. In the Y2 we devised 2 training schools with an higher number of attendee supported by the Action. One will be focused on natural

compounds, green chemistry and environmental impact; the second one will be focused on parasitology in vitro studies within One Health concepts. This last one will be performed in Poland, Warsaw on the next September 2024.

### **In presence meetings represent a strong effort for OHD – thanks to all organizers and participants**

During Year 1, 2 in presence meetings have been performed, one in Modena by the end of January 2023, and one in Giessen in September 2023. For the next year we are planning 4 in presence meetings: Porto in May 2024, in Rome July 2024 and Oxford in July 2024 and finally in Athens in September 2024. So, we follow the suggestions collected from the network participants and by our project officer Lucia Forzi, to intensify the in-presence meetings.

### **Without a high number of publications stemming from our COST Action, is our fingerprint!**

The low number of publications (11) compared to the participant count have been observed, emphasizing the need for greater recognition of OHD in publications related to its topics. Recognizing OHD in affiliations is crucial, as it reflects collaborative efforts, an aspect deemed highly important, there is a recognized need to reinforce the visibility of collaborative work through publications. To facilitate the submission of more contributions, the **ACS infectious diseases Special Issue extended the deadline for submissions to 1<sup>st</sup> March 2024.**

### **The Surveys are essential glue for OneHealthdrugs' life**

This is an important monitoring and programmatic initiative. The Surveys are thought to characterize and enhance the network participant profiles and to collect information for further activities. Outcomes of the surveys conducted during the first Grant Period (GP). Noting the substantial number of surveys conducted in 1<sup>st</sup> GP, these initiatives were aligned with capacity-building objectives, focusing on scientific and collaborative dimensions. The surveys included:

1. **WG.6 Survey** on research perspectives for drug development targeting vector-borne diseases and environmental impact. About 100 responses were collected, a first paper is under writing. The survey will continue the next year and represent an entry survey for all new network participants.
2. **WG.2 Survey** on Compounds Database—credited to Ulrike for efficient preparation. Survey related to compound collection (chemical compound structure database, on virtual collection). A paper is under writing during Year 2.
3. **WG.3 Survey** related to the compounds collection (chemical compound structure database, on virtual collection). Compound profile was defined for hits and leads as antiparasitic agents. The aim was to collect the compounds and set-up a database containing those compounds and others.

Regarding WG.2 survey. The survey results were already accessible on the website, but we need to emphasize the importance of translating this into a finalized paper. The structure was established, and

efforts were underway to ensure its completion, with a potential publication in an ACS special issue for OHD.

There is the need to efficiently collect databases and ensure operational functionality for **WG.3 Survey**. During YEAR 2 a Database will be established and will be usable. This is part of the expected Deliverable.

Therefore, during YEAR 2 the Surveys will be translated into communication in paper format.

In YEAR 2 we will have more Surveys:

**4 Survey on the “Available technologies within COST Action OHD”** and spearheaded by Theodora. This will be distributed by WG2 with the aim of exploring the technologies of the network and make the information available internally in the network and to stakeholders to support new interactions and use of the same.

**5. Survey** is coming by Theo Zacharis and will focus on WG.6 goals such as exploitation.

In summary, the emphasis is on increasing publication recognition for OHD-related topics, coupled with a detailed overview of the ongoing surveys and their respective objectives.

**The report about the COST policy as a monitoring outcome of YEAR 1 shows our capacity to involve our OHD network**

The report was taken aback by the report from the COST office on our OHD Action, which delineates the network's categorization based on various criteria. These criteria encompass different sections such as gender, research status (distinguishing between young and senior researchers), and country of origin (ITC, non-ITC, etc.). This report represents the 1st evaluation of the OHD Action performance by the COST Office.

After 12 months of the start of this Action, the following was described:

<b>Career Stage: Young Researcher and Innovators (YRIs)</b>					
	% YRI MC Members(8)	% YRI WG Members(9)	% YRI in mandatory leadership roles(10)	% YRI in other leadership roles(11)	% YRI in all leadership roles(12)
Action CA21111	11%	31%	20%	17%	19%
All Actions(1)	20%	42%	21%	32%	25%

We are below the average of ITC in leadership positions and ITC in mandatory leadership roles.

Each of these tasks, as denoted by the numbers sourced from the network content, allows for diverse categorization and identification of leadership positions within the network. Currently, there is a shortfall in the expected number of Young Researcher Investigators (YRI) holding leadership roles or positions in Working Groups (WG).

The roles and activities of HG.5 led by Elisa Uliassi (EU), emphasizing increased efforts for YRI within the Action was essential and it will be for the next YEAR. Notably, young proposals accounted for 17%, and female representation was at 50%, reflecting positive dynamics. However, comments were made acknowledging that certain categories, absent during the proposal phase, had evolved since.

These encompassed geographical diversity and COST inclusiveness, aligning with the policy of inclusiveness targeting specific countries. Evaluating our progress against the proposed targets based on geographical diversity, for instance, ITC representation in Management Committee (MC) members reached 61%, slightly exceeding the average of 57.6% across all actions. In the context of ITC - MC members within our construction, we achieved 59%, outperforming the average of 56% in all actions. The representation of ITC members among WG leaders stood at 48%, which, while slightly lower than the general average of 51%, remained comparable.

In summary, the discussion highlighted both positive aspects and areas for improvement, particularly in ensuring increased representation of YRIs in leadership roles and adapting to evolving categories within the network.

Recognizing the need for increased involvement of younger researchers (YRI), immediate actions were taken in collaboration with EU. Additional team members have been incorporated, actively engaging in performance-related activities. The objective is to encourage young researchers to participate more actively in our network. Activities addressing gender balance, particularly in leadership roles, are underway.

To enhance our efforts, especially concerning leadership roles encompassing 51 countries, it is imperative to further involve and implement strategies tailored for younger researchers.

Regarding **Stakeholders involvement**, the following initiatives were initiated as part of the COST policy and our work budget plan (WBP). Some instruments and activities have been included in the YEAR 2 WBP.

### Stakeholders involved during YEAR 1 and for YEAR 2.

#### Describe Action's plans to implement **SC Recommendation(s)** and COST policy in the future \*

For WP2 the Action will focus in particular toward the dissemination and communication activities, reinforcing the contacts established during the WP1 with stakeholders and networking with other networks in Europe and US (e.g. European Lead factory -ELF, **UniGREEN** (<https://unigreen-alliance.eu/about-unigreen/institutions/>) **Paul Ehrlich PhD medchem network** (<http://www.pehrlichmedchem.eu>), European Researcher Night One Health Commission, **OHC**, (<https://www.onehealthcommission.org>). Contacts have been engaged with **ISS-OH** ([Istituto Superiore di Sanità | MedilabSecure](http://www.istituto-superiore-di-sanita-medilabsecure.it)), **PARCSYNnet** (Parc.eu). This activity will continue to be promoted via the website and social media, by direct contact with potential stakeholders and scientific publications. In this way the Action should not only gain visibility but especially enlarge the network also beyond the Cost Member Countries. As done so far, the Action will accept new participants based on their expertise and willingness to actively engage into the Action activities.

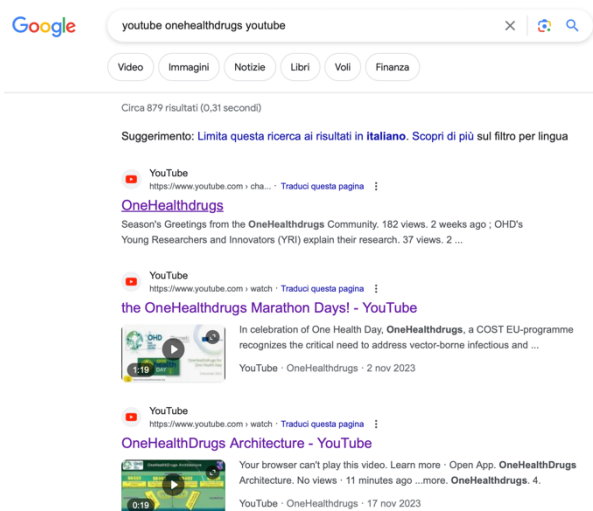
The correct address of the project **PARCSYNnet** is the following one: <https://www.eu-parc.eu> So, we have focused on four key pillars: YRI, ITC, gender, and stakeholder involvement. We have to continue and implement more connections and engagement.

### Conclusions about YEAR 1

Beyond technical and practical achievements tied to capacity building and scientific objectives, the most notable success in this initial year revolves around addressing the intricate connection between drug discovery, development, and their environmental impact across various dimensions. This positive conclusion signifies substantial progress in network members participating to the various events and activities, in awareness and mentality. Numerous projects are now in development, and several papers are slated for publication this year.

### Dissemination activity

We are implementing the dissemination and exploitation activity in YEAR 2 by the new participants Theo Zacharis. His unique profile is considered a valuable asset for our project, OneHealthdrugs (OHD). Particularly noteworthy is his considerable experience in science dissemination. Recognizing the distinct perspective he brings, it should be emphasized that Theo's expertise should become crucial for OHD, and we are invited to collaborate to the future initiatives that will be proposed. For starting, we have now a **OneHealthdrugs youtube channel**.



During YEAR 2 the Horizontal group 4 will be active and will perform the planned activities. They have prepared a youtube video for the communication.

You can find the youtube video at the following address:

[https://www.google.com/search?client=safari&rls=en&q=onehealthdrugs+youtube+channel&ie=UTF-8&oe=UTF-8#fpstate=ive&vld=cid:224cf158,vid:gFu3\\_u4J8OM,st:0](https://www.google.com/search?client=safari&rls=en&q=onehealthdrugs+youtube+channel&ie=UTF-8&oe=UTF-8#fpstate=ive&vld=cid:224cf158,vid:gFu3_u4J8OM,st:0)

**Some comments from the OHD members:** the audience and all participants are invited to share their experiences during the 1st Grant Period (GP). **Clara Lima** (CL) emphasized the need to inform OHD participants about their role within the COST Action, treating it as a network event rather than merely an opportunity to attend events and receive grants. CL proposed the creation of "Participant Guidelines" within the COST Action to guide participants in understanding and fulfilling their roles. She stressed the importance of efforts beyond local presence, emphasizing the sharing of experiences and the necessity of thorough preparation for activities and opportunities. **Sheraz Gul** (SG) shared a positive experience with Google Docs, highlighting their effectiveness in disseminating projects and engaging people in proposed activities. **Rolf Düring** (RD) contributed to the discussion, sharing personal experiences and challenges related to multitasking and the need to attend multiple meetings, sometimes concurrently. **Paul Selzer** (PS) proposed consolidating smaller events into larger ones, possibly in person. He also offered to disseminate OHD information at the German Society for Parasitology event in March during 2024.

Overall, we have performed the planned activity, reported in the Memorandum of understanding. We need to acknowledge the substantial effort put forth by participants, with approximately 1000 attendees in 34 meetings during the first year. The work performed by all contributors including WG and Horizontal groups Leaders was excellent in emphasizing the most updated drug discovery and development activities, green approaches to synthetic medicinal chemistry, mechanism of action studies and pharmacology, animal model studies and ecotoxicology approaches other than compounds degradability. In this context important advances have been done in the consideration of the environmental impact in drug development and toxicity management.

**Clara Lima** emphasized the need for the network to contribute systematically to changing the paradigm of scientific production for drug development. She stressed the importance of raising awareness about the issues faced and highlighted the role of surveys in identifying areas for intervention. Clara suggested focusing on survey outcomes to decide on interventions, changes in attitudes, and increased awareness. She proposed planning activities with specific consideration for environmental protection aspects. Clara expressed a positive outlook and suggested taking concrete actions, including the creation of participant guidelines to enhance collaboration and engagement within the network. She wants to move in that direction, and similarly, with the White Paper, we aim to reach a point where our experiences can be acknowledged and discussed.

**Anabela Cordeiro** shared a perspective on the engagement within the Cost Action, highlighting a sense of feeling lost during meetings. Despite being actively involved in the objectives and closely connected with peers, there seems to be a perception gap regarding their contribution. ACS emphasized the need

for financial support to advance collaborative projects, proposing a more targeted approach to involve individuals less active in the action.

**Sheraz Gul** added that success within the consortium often depends on individual initiatives. He suggested individuals take the lead on mini-projects within the COST Action, citing examples like writing a paper on guidelines for the One Health initiative. While funds are available for meetings, there is limited support for basic research. **Sheraz Gul** emphasized the importance of individuals taking initiative, suggesting streamlined communication through platforms like Google Docs for collaborative projects. **Rolf During** acknowledged the challenge of time constraints, especially for young researchers focused on publishing. He highlighted ongoing work related to environmental degradation, emphasizing the need for communication among chemists, biologists, and ecologists.

**Paul Selzer** proposed combining multiple events into one meeting for increased efficiency, given the challenges of resources. He stressed the importance of **face-to-face interactions** for effective communication. Selzer raised concerns about the fast degradation of compounds in the market, particularly in the context of animal health, where stability is crucial.

*In summary, the discussion highlighted the overall positive outcome of YEAR 1 (Grant period 1). It was noticed the need for more targeted engagement, individual initiatives, and streamlined communication platforms, as well as the challenges of limited financial support and the importance of face-to-face interactions for effective communication.*

Maria Paola COSTI (MPC):

I believe we have missed valuable contributions from companies, not necessarily specific ones but companies in general. Their unique perspective, with a more practical view of the problems related to manufacturing and working with materials, could offer insights into addressing issues such as pollution and waste management.

#### **Meeting of the next year 2024.**

It is worth noting the upcoming meeting in Germany, organized by the The German Society of parasitology.

#### **24th Drug Design & Development Seminar**

**mar 12 mar 5PM – ven 15 mar 2024 12PM (CET)**

#### **The Biocenter of the University of Würzburg**

Typically, this event attracts around 60 to 80 people, creating a diverse mix of industry professionals and academics. It has been well-received, occurring every two years, with independent meetings in between. Paul Selzer encouraged the idea of including a presentation from the COST Action participants and the sharing of the LOGO in the DDDS 2024 webpage.

3rd Training School "Natural products in parasitic diseases".

April 2024 -3days school.

WG3, WG4, WG6, HG4, HG5 Thematic Workshop "Animal friendly and environmentally relevant systems to replace or refine animal tests during drug developmental processes for VBD"

I3S, Porto, Portugal, 14-15 May 2024

Workshop "Medicinal chemistry process within the OneHealth perspective for YRI"

8th June 2024 Rome (Italy)

WG1 WG2 Conference "Structural and functional drug discovery for vector-borne diseases".

Oxford (UK) 3-5 July 2024

WG1 WG2 HG7 Thematic Workshop: " Novel leads and drugs for vector borne diseases: Targets and off targets (toxicity and ecotoxicity) and mechanism of action"

September 19-20 2024, National Hellenic Research Foundation, Athens, Greece

4th Training School "Cell culture as in vitro models for newly developed drugs against vector borne parasitic diseases within the One Health perspective".

25-27 September 2024 -3days school. University of Warsaw, Faculty of Biology, I. Miecznikowa 1, 02-096, Warsaw, Poland

## Events *in presence* for the 2<sup>nd</sup> WP for 2024

### List of *in presence* workshops and training schools for 2024.

The Grants awards planned for the second working period:

STSM	ITC CONFERENCE	DISSEMINATION CONFERENCE	VNS
<p>3rd call: closed 15/11/2023 4th call opening: 1 February 2024 deadline 15/3/2024.</p> <p>In total about 10 -11 STSM of 2.500 euro/each in average.</p> <p>All STSM must be concluded before 31/08/2024.</p>	<p>1 GRANT * (award for best YRI contest during the OHD marathon days)</p>	<p>1 GRANT* (award for best YRI contest during the OHD marathon days)</p> <p>* IVAN BASSANINI * MARKO JURIK</p>	<p>Theo Zacharis</p>

### Activities associated to the Specific goals for the 2<sup>nd</sup> Working Period

Publication plan	Dissemination plan 1	Dissemination plan 2	Structural biology (Cecilia Pozzi) (From WG1)
<ul style="list-style-type: none"> <li>ACS infectious disease issue finalization 1 March 2024</li> <li>Other papers? Make a list please!!</li> </ul>	<ul style="list-style-type: none"> <li>Specific partner to be involved</li> <li>One Health day 3NOV24</li> <li>Women in STEM day 11Feb24</li> </ul>	<ul style="list-style-type: none"> <li>2<sup>nd</sup> Edition Marathon days (20-Nov – 23 Nov)</li> <li>Prize to the 2 best talks YRI</li> </ul>	<ul style="list-style-type: none"> <li>Plan advanced to be finalized</li> <li>Outcome to be defined</li> </ul>

### Projects planned during YR 1 and to be continued/finalized during YR2

<p>Good Database Management Practice (WG1-WG2-WG3)</p> <ul style="list-style-type: none"> <li>Database upload</li> <li>Database management</li> <li>Database use</li> </ul>	<p>Clara Lima project on veterinary drugs and environment</p> <ul style="list-style-type: none"> <li>Specific partner to be involved</li> <li>One Health day</li> </ul>	<p>Drugs &amp; Ecotox (Michael Bertram, Eli Torè, Bryan Brooks, Mirco Bundusch, Rolf) (From WG1-WG2-WG3-WG4)</p> <ul style="list-style-type: none"> <li>Plan advanced to be finalized (to be defined)</li> <li>Outcome to be defined</li> </ul>	<p>Collaborations &amp; projects</p>
<p>Elisa Uliassi + Team (Kahyan, Gulsah)HG4-YRI</p> <ul style="list-style-type: none"> <li>Specific workplan</li> <li>Youtube video</li> </ul>	<p>Dissemination plan by Theo Zacharis (VNS)</p> <ul style="list-style-type: none"> <li>Youtube video</li> <li>Newsletters to stakeholders</li> <li>More LinkedIn activity</li> <li>Internal surveys</li> </ul>	<p>Animal models ?</p>	<p>Collaborations &amp; projects</p>

The limitations of animal models in drug development, should be addressed by emphasizing the current challenges faced in grant applications involving animals without sufficient evidence of their necessity. The integrate collaboration with the ecotoxicologist to identify useful models to address some of the problems linked to the animal use was already addressed in some meeting during YEAR 1 and will be faced again during Year 2. There is a need for enhanced collaborations and projects to address these concerns.

MC members' epidemiological survey (2h), which was proposed by the COST Commission. We need to start this activity, after some discussion and clarifications on this matter. Additionally, we have acknowledged the requests increase the training school and allocate more funds for in-person meetings, aligning with previous suggestions. The decision to double the amount for in-person meetings was influenced by feedback from previous interactions.

Regarding the planned meeting in the UK, it is acknowledged the effort by Marco Mazzorana and his scientific community, its significance and the existing agreement with the Diamond Light Source Synchrotron facilities in the UK (Oxford). While recognizing the importance of this event, we should explore the possibility of allocating additional funds through the COST portal to enhance overall support for the initiative.

Following the project office's (PO) suggestions, the plans are currently fluid. Notably, the two grants for the **ITC conference and the Dissemination Conference** have been awarded to the winners during the OHDs Marathon Days, particularly on Young Researcher and Innovator Day held on November 22. While COST rules limitations prevent financial support for individuals from Africa, a mention is given in recognition to Darline Dize from the Yaoundé University (Cameroon).

Several events are planned for the year, and adjustments can be made if deemed not needed. It is desirable to organizing an event within HG3 (Horizontal Group Stakeholder), focusing on contacts with companies, like the successful event held last year.

**The training school** have seen some improvements and positive attendance, with Sheraz likely sharing more details. We appreciate his constant optimistic view and attitude.

A fourth training school is scheduled for Warsaw (Poland) organized by Katarzyna Goździk in Poland.

Regarding STSM, the first call had limited applicants (only 3), and the outcome will be published soon. The second call opens on February 1 and close on 15 March 2024.

Monitoring goal achievements is crucial this year, because there is a revision of the GRANT PERIOD by October, more detailed than the one performed by the COST officers by the end of YEAR1.

Numerous publications are in progress, making it a promising year for dissemination. Alfonso Garcia Sosa (AGS), WG.5 leader of, is leading the publication list of OHD. MPC and ACS are leading the special issue for OHD publication plan. The deadline has been extended to March 1 2024.

The acknowledgment of COST is crucial for network members. A well-structured dissemination plan should involve external partners, including organizations, companies, and governmental institutions engaged in the action. Policymakers are integral, and their participation in discussions or collaborative work should be encouraged.

Two significant days need celebration this year. On 11 February 2024, with focus on the **Women in STEM day** (suggestions for activities can be provided closer to the date ). International Day of Women and Girls in Science is an annual observance that celebrates the achievements and contributions of women and girls in the fields of science, technology, engineering, and mathematics (STEM). The second one is the **One Health day 3 November 2024**.

**The 2nd edition of the OHD Marathon Days will also be celebrated, (18-21 Nov 2024)** with results presented at the General Assembly. This year's event was deemed a valuable experience.

Specific days are allocated for various topics, allowing for suggestions. Notably, the focus on **good database management practices (GDMP)** is crucial, aiming to update compound databases with high profiles. Veterinary drugs and their impact on the environment, along with animal models, are central themes. A workshop on alternative models is planned, and collaboration with molecular modeling experts is sought for a compound screening project.



A **laboratory description section** will be added as per the project officer's request. Continuous data collection on participant profiles, technology surveys, and a survey on dissemination and exploitation plans are in progress.

Additional efforts involve engaging all countries in a common project developed by the platform, focusing on the veterinary and human medicine situation in each country. This project aims to identify critical issues related to infections.

#### **Leadership roles available, candidature acceptance**

Updates on the need for replacements within the group:

**WG.4 Vice Leader** – Currently held by Anabela Cordeiro, but a vice leader is necessary for collaboration with Rolf During (WG4 Leader).

**WG.6 Leader** – Clara expressed her commitment to her PhD project, prompting the need for someone else to assume the role and assist in managing the topic.

#### **VERY IMPORTANT POINT**

**DURING THIS YEAR 2 WE WILL HAVE DEEP MONITORING BY THE COST OFFICE AND WE NEED TO FILL THE ONLINE FORM AT THE FOLLOWING ADDRESS:**

<https://docs.google.com/spreadsheets/d/1GcC-wuYN0IqP8R7gEiRngDFiWzLoGqxNuwXMm6rnVLE/edit#gid=0>

**PLEASE, INCLUDE ALL YOUR ACTIVITIES AS REPORTED IN THE SHEET. THESE ARE:**

- 1-co-authored publications
- 2-Dissemination meetings funded by the Action
- 3-Other outputs / achievements
- 5-Other dissemination activities
- 4- Projects
- 6-Exploitation activities