

"How to control pathogens in aquaculture?" With Ivona Mladineo, the coordinator of the Horizon Europe project.

As the coordinator of the Cure4Aqua consortium, a significant project funded under the Horizon Europe programme, could you please provide a brief overview of the project's objectives?

The Cure4Aqua project aims to enhance the resilience and sustainability of EU aquaculture by tackling one of its main challenges: the efficient and cost-effective control of pathogens. This is crucial in Europe due to the diversity of species and production systems, which complicates the implementation of tailored good husbandry practices. The project



Ivona Mladineo – coordinator of Cure4Aqua, Institute of Parasitology, Biology Centre CAS Photo: Jakub Hardt

seeks to develop cost-effective vaccines for significant pathogens, identify markers for stress and disease management, create bio-based solutions as alternatives to antibiotics, and develop tools and technology for better health and welfare monitoring. It places a strong emphasis on fish welfare and aims to ensure the environmentally friendly, inclusive, safe, and healthy production of seafood. Research must be at the forefront of positive changes that will ensure our food systems are sustainable while caring about high health and welfare standards for fish. There is an urgent need to solve some of the major shortcomings and constraints that the European aquaculture industry is facing. Cure4Aqua will address these issues by building a co-creative approach with other players interested and involved in the aquaculture sector.

What motivated you to become a coordinator? How many partners are working on the project and how difficult was it to assemble the consortium?

I was invited to coordinate this initiative because the ideas of the consortium and what we would do, have been incubating for some time within a small group of "fish pathologists", but none actually wanted to take the lead. The decision to accept and commit myself was greatly influenced by my active involvement in previous Framework Programmes and the possibility of observing the evolution of needs of the aquaculture sector in relation to what science is currently offering. Aquaculture is mostly a traditional setting and changes are hard to implement, although this is slowly altering and there is a better possibility for the uptake of new technologies, such as mRNA vaccines, or monitoring fish welfare by AI tools.

I am both happy and lucky to have a reliable and highly skilled consortium of partners with whom I previously collaborated and who refreshed the consortium bringing in their own reliable collaborators. The assembling of the consortium was not difficult in terms of finding the partners, but saying no to some due to financial limitations. The consortium we assembled is composed of in total 31 partners affiliated to research institutes, universities, and industry. This breadth of expertise is part of a deliberate strategy to comprehensively address the project's objectives. Our experts range from specialists in aquatic bacteriology, virology, pathology, and immunology to veterinarians, specialists in sociology, economic modelling, biosecurity and also fish welfare. The project's broad thematic areas require meticulous management and oversight. In this context, the role of Work Package (WP) leaders becomes crucial. Their expertise and dedication are vital in steering the project towards its goals, ensuring that each task is executed with precision and efficiency.



While our previous collaborations have facilitated smoother interactions among the majority of



Members of the Laboratory of Functional Helminthology Photo: Jakub Hardt

partners, we also face the challenge of integrating partners that are now facing a type of project administration that is more rigid compared to their known national grants. I would say that for working with a diverse and large group of persons, the main asset is to be patient and stay positive. I admit that sometimes it is hard, but one can achieve more with positive motivation. At the end, we need to leave our frustrations behind and understand that the collective effort and expertise of all partners will direct us in achieving our shared objectives.

How much time did you devote to the preparation of the project, what would you recommend to future coordinators from your experience, what should they pay special attention to during proposal preparation?

We started the preliminary discussions a bit over a year ahead of the submission deadline. It was then that we formed the core group of ten people and talked through the work program and the call topic in detail. We literally broke down the call topic in simple bullet points and added what we called a wish list of ideas that would be worthwhile exploring. Then we sought more partners to cover the expertise necessary for the ideas. I remember many meetings and exchanges of research directions, and although it was a hectic period, it was the most creative part of the proposal preparation. We all met new people with amazingly different approaches to ideas, and I think everyone learned a lot during this process. When finally, the tasks and WPs were created, the preparation of the budget was the most demanding part. Not because it is complicated by itself, but because when I summed up all our needs, we were 50% over the limit. Trimming it down and giving away some tasks was inevitable and it requested a lot of diplomacy from my side. The final proposal shaping took the last two months before the deadline. I did it from home, quite relaxed, but I need to say that all of my partners were incredibly responsive and fast in checking, reading, correcting, commenting and giving their best support.

My journey also highlighted the invaluable support provided by the Technology Centre in Prague, particularly Nada Konickova, whose insights and guidance were instrumental in navigating administrative hurdles. Although we collaborated on the proposal preparation with a consultancy firm that currently is our lead partner for Dissemination, Exploitation and Communication activities, Nada's experience was essential while making some strategic decisions during proposal writing.

Therefore, my recommendations are very simple, but sometimes the most obvious is hard to see.

If you are not as lucky as I was to already have reliable partners, do not be afraid of asking around, at the conferences and meetings, even on social media. Post your expression of interest on the Partners Search Portal, and most importantly, talk to your NCP. They are the most qualified to support you, help you and motivate you during each, sometimes lonely step in the proposal preparation. They are the best guides through convoluted legal and administrative aspects of grant preparation, and they have the best position to network with you.



Do read the call topic thoroughly and all the many additional documents that the topic is referring to. This is maybe the most tedious part, but it pays off to understand what really the Commission is willing to finance.

And lastly, science is changing fast, so think at least a year ahead when preparing a proposal. At the moment of proposal submission to the possible project start it will take at least 8 months, and another couple of months to organise the consortium. The bright ideas discussed in the preparation phase might become obsolete when they actually start, so think in advance.

To shortly sum up, my advice to future coordinators is multifaceted:

- Gain firsthand experience with the HE framework, whether as an evaluator or a partner, to understand the landscape deeply.
- Cultivate strong relationships with experienced partners from various funding schemes, such as Horizon Europe and COST Actions.
- Ensure robust and experienced project support, whether external or internal. Engaging with the Technology Centre at the earliest stages can provide critical guidance.
- Embody a strong personality, prepared to make tough decisions within your consortium, even when they may be unpopular.

Despite the challenges, being involved in a Horizon Europe project offers unparalleled experience and learning opportunities. The journey, though demanding, is immensely rewarding, offering a unique blend of professional growth, collaboration, and innovation.

What is your experience with coordination during the project implementation? Can you please also mention the results that have already been achieved?

As we approach the end of our first reporting period, we have made considerable progress, having submitted several deliverables and reached key milestones. Additionally, the opportunity to present our initial findings at conferences and the submission of articles to academic journals last year marked significant early achievements of our work. We still have a long way to go, and I am looking forward to seeing the research shaping into an application!

So far, the project is progressing largely as planned, albeit with a few delays. We are eagerly anticipating the upcoming Project Review Meeting in Brussels this June, where we will showcase our progress.

My experience in coordinating such a substantial project has underscored the critical importance of maintaining open lines of communication with all partners. It is essential not only to ask questions but to engage deeply, asking follow-up questions and consistently reminding everyone of the project's overarching goals. For this, I am in debt to my Project Manager Anna Holčakova who has excellently and with much energy and enthusiasm embraced a 4.5 years adventure in a topic that was greatly alien to her at the beginning. I cannot imagine doing this without her positive personality. She is a solution- and not a problem-seeker, which facilitates our daily communication and decision-making.

One of the more challenging aspects, beyond the scientific endeavours, has been managing the administrative components of the project. Anna is ensuring that all necessary information and documentation are correctly handled with diligent attention to detail. However, I find that the challenges encountered along the way are overwhelmingly offset by the progress and achievements we continue to realize. The project's success to date is a testament to the hard work and dedication of the entire team, and I am confident that our collective efforts will lead to even more significant results as we move forward.