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# BlueRemediomics

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| **Project Number** | **101082304** |
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| **Funding Programme** | **Horizon Europe** |
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| **Lead** | **EMBL** |
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| **Author(s)** | **Robert Finn, Shriya Raj** |
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UK Research and Innovation

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| | | ▪ | |

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# Glossary

| ACRONYM | DESCRIPTION |
|---|---|
| ABS | Access and Benefit Sharing |
| CA | Consortium Agreement |
| CM | Consortium Meetings |
| D | Deliverable |
| EAB | External Advisory Board |
| EC | European Commission |
| EDI | Equality, Diversity, and Inclusion |
| EU | European Union |
| GA | Grant Agreement |
| GDPR | General Data Protection Regulation |
| GMS | Grant Management System |
| IB | Innovation Board |
| IPR | Intellectual Property Rights |
| MB | Management Board |
| MS | Milestone |
| PCT | Project Coordination Team |
| PI | Principal Investigator |
| WP | Work Package |
| WPL | Work Package Leader |

# 1. Introduction

The consortium working guidelines document is drafted to provide all information pertaining to the **BlueRemediomics** management procedures, implementation processes, such as conformance to ABS, EDI policies, and finally, the code of conduct. This reflects a living document and as such will be revised over the course of the project lifetime by incorporating feedback from partners as well as procedural updates as they evolve.

# 2. Purpose and scope

This document will serve as a practical working guide for the **BlueRemediomics** consortium members. It will provide information with regards to the management structure, communication channels, document repositories, risk management, conflict resolution, conformance to ABS, EDI policies, and the code of conduct for members. This document will not replace EU guidelines for the project execution and documentation, nor established agreements related to the project implementation, namely the EU Grant Agreement (GA) and the Consortium Agreement (CA). These along with the Data Management Plan (D7.2 to D7.4) will be covered in detail in the respective documents and will be referred to briefly here.

# 3. Consortium membership

| BENEFICIARIES | | | |
|---|---|---|---|
| **No.** | **Participant organisation name** | **Short name** | **Country** |
| 1 | EUROPEAN MOLECULAR BIOLOGY LABORATORY (COORDINATOR) | EMBL | Germany |
| 2 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | CNRS | France |
| 3 | SORBONNE UNIVERSITÉ | SU | France |
| 4 | COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES | CEA | France |
| 5 | INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER | IFREMER | France |
| 6 | EUROPEAN MARINE BIOLOGICAL RESOURCE CENTRE EUROPEAN RESEARCH INFRASTRUCTURE CONSORTIUM | EMBRC | France |
| 6.1 | HELLENIC CENTRE FOR MARINE RESEARCH | HCMR | Greece |
| 7 | STAZIONE ZOOLOGICA ANTON DOHRN | SZN | Italy |
| 8 | USTAV ORGANICKE CHEMIE A BIOCHEMIE, AV CR, V.V.I. | UOCHB AVCR | Czech Republic |
| 9 | NORCE NORWEGIAN RESEARCH CENTRE AS | NORCE | Norway |

| | | | |
|---|---|---|---|
| 10 | ACONDICIONAMIENTO TARRASENSE ASSOCIACION | LEITAT | Spain |
| 11 | FONDATION TARA | FTO | France |
| 12 | UNIVERSITY OF THE WESTERN CAPE | UWC | South Africa |
| 13 | ABS INTERNATIONAL | ABSint | Belgium |
| 14 | ERINN INNOVATION LIMITED | ERINN | Ireland |
| 15 | NAICONS SRL | NAICONS | Italy |
| 17 | LATVIJAS BIOMEDICINAS PETIJUMU UN STUDIJU CENTRS | LBMC | Latvia |
| 18 | BOKSTEEN AQUACULTURE | ZILT | Belgium |
| 19 | VALAGRO SPA | VALAGRO | Italy |
| 20 | LERØY SEAFOOD GROUP ASA | LSG ASA | Norway |
| **ASSOCIATED PARTNERS (AP)** | | | |
| 21 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZUERICH | ETH Zürich | Switzerland |
| 22 | UNIVERSITY COLLEGE LONDON | UCL | UK |
| 23 | THE CHANCELLOR MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE | UCAM | UK |
| 24 | THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN | UNIABDN | UK |

# 4. Legal aspects

## 4.1. Grant Agreement (GA)

The EU GA includes all the legal and financial rules along with the project execution and budget. The agreement is entered between:

- the European Research Executive Agency (REA) under the powers delegated by the European Commission (‘European Commission’)

and

- the Coordinator, EMBL
- along with the Beneficiaries who have signed the Accession Forms.

All Beneficiaries have access to the GA through the GMS on the EC Funding and Tenders portal as well as through the consortium’s document repository.

Note - Associated Partners do not sign the GA but are party to the CA. The Associated Partners are required to contribute to the EC technical reporting (continuous and periodic) during and after the project implementation. They are not required to participate in the EC financial reporting.

The GA consists of:

- Terms and Conditions
- Annex 1 Description of Action
- Annex 2 Estimated budget for the action
- Annex 2a Additional information on unit costs and contributions (if applicable)
- Annex 3 Accession forms (if applicable)
- Annex 3a Declaration on joint and several liability of affiliated entities (if applicable)
- Annex 4 Model for the financial statements
- Annex 5 Specific rules (if applicable)

## 4.2. Consortium Agreement (CA)

The CA governs the relationship among the parties (Beneficiaries and Associated Partners), including the governance structure and operational procedures for the consortium bodies, intellectual property ownership and access rights, confidentiality, dissemination, dispute resolution, and [for Beneficiaries only] financial provisions. The Associated Partners are expected to agree to the principles set out in the CA and are specifically expected to commit to the proper implementation of the project tasks since they will be required to contribute to the technical reporting for the EC. They will also be expected to commit to the articles pertaining to confidentiality and security and information obligations, amongst others.

## 4.3. Amendments

Due to the dynamic nature of the project, changes may be required to the GA content (data or options specific to the agreement) or annexes, which will require the submission of a formal amendment request to the EU via the GMS on the EC Funding and Tenders portal. Although the amendment request can be prepared by the consortium partners together, it is only the Coordinator who can launch, finalise, submit and sign the request. Before launching the amendment, the EC Project Officer must be informed of the proposed amendment who will decide if the proposed changes necessitate the amendment and are acceptable. The signed amendment is legally binding and will be incorporated into the GA. The Coordinator is responsible for circulating the amendment to the consortium members.

# 5. Governance structure

## 5.1. Project Coordination Team (PCT)

The PCT of the **BlueRemediomics** project is composed of the two coordinating PIs and the Project Manager. The PCT is responsible for the day-to-day coordination of the project activities, liaising with internal and external stakeholders, serving as the main point of contact with the EC, and organising the matrix of meetings regularly. The PCT members are:
Dr Robert D Finn from EMBL is the scientific and administrative coordinating PI and main contact person for the EC.
Prof. Chris Bowler from CNRS is the scientific coordinating PI.
Dr Shriya Raj from EMBL is the Project Manager and the coordinator contact person.

## 5.2. Management Board (MB)

Managerial oversight for the **BlueRemediomics** project is provided by the MB. The MB is composed of the coordinating PIs, the Work Package Leaders (WPL) and the Project Manager. The work in **BlueRemediomics** is covered by seven Work packages (WP) and each WP is led by two consortium partners. The MB is responsible for formulating the internal policies and plan spanning data management,

ensuring FAIR data/research outputs, and data storage. MB meetings will be organised on a bimonthly frequency.

## 5.3. External Advisory Board (EAB)

The EAB is established to provide advice to the **BlueRemediomics** Consortium on all aspects of the **BlueRemediomics** project. The scope of their advice will cover scientific as well as strategic aspects of the project implementation and furnish ad hoc guidance as required. The EAB members will be appointed by the Project Coordinators for the project duration and will be provided a Terms of Reference. They will report to the Project Coordinators who in turn will share their advice with the Consortium unless specified otherwise. In conjunction with the Project Coordinators, one member of the EAB will be designated as Chair, who will coordinate the responses from the EAB. The EAB meetings will be organised on an annual basis. The EAB may be asked to act as formal or informal ambassadors of the project with external stakeholders. The EAB members appointed are: (i) Prof. Linda Amaral-Zettler from the NIOZ Royal Netherlands Institute for Sea Research; (ii) Prof. Fayza Daboussi, Scientific Director at Toulouse White Biotechnology (TWB-INRAE); (iii) Dr Morten Limborg from the Globe Institute at the University of Copenhagen Globe Institute; and (iv) Prof. Dr Folker Meyer, Head of Data Science at the University of Duisburg-Essen.

## 5.4. Innovation Board

[This will be completed in the next version of the handbook once we have details of the Board Members. Currently, we are not at the point of producing key exploitable results, which makes this less urgent].

## 5.5. Reporting

Per the GA, the project has three reporting periods (RP): RP1 runs from M1 to M18, RP2 from M19 to M36, and RP3 from M37 to M48; the EC reporting months are M19 to M20 for RP1, M37 to M38 for RP2 and M49 to M50 for RP3. The Project Manager is responsible for coordinating the continuous and periodic technical and financial reporting on the project to the EC as well as monitor progress on the project deliverables. The Project Manager will notify relevant Beneficiaries and Associated Partners 1 month in advance of the continuous reporting deadline for deliverables and milestones that are due. For periodic reporting, this **advance notification will be provided 3 months** in advance to facilitate timely reporting. Reporting templates have been created and stored in the document repository and will be shared with the consortium for inputs. For periodic reports, a template will be provided to the relevant partners on a per WP basis. We will also ask the WPLs to help coordinate the report to ensure timely and effective delivery of the report.

## 5.6. Review meetings

The EC review meetings will occur once per reporting period. The EC Project Officer will conduct these reviews to ensure that the project is implemented properly and in accordance with the obligations specified within the GA. The EC Project Officer might be assisted by independent outside experts if required. The Coordinator, and relevant Beneficiaries will be required to provide information and data as requested by the EC and also participate in the review meetings, including with the external experts. The outcome will be a project review report which will be provided to the coordinators, who will have 30 days to respond.

## 5.7 Deliverable Reporting

Similar to the periodic reports, templates for the reports will be provided approximately 30 days before the deliverable due date. If members responsible for the deliverable anticipate delays in reporting on their deliverable, they are requested to notify the Coordinator/Project Manager as soon as possible, so that the EC Program Officer can be informed of the delays. The EC should also send notifications prior to the deliverable due date, which is approximately 15 days.

# 6. Meetings

A matrix of meetings is organised to review project progress and ensure the timely delivery of the project. Listed below are the meetings, composition, their frequency, mode of facilitating, and information flow. All meetings are minuted and circulated to the consortium members for review and inputs if necessary and finalised minutes are deposited in the relevant folder in the project document repository.

## 6.1. MB meetings

Objective: Ensure interoperability and inter-dependability between WPS, formulate internal policies relating to the DMP.
Composition: PCT (Coordinating PIs, Project Manager), WPLs. If a WPL is unavailable an appropriate substitute can be nominated to attend in their absence.
Frequency: Every two months
Mode: Virtual (Zoom).
Information flow: WPLs to PCT.

## 6.2. WP meetings

Objective: WP-specific meetings will focus on review of tasks within their WPs, status update on deliverables and milestones, identify potential issues and implement remedial measures.
Composition: WPLs, WP participants
Frequency: Every two months (organised the week before the MB meeting to ensure information flow)
Mode: Virtual (Zoom)
Information flow: WPLs to MB.

## 6.3. Consortium Meetings (CM)

Objective: Formal CM are held every six months. These will alternate between in-person meetings, i.e. General Assembly and virtual meetings. The agenda will be finalised in the MB meeting and will include a summary of the deliverables and milestones achieved to date, review progress of WP tasks, upcoming deliverables and milestones, discuss results, and immediate plans for the next six months. These meetings will also provide a platform to discuss administrative (e.g. upcoming reporting), legal, financial and other matters.
Frequency: Every six months.
Mode: In-person General Assembly, virtual CM (Zoom).
Information flow: Distributed.

## 6.4. EAB meetings

Objective: To obtain expert guidance and feedback on scientific and strategic aspects of the project.
Composition: EAB members, PCT, WPL.
Frequency: Annually, ad hoc.
Mode: Virtual (Zoom); invitation to attend in-person project kick-off meeting and final conference.
Information flow: EAB to PCT.

All of the aforementioned meetings will be added to the **BlueRemediomics** calendar to enable a single point of reference for finding out when there are meetings.

# 7. Equality, Diversity, and Inclusion (EDI) policies

We want to establish **BlueRemediomics** as a paragon of strong adherence to EDI principles. While each partner will have institutional specific EDI policies, we will strongly encourage all members to embrace a culture of being proactive with respect to EDI. To this end, leadership will advocate EDI principles throughout the project.

During the recruitment of staff who will be employed on this project, we should aspire to make sure that selection panels are composed of mixed genders, the candidates being interviewed reflect diversity, and the impact of unconscious bias is considered and mitigated against during the CV selection and interview process. During the project, we will aim to ensure that we provide equal opportunities for all consortium members to participate in meetings, showcase work and ask questions. We will also monitor the development opportunities provided to staff at all levels, as well as the dissemination activities from an EDI point of view. We will conduct a survey during the course of the grant to understand the perception of EDI and identify areas for improvement. The **BlueRemediomics** website will also be evaluated to ensure that the site is perceivable, operable, understandable, and robust for all users.

EDI will also be considered in the context of external outreach, training, public engagement, and collaborations. We will monitor the audiences with whom we interact in terms of demographics, make sure that venues are accessible, and materials are available in a variety of formats and/or appropriate alternatives (e.g. guides who can verbalise content).

To help promote best practice in EDI, we will arrange appropriate webinars that will be made compulsory to the consortium members.

# 8. Code of conduct

The **BlueRemediomics** project unites a large and diverse group of academic researchers, marine observatories, legal experts, SMEs and larger companies from across Europe and beyond.

The breadth of work planned in the **BlueRemediomics** project is a reflection of a variety of scientific disciplines, which in turn represent diversity not only in terms of research questions but also of the researchers asking them. While this heterogeneity does create challenges, we nevertheless believe that this diversity of data, people, and questions, is also our core strength.

To suitably address this, we have established a code of conduct that embodies our commitment to promote reproducibility and enhance interaction across the consortium. By embracing these principles, the **BlueRemediomics** consortium members and collaborators will create a welcoming and productive community.

**Be welcoming**
**BlueRemediomics** is dedicated to fostering an environment for scientific collaboration that is free from harassment of any sort, including verbal and written language and imagery, targeting an individual or group of individuals. Anyone receiving or witnessing harassment, or is concerned about potentially harassing behaviour, should feel empowered to report it.

**Be respectful**
Maintain a welcoming and supportive environment that cultivates diverse perspectives to be openly shared with the goal of supporting new ideas and novel solutions to current challenges. To acknowledge that language matters and to strive to make conversations that are constructive and inclusive. Within the consortium employ open, transparent, and collaborative values.

**Be supportive, positive, and professional**
Celebrate all accomplishments and acknowledge that failure may be only the first step towards achieving planned objectives. Demonstrate trust and accountability through open and transparent communication within the consortium and to the wider scientific community.

# 9. Green policies

This policy will not cover issues associated with sampling and alignment with Nagoya protocol, as this will be addressed by WP5.

We aim to keep air travel to a minimum during the course of the project. This will be achieved through facilitating a greater fraction of meetings arranged entirely virtual or in a hybrid format. When there is a meeting in person, **BlueRemediomics** partners should consider the use of alternative forms of transport, such as trains. The Management Board will select locations for these meetings that are easily accessible, while retaining the objective of ensuring the broad geographical impact of the project. We will also aim to coordinate meetings with key events, such as public engagement events or conferences (including the final **BlueRemediomics** meeting).

Where possible, we will also try to minimise duplication of computational effort. This particularly applies to WP1, where MGnify will focus on leveraging data already produced within the consortium rather than recalculate data products, such as metagenomic assemblies and MAGs. Similarly, we will try to provide this data to the consortium partners, such that data is only calculated once.

We will also make every effort to reduce waste, which includes minimising the amount of material produced for meetings. If items are produced to promote the project, such as public engagement activities, we will aim to ensure that they are produced from a sustainable source and from within Europe. At **BlueRemediomics** meetings we will try to reduce the amount of meat products consumed through the inclusion of more vegetarian based options.

# 10. Access and Benefit Sharing (ABS) conformance

ABS forms a key aspect of the activities within the **BlueRemediomics** project. To ensure that all **BlueRemediomics** consortium members are aware of their obligations within the ABS domain, they will undergo the necessary training. One session will be facilitated by the WPLs responsible for ABS within the project during the **BlueRemediomics** kick-off meeting and material will be converted into a training guide (D7.7). Any transfer between project partners and/or external collaborators must be accompanied with a materials transfer agreement and the Coordinator and Project Manager must be informed about such exchanges. The list of material transfers will be maintained centrally and used as a reference for managing ABS. Any transfer between project partners and/or external collaborators must be accompanied with a Material Transfer Agreement (MTA) and the Coordinator and Project Manager must be informed about such exchanges. The list of material transfers will be maintained centrally and used as a reference for managing ABS.

# 11. Communication

## 11.1. Internal communication

Internal communication refers to the communication within the consortium.

Three mailing lists have been created by the Coordinator EMBL based on the different categories of participants, i.e. scientific, administrative, or WP specific. All consortium members can post to these lists. To ensure data protection, only the names and Beneficiary/Associated Partner organisation names are stored in the document repository while email addresses are stored in the Coordinator's internal database.

The mailing lists are as follows:
**BlueRemediomics** consortium BlueRemediomics@ebi.ac.uk: this reaches all scientific personnel (Beneficiaries, Associated Partners) associated with the project.
**BlueRemediomics** Administrators BlueRemediomics-admins@ebi.ac.uk: this includes administrative and legal staff from Beneficiary and Associated Partner institutions.
**BlueRemediomics** WPL BlueRemediomics-wpl@ebi.ac.uk: this list covers all the WPLs on the seven WPs of the project.

For more specific questions about the project, please contact either the Project Coordinators (Rob Finn, rdf@ebi.ac.uk, and Chris Bowler, cbowler@biologie.ens.fr) or the Project Manager (Shriya Raj, shriya@ebi.ac.uk).

## 11.2. External communication

External communication refers to communication with external stakeholders. These could encompass exchanges with the EC Project Officer, the EAB, IB, the other project funded under this mechanism, etc. The Coordinator EMBL is the main contact point for the EC and all queries from the consortium to the EC should be channelled through the Coordinator.

**Twitter** - **BlueRemediomics** has a twitter account (@BlueRemediomics), which is controlled by Beneficiary ERINN. In addition to ERINN, the Coordinators and Project Manager can also post to this Twitter account. However, all posts should be channelled through ERINN, who will manage our Twitter campaign. Throughout the course of the project, members are encouraged to share their ideas on useful tweets that will boost promotion of the project. This can be done either directly via email or tagging @BlueRemediomics in your tweets. We would expect people in this project, where @ BlueRemediomics mention to adhere to the code of conduct indicated above.

**Website policies -** The website guidelines and policies will be covered in a separate document. As with Twitter, the website will be administered by Beneficiary ERINN and content controlled by them in conjunction with the **BlueRemediomics** Coordinators. Suggestions for the website will be appreciated, especially any images that would help to promote the project and its applications.

**Publications, Posters, and Presentations** - Due to the number of parallel activities being undertaken in **BlueRemediomics**, members are encouraged to act with freedom in disseminating the project. In the case of presentations and conference posters, members are requested to circulate the abstract and list of authors (where appropriate) to the **BlueRemediomics** mailing list. For publications it is important that all members of the consortium have a chance to comment, as well as verify that members have the appropriate authorship.

Thus, in accordance with the CA, please provide notification of any planned publication at least 30 calendar days before the publication, which should include a near final draft. Any objection to the planned publication shall be made in accordance with the Grant Agreement by written notice to the Coordinator and to the member/ members proposing the dissemination within 20 calendar days after receipt of the notice. If no objection is made within the time limit stated above, the publication is permitted.

**Outreach** - For any events planned, all Beneficiaries are strongly encouraged to keep informed the following personnel: WP6 leads ERINN and FTO along with the Project Coordinators (Rob Finn, rdf@ebi.ac.uk, and Chris Bowler, cbowler@biologie.ens.fr) or the Project Manager (Shriya Raj, shriya@ebi.ac.uk).

**Dissemination** - Beneficiaries who intend to disseminate their results must give at least 15 days advance notice to the other Beneficiaries accompanied by sufficient information on the results they will disseminate.

**Funding Acknowledgement** - Another important aspect is to ensure that funding is acknowledged in the following way:

**BlueRemediomics** is funded by the European Union under the Horizon Europe (RIA) funding programme, Grant Agreement No. 101082304. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the European Union nor the granting authority can be held responsible for them.

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The Swiss Partner on **BlueRemediomics** (Eidgenoessische Technische Hochschule Zuerich) has received funding from the Swiss State Secretariat for Education, Research, and Innovation (SERI) under Contract No. 22.00384.

For posters and presentations, please send any slides and materials to ERINN (Marieke@erinn.eu) and the Project Manager (shriya@ebi.ac.uk).

# 12. Conflict resolution

Settlement of disputes is governed by the Terms and Conditions detailed in the CA. Per the CA, all parties will agree to settle their disputes amicably. Any disputes, controversies or claims arising or relating to this contract will be mediated in accordance with the WIPO Mediation Rules. In the event of divergence from the project objectives, the parties in question will formulate a detailed plan of action along with the MB. In the likelihood of major scientific and technical modifications needed, advance notice will be provided to all consortium members and decisions will be arrived at the CM.

# 13. Document management system

All documentation associated with the project will be stored on Google Drive within a project specific folder. The folder will be uniformly accessible to both the scientific and administrative personnel working on the project. The folder is dynamic and is currently organised as follows:

- Administrative: documentation associated with the GA, CA, Amendment, other
- Scientific: Description of Action, WP-specific sub-directories, list of deliverables and milestones, Gannt
- Reporting: periodic and continuous reporting
- Meetings: consortium meetings, presentations, minutes
- Document templates for all purposes

- Slide deck

# 14. Risk management

The critical risks associated with the project implementation and proposed mitigation measures have been detailed in the GA.

| CRITICAL RISKS FOR IMPLEMENTATION | | |
|---|---|---|
| **Description and level of risk** | **WP involved** | **Proposed risk-mitigation measures** |
| MAGs too fragmented or incomplete for BGC and/or pathway predictions (medium/high). | WP1 | Use co-assembly and/or long-reads sequencing to improve contig length. |
| Metabolomic models are extremely computationally expensive to execute (medium/medium). | WP1 | Reduce the number of organisms and/or inputs to the models. |
| Functional sub-setting of protein families results in excessive targets to experimentally characterise (medium/low). | WP1 | Conduct additional *in silico* modelling and structural analysis to select initial sets; use screening results to improve data. |
| Creation and scale of integrated database (medium/medium). | WP1 | Use of existing annotation tools and smaller datasets; use of new functional annotation systems (ProtENN) to bridge annotation gaps to facilitate better integration of metabolite and reaction data. |
| Expertise lost in WP1, specifically T1.3, due to UK not fulfilling commitment to fund Associated Partner (UCL) (low/medium). | WP1 | Replace expertise lost with EMBL partners who have experience in protein analysis. |
| Application of screening technologies (medium/medium). | WP2 | Selection of products and processes across range of complexity; experimental feedback loop to refine informatics predictions in WP1. |
| Inability to scale-up production, either biomass or metabolite production (medium/low). | WP2 | Conduct metagenomic and metabolomic analyses to rationalise the failure. |
| Expertise lost in WP2 and WP3 due to UK not fulfilling commitment to fund Associated Partner UCAM and UNIABDN (low/medium). | WP2, 3 | Replace expertise lost by leveraging overlapping expertise offered by other members of the consortium, with UWC and SZN taking on the role performed by UNIABDN, and EMBL fulfilling the role of UCAM. |
| Inability to scale-up production, either biomass or metabolite production (medium/low). | WP2 | Conduct metagenomic and metabolomic analyses to rationalise the failure. |

| | | |
|---|---|---|
| Failure of community induction approaches for bioactive expression (medium/high). | WP2, 3, 4 | Use more classical molecular overexpression systems. |
| Delays to TREC expedition resulting in lack of samples (medium/low). | WP2, 4, 6 | Use consortium and wider network to obtain alternative marine samples. |
| Whole microbial communities have no potential as antimicrobial producers or as probiotics for aquaculture (medium/high). | WP3, 4 | Test isolated strains or synthetic consortia based on the metagenomic assessment and the culturomics platforms from WP2. |
| Company participating in the proposal ceases trading (medium/medium) | WP3, 4, 7 | Find alternative capacity within the existing community or identify a new industrial partner. |
| Delay in the fish/shrimp trials (medium/medium). | WP4 | NORCE will strictly control the trials schedule, with monthly check-ins with the involved partners and the industry. If the risk occurs, a flexible timeline has been anticipated. |
| Mortality during fish/shrimp trials experiments (low/high). | WP4 | Strict biosecurity and frequent monitoring of water quality and animal welfare parameters will be performed, as preventive measures. If the risk occurs, a flexible timeline to repeat the experiments and alternative fish/shrimp suppliers have been anticipated. |
| Legal expertise provided by UNIADBN lost due to the UK not fulfilling commitment to fund this Associated Partner (low/high). | WP4, 5 | The consortium does not currently have any other partner with legal expertise. Thus, we would identify a new partner who is based in the EU to replace this expertise. |
| Case studies on 'do no significant harm' generate concern and bad press (low/high). | WP4, 6 | Materials carefully scrutinised before public meetings, active monitoring of media to quickly address fears. |
| ABS and IPR conflicts are unresolvable (low/low). | WP5 | Publish a report on conflicts and possible solutions to shape future discussions. |
| Issues on sharing biological specimens between project partners (low/high). | WP5 | Training, including use of ABS transfer database provided at kick-off meeting. |
| Poor participation of citizens at planned events (low/medium). | WP4, 6 | Appropriate levels of promotional advertising and use of local community networks. |
| No KERs produced (low/medium). | WP3, 4, 6 | Samples and technologies for applications chosen across the range of TLRs to provide good scope for achieving KERs. |
| Inadequate communication and coordination across the project | WP7 | Reviewed at MB meetings, increase number of meetings and progress reports. |

| | | |
|---|---|---|
| (low/medium). | | |
| New COVID variant resulting in reduced working capacity and travel restrictions (medium/high). | All | Adopt flexible approaches, e.g. final conference moved to an online format, prioritise informatics activities in remote working situation to ensure data generation, reschedule wet lab experimental work/deliverables with guidance from EC. |