



Bacterial Accumulation Rules for
Influx, Efflux & Resistance

Project Handbook



Project Partners:



UNIVERSITY OF
BIRMINGHAM



IMPERIAL



University of
Nottingham
UK | CHINA | MALAYSIA

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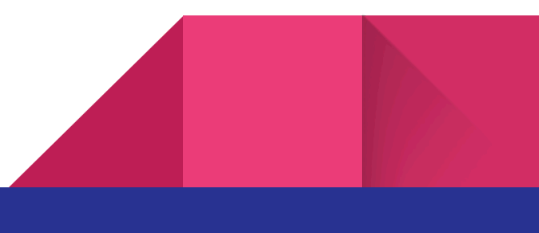
Biotechnology and
Biological Sciences
Research Council



This handbook describes the shared values, expectations, and ways of working for all members of the sLoLa BARRIΣR consortium. It is intended to support effective collaboration, communication, and delivery of our project objectives.

This is a living document and will be reviewed annually by the project team and updated as required.

We gratefully acknowledge the [Valuing Voices Team](#) at the University of York for sharing their project handbook, which provided useful guidance and inspiration in the development of this handbook.



Project Summary

Modern medicine depends on antibiotics to treat bacterial infections, but antimicrobial resistance (AMR) is making these treatments less effective. Gram-negative bacteria such as *E. coli* and *Salmonella* are particularly resistant because of their complex, multi-layered cell envelope, which limits antibiotic entry, and efflux pumps that expel toxic compounds. Together, these mechanisms reduce antibiotic accumulation inside cells, posing a major barrier to treatment and drug development.

Recent research shows that the balance between preventing antibiotic entry and actively exporting drugs varies with bacterial physiology and environmental conditions, though the underlying rules remain unclear. This project addresses these gaps through an interdisciplinary approach, combining experimental and mathematical methods to measure antibiotic accumulation and identify factors controlling it. By modelling these processes, the work aims to optimise antibiotic use, improve diagnostics, and support development of new treatments, while training researchers and advancing understanding of membrane transport.

Our Team

Our Team is led by Professor Jessica Blair, and includes academics, post-doctoral research, and technical staff, postgraduate students, and a project manager.

The Core Academic Team consists of:

- Prof Jessica Blair, Project lead, University of Birmingham
- Prof Sara Jabbari, Project co-lead, University of Birmingham
- Prof Tim Overton, Project co-lead, University of Birmingham
- Prof Andrew Edwards, Project co-lead, Imperial College London
- Prof Mark Webber, Project co-lead, Quadram Institute Bioscience
- Dr Dong-Hyun Kim, Project co-lead, University of Nottingham

Post-doctoral researchers and technical staff:

- Dr Pauline Siasat, University of Birmingham
- Dr Sandeep Shirgill, University of Birmingham
- Dr Ed Douglas, Imperial College London
- Dr Leanne Sims, Quadram Institute Bioscience
- Dr Carver Wong, University of Nottingham

Students:

- Kacie Tamplin, University of Birmingham
- Zofia Burns, University of Birmingham
- TBC

Project Manager:

Ann Smith, University of Birmingham

Our team values

Building, maintaining, and promoting a positive work culture is a central aim of this project. We endeavour to be the type of person we would like to work with by aspiring to meet the following values and behaviours.



Excellence and innovation – work, impact, dissemination

We are ambitious. We hold ourselves to high standards, aim to produce the highest quality work and maximise impact.

We are curious. We embrace continual learning and personal development.

We are reflexive and agile. We evaluate and reflect on our progress and have the flexibility to adapt and change direction where the evidence tells us we need to do so or where there are opportunities to learn more.

We focus on discovery, innovation, and the development of others. We generate new knowledge, develop innovative approaches, build useful resources, and train the next generation.

We consider the bigger picture. We design activities and outputs that will benefit the wider community and society.



Respect – each other, ourselves, the wider community and the public.

We respect each other's perspectives and expertise. We are an interdisciplinary team with diverse expertise and experience. We make team decisions based on discussion and agreement to advance the project.

We communicate clearly and inclusively. By considering others, we maximise the value of our interactions by communicating in ways that speak to everyone.

We make work enjoyable. By building a positive and inclusive team environment, we make work a pleasurable and rewarding experience.

We consider how our actions impact others. We avoid behaviours that negatively affect others and promote approaches that empower all.

We are outward looking. By considering the needs of the scientific community, we develop outputs that benefit others.

We support others. We recognise our responsibility to others, particularly more junior team members, and support their development goals.



Integrity – open and transparent, challenging.

We are open and honest. We strive for transparency in decision making, provide constructive feedback and are open to challenge.

We share our findings. We are transparent about our work, our findings, and our conclusions. We share data freely and efficiently.

We acknowledge each other's contributions. Contributions are recognised and appropriately acknowledged.

We involve others in our decision making. We work as a team to make the best decisions and plans.

We challenge each other. We scrutinise each other's work to ensure robustness and rule out artefacts.



Collaboration – honest, communicative, supportive, mentoring

We facilitate productive collaboration. Clear communication, open sharing to meet agreed goals.

We work synergistically. We play to our strengths, work to avoid duplication and strive to add value to others' work.

We are good team players. We work to support the shared goals of the group rather than just our own ambitions.

We work with other research groups to achieve our aims. We actively identify and work with groups outside our consortium to maximise our success.

We are approachable, kind, and supportive. We provide support, mentoring and guidance whenever it is needed.

Leadership

Jessica Blair has overall responsibility for project direction and management.

Each work package has a PI/Project Co Lead, but many aspects of the programme require collaboration between two or more groups. Within groups, tasks are delegated as appropriate by the PI/Project Co Lead.

ECR team members have the opportunity to develop leadership skills via these tasks, as well as opportunities to supervise project students and their own projects, as appropriate.



Decision making and agile working.

Overall directions of the project are based on those outlined in the proposal document. Significant deviations from this are possible, where the science justifies it and where there is agreement between relevant PI/Project Co Leads. However, we will be mindful of not changing course too often or at the expense of the overall goals of the project.

For specific WPs, decision making is primarily at the discretion of the PI/Project Co Lead's working in those areas, who are free to consult with the wider team as appropriate i.e. not all team members need to be involved in all decision making.



Team Meetings

Regular team meetings take place online approximately every 4 weeks. These are primarily for group updates and decision making. All teams should provide an overview of progress, technical hurdles, needs from the group and next steps. If attendance is not possible, apologies should be provided in advance and key updates shared with the group.

Twice-yearly management meetings will review overall project progress, including objectives, work package delivery, timelines, budget, and risk. The meetings will focus on assessing performance and setting priorities for the next six months.

Additional focussed meetings will be arranged on an ad hoc basis as needed. These could focus on a particular work package, discussion of results, technical discussions on method development or experimental design, or on wider aspects of the project such as dissemination, publication, training, or support. Team members are always welcome to request such meetings if they think they would be useful.

In person meetings will occur on a six-monthly basis and include detailed discussions on progress, ECR development and cohort building activities. Meetings will be scheduled as far ahead of time as possible to maximise attendance and minimise disruption to other activities.



Team Communication

A Teams channel has been established. However, it is primarily expected that email be used to ensure that messages are seen.

Whilst it is acceptable to send messages outside of working hours, a response is not expected outside of your working hours.

It is usually a good idea to reply-all to keep the team in the loop.

When requesting information/guidance/reagents, please provide a desired timeframe.

For feedback on reports, manuscripts, or publications, please allow a reasonable amount of time for people to respond, commensurate with the request.

We encourage a light-touch approach. There is no need for overly formal or polished emails/teams' messages; concise and clear communication is preferred.

Communication of project outputs and activity

It is expected that team members attend relevant conferences, and other fora (within budget) to highlight our work via poster or oral presentations. These may include GRC, BSAC, ECMTB, SMB and Microbiology Society meetings, as well as local and regional meetings.

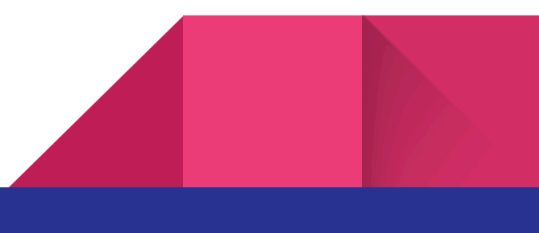
Attendance at meetings and conferences should be discussed in advance to avoid duplication, ensure author credit and efficient sharing of data as needed. Details of attendance should be recorded and shared with the Project Manager.

Conference attendance can usually only be justified by presenting work. Exceptions may be made where the attendee has a significant role in the meeting such as Chair.

Team members are strongly encouraged to apply for travel grants to attend conferences, which will allow more meetings to be attended and may provide additional presentation opportunities.

Presentations, publications, posters and other public-facing outputs should provide appropriate credit to contributors, their host institutions, the BARRIΣR project, and BBSRC as the funder. All outputs should use appropriate project and institutional branding and acknowledge BBSRC support in accordance with the funder's requirements.

It is acceptable to present data from other groups, where appropriate and with full credit following discussion with the people concerned.





Data Storage, Processing and Sharing

Groups that generate raw data are responsible for storage and labelling.

It is expected that data will be shared freely between groups, in a format that is appropriately labelled for use by all parties. Relevant metadata (context, protocols, or other information) should be embedded in files such that the dataset is understandable by other members of the team without needing further explanation.

Any processing of raw data sets should be fully documented (e.g. process of normalisation), and data saved with a new file name to ensure proper version control.



Publications

Team members are encouraged to begin planning papers early, including suggestions for what data should be included, what work is needed for completion, who will do this and who will be included as authors based on CREDIT guidelines.

Any disagreement about how data are published will be discussed by all parties towards a consensus. If a consensus is not reached, the project lead will decide.

Publications can include reviews, methods papers, resource announcements, and other work that would benefit the community. Where possible, and as appropriate, we will favour larger, more collaborative papers with a bigger impact, over smaller, individual papers. However, this will be context dependent and consider individual as well as team beneficiaries.

Sequencing of papers will form an important part of decision making.

Joint first or last authorship will be discussed and agreed by relevant parties. The precise ordering of joint authors will occur via coin toss.



Social Media

We will use LinkedIn & Bluesky.

Team members are welcome to use social media to highlight project activities and outputs where they feel comfortable doing so. There is no expectation that all team members maintain a social media presence.

Please use our project, university, and funder logos, but take care to ensure our reputation is protected.

We will build a website that provides detailed information and interfaces with social media.

Reporting

Our BBSRC progress report is due mid-term (year 3), with an interview at the end of the project. Team members will strive to collect, store, and provide outputs (e.g. conference attendance/talks/outreach activity) for this on a regular basis. Outputs will be collated by the Project Manager via the [project reporting form](#) and ongoing communication with team members.

Addressing Concerns About Team Values

What should you do if you feel a team member is not upholding the team's values?

1. Raise your concern with your line manager, mentor, or another appropriate person.
2. The line manager, mentor or appropriate person will consider the concern and decide on the most appropriate course of action.
3. A brief summary of the concern and any action taken will be submitted to the Project Manager by email: a.m.smith.2@bham.ac.uk who will maintain a confidential record.
4. If a pattern of concerns emerges over time, this will be escalated to Jess Blair, Project Lead, for further consideration.

Quick guide

Item	Details
Project Lead	Prof Jess Blair
Project Manager	Ann Smith
Team Meetings (Online)	Every 4 weeks
Team Meetings (In Person)	Every 6 months
Management Meetings	Every 6 months
Scientific Advisory Board	Annual meeting
Reporting of Outputs	Ongoing
Main communication route	Email
sLoLa BARRIER website	<u>barrier-amr.org</u>