**BactiVac Catalyst Projects Application Form**

Please complete each section (where stated, word limits must be adhered to). Please ensure you refer to the [Catalyst Project Funding Guidance Document](https://www.birmingham.ac.uk/research/activity/immunology-immunotherapy/research/bactivac/catalyst-pump-projects.aspx) for details of eligibility, scope, grant requirements and our policy with regard to publication of information. Reference to our [Privacy Policy](https://www.birmingham.ac.uk/research/immunology-immunotherapy/research/bactivac/BactiVac-Privacy-Notice.aspx) is also recommended. Applicants are encouraged to review the [Terms and Conditions of Award](https://www.birmingham.ac.uk/research/activity/immunology-immunotherapy/research/bactivac/catalyst-pump-projects.aspx)**\*** and discuss these with the relevant departments in your institution at an early stage, as these are non-negotiable in the event of your application being successful.

Applications will be scored according to the scientific merit (60%, including quality of the project and research people & environment), facilitation of cross- network collaborations (20%, especially involving LMIC and industry partners) and strategic impact for the Network (20%, including research impact, routes to further funding, benefit delivered to LMICs, etc.).

**Please note that funding in this round is available from 01 November 2022 and all projects must start by no later than 01 December 2022.**

Please submit your completed application and associated documents **by 10 July 2022 (23.59 hours UK time)** to the BactiVac Admin Team at [bactivac@contacts.bham.ac.uk](mailto:bactivac@contacts.bham.ac.uk). Notifications of awards will be made no later than 27 October 2022.

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| 1. Project title (non-confidential, as successful projects’ titles and lay summaries will be listed on the BactiVac website) |
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| 1. Lay summary (non-confidential; max 250 words) – this information will be used for publication on the BactiVac website for successful applications |
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| 1. Project duration (typically 6 months and must not exceed the maximum duration of 8 months) |
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| 1. Proposed start/end dates (projects must start within 1 month of the proposed start date but no later than 01 December 2022 | |
| Start date: | **End date:** |

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| 1. Total sum requested (GBP) |
| £ |

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| 1. Lead applicant details | |
| Name |  |
| Post Held |  |
| Department & Institute |  |
| Country |  |
| Email address |  |
| Telephone number |  |
| Hours per week on project\* |  |
| Expertise and value to project (max 150 words) | |
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*\*for information only - please note that Directly Allocated (DA) costs for Principal Investigator time supervising the project are not allowable and should not be included in the financial fEC costing.*

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| 1. Co-applicant details |

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| Project co-applicant 1 | |
| Name |  |
| Post Held |  |
| Department & Institute |  |
| Country |  |
| Email address |  |
| Telephone number |  |
| Hours per week on project\* |  |
| Expertise and value to project (max 150 words) | |
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| Is this a new collaboration? | **Yes / No** |
| Extent of collaboration? | **Low / Medium / High** |

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| Project co-applicant 2 (if applicable - please copy and paste this section below, as necessary, to add details for each collaborator) | |
| Name |  |
| Post Held |  |
| Department & Institute |  |
| Country |  |
| Email address |  |
| Telephone number |  |
| Hours per week on project\* |  |
| Expertise and value to project (max 150 words) | |
|  | |
| Is this a new collaboration? | **Yes / No** |
| Extent of collaboration? | **Low / Medium / High** |

*\*for information only - please note that Directly Allocated (DA) costs for co-applicant time supervising the project are not allowable and should not be included in the financial fEC costing.*

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| 1. Project aims and technical summary (max 500 words) |
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| 1. Description of the Proposed Project – include the scientific challenge being addressed, how the project addresses the priorities identified for BactiVac (including alignment to AMR if appropriate), your planned methods, any added-value to other ongoing work, and how the project benefits from the participation of LMIC, industry and/or other partners (max 1,000 words excluding figures and references – max 2 sides of A4 for figures and 2 sides of A4 for references) |
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| 1. Project Objectives and Milestones – please list objectives & milestones and include Gantt chart (or equivalent) detailing the related timescales for achieving these |
| 10.1 Objectives: |
| 10.2 Gantt chart/milestones: |

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| 1. Project Relevance to the BactiVac Network catalyst funding priorities – confirm all that apply to your project | |
| Research that will deliver outputs/outcomes that are primarily of benefit to LMICs | Yes/No |
| Targeting pre-clinical & clinical transitional bottlenecks | Yes/No |
| Advances the ability to tackle the global challenge of AMR | Yes/No |
| Generation of novel partnerships between UK and LMIC and/or industry partners | Yes/No |
| LMIC involvement | Yes/No |
| Industry engagement | Yes/No |
| Generation of results to attract follow on funding | Yes/No |
| Research governance in place (e.g. collaboration agreements/IP considerations) | Yes/No |

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| 1. Pathways to Impact - What impact will your project have (e.g. on the vaccine development pathway, UK Overseas Development Agency (ODA) priorities, delivering outputs/outcomes that are primarily of benefit to LMICs, addressing the global AMR challenge, industry engagement, career development, obtaining follow-on funding from other sources, etc.)? How will you make your project achieve its impact? (max 800 words) |
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| 1. Project Budget - Please specify the costs for your project (£GBP), per partner institute. Please note, funding will be awarded at 80% fEC for academic institutions based in the UK (with the remaining 20% of their project costs match-funded by their institution) and at 100% fEC for all other institutions, including applicants based in industry and LMIC countries. Total project cost (100% fEC) should typically be up to £50,000 and must not exceed £100,000 (a strong justification will be required for funding in excess of £50,000). Other Indirect costs, including lead and co-applicant supervision costs are not allowed. Please refer to guidance notes for further details on max funding available and allowable costs. |

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| Lead applicant | |
| Institute name |  |
| Category of institution | UK academic/LMIC/industry/other? – please specify |

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| (A) Direct: staff salary costs [£] | | | | | |
| Name | **Position** | **% FTE requested** | **Start date** | **End date** | **Cost** |
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| Total salary costs | | | | | **£** |

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| (B) Direct: consumable costs [£] | |
| Item | **Cost** |
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| Total consumables costs | **£** |

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| (C) Direct: equipment costs (max £10,000) and/or other direct costs [£] | |
| Item | **Cost** |
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| Total equipment/other costs | **£** |

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| (D) Indirect costs: [£] – please specify e.g. indirect costs related to academic staff salary costs, core facilities, animal maintenance, etc. (UK academic institutions only costing using fEC) | |
| Item | **Cost** |
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| Total indirect costs | **£** |

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| Total direct costs (A+B+C) | £ |
| (D) Indirect costs | £ |
| (E) Estates costs (UK academic institutions only) | £ |
| Total 100% fEC (A+B+C+D+E) | **£** |
| Total funding requested by Lead Applicant’s institution | **£** |

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| Co-applicant 1 | |
| Institute name |  |
| Category of institution | UK academic/LMIC/industry/other? – please specify |

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| (A) Direct: staff salary costs [£] | | | | | |
| Name | **Position** | **% FTE requested** | **Start date** | **End date** | **Cost** |
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| Total salary costs | | | | | **£** |

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| (B) Direct: consumable costs [£] | |
| Item | **Cost** |
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| Total consumables costs | **£** |

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| (C) Direct: equipment costs (max £10,000) and/or other direct costs [£] | |
| Item | **Cost** |
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| Total equipment/other costs | **£** |

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| (D) Indirect costs: [£] – please specify e.g. indirect costs related to academic staff salary costs, core facilities, animal maintenance, etc. (UK academic institutions only costing using fEC) | |
| Item | **Cost** |
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|  |  |
| Total indirect costs | **£** |

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| Total direct costs (A+B+C) | £ |
| (D) Indirect costs | £ |
| (E) Estates costs (UK academic institutions only) | £ |
| Total 100% fEC (A+B+C+D+E) | **£** |
| Total funding requested by Co-applicant 1’s institution | **£** |

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| Co-applicant 2 (if applicable) | |
| Institute name |  |
| Category of institution | UK academic/LMIC/industry/other? – please specify |

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| (A) Direct: staff salary costs [£] | | | | | |
| Name | **Position** | **% FTE requested** | **Start date** | **End date** | **Cost** |
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| Total salary costs | | | | | **£** |

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| (B) Direct: consumable costs [£] | |
| Item | **Cost** |
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| Total consumables costs | **£** |

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| (C) Direct: equipment costs (max £10,000) and/or other direct costs [£] | |
| Item | **Cost** |
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| Total equipment/other costs | **£** |

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| (D) Indirect costs: [£] – please specify e.g. indirect costs related to academic staff salary costs, core facilities, animal maintenance, etc. (UK academic institutions only costing using fEC) | |
| Item | **Cost** |
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|  |  |
| Total indirect costs | **£** |

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| Total direct costs (A+B+C) | £ |
| (D) Indirect costs | £ |
| (E) Estates costs (UK academic institutions only) | £ |
| Total 100% fEC (A+B+C+D+E) | £ |
| Total funding requested by Co-applicant 2’s institution | **£** |

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| Total Project Budget | |
| Total cost of project 100% fEC (A+B+C+D+E for all partners, must not exceed £100,000) | **£** |
| Total amount requested (by all partners, typically up to £50k, exceptionally up to £100k) | **£** |

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| 1. Resource Justification - please provide a detailed justification of the costs you are requesting. If budget requested is >£50k, please ensure that you provide a strong justification for the requested level of funding (max 400 words) |
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| 1. Funding for projects will be available from 01 November 2022 with all projects needing to start no later than 01 December 2022 due to restrictions on funding sources. Notification of awards will be made no later than 27 October 2022. Taking into account the resources requested/required to deliver the project (e.g. recruitment of staff), how will you ensure that the project starts and is delivered within the stated timescales? |
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| 1. Matched Funding – please include details of funding leveraged (if applicable) or in-kind contributions from other sources to support this project (please include these as estimated figures in £GBP). Please complete the table below as fully as possible |

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| **Type** | **Description** | **No. hrs per wk** | **Actual/estimated value** | **Comments** |
| Matched funding |  |  | £ | e.g. 20% fEC contribution by UK HEIs, other funding directly supporting project delivery, |
| Matched funding |  |  | £ | e.g. Supervision time *(new line for each co-applicant)* |
| In kind contribution |  |  | £ | e.g. other resources that directly support the project e.g. access to reagents, technical or other expertise, etc. |
|  |  |  | £ |  |
| Other |  |  | £ |  |
| **Total** |  | **XX hrs** | **£** |  |

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| 1. Ethical Concerns – Does your research involve (please tick all that apply): | |
| Use of human biological samples – if yes, please answer Q17.1 | Yes/No |
| Use of animals or animal samples – if yes, please answer Q17.2 | Yes/No |
| No use of animals, or use of human or animal samples (go to Q18) | Yes/No |
| * 1. Use of human samples – please detail how these samples were obtained and confirm that you have, or have applied for, appropriate ethical review and approval, and have plans in place for any import/export (max 500 words) | |
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| * 1. Use of animals or animal samples – please state how you will (or did, if samples are already collected) work ethically, including personal and project licences, details and justification of species and numbers of animals being used in the project in line with the 3Rs (max 500 words) | |
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| **18. Technology readiness level (TRL)** | |
| Please indicate the TRL at the start of your project (this should be stated as TRL-1 to 9, with reference to the definitions provided in Appendix 1).  *Please ensure only one whole number is given.* | TRL- |

**Appendix 1 – Definitions of technology readiness levels (TRLs)**

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| **Stage Technology** | **Readiness Level** | **Definition** |
| Ideation | TRL-1 | Need identified, Basic principles observed and reported (Scientific research begins to be translated into applied research and development) |
| Proof of Principle | TRL-2 | Epidemiologic study, Research ideas developed, hypothesis formulated and protocols developed (Initial level in vitro studies, Development of working Cell Bank) |
| Proof of Concept demonstrated | TRL-3 | Hypothesis testing and initial proof of concept (PoC) is demonstrated in a limited number of in vitro models and limited in vivo efficacy studies (Formulation development, complete in-house testing of the formulated vaccine by in vitro model studies and In vivo efficacy in limited number of animals) |
| Proof of concept established | TRL-4 | Efficacy & safety of vaccine candidate is demonstrated in a defined animal model (Results of serological studies in different animals at preliminary level and efficacy in defined in vivo model, Manufacturing and QC release of vaccine for Studies, Scale up Development) |
| Early stage validation | TRL-5 | Pre-clinical studies, including GLP efficacy, acute and chronic toxicity, all the studies mandatory for safe exposure to humans such as repeat dose toxicity (RDT) and safety in animal model producing sufficient data for DCGI application for clinical trials |
| TRL-6 | Material produced in GMP facility of clinical trials. Phase I Clinical trials done and results & safety of the vaccine candidate reviewed by DCGI for approving Phase II Clinical trials |
| Late stage Validation | TRL-7 | Phase II Clinical trials completed and data reviewed by DCGI and Phase III Clinical trial plan approved |
| Pre-commercialization | TRL-8 | Phase III Clinical trials completed successfully. DCGI approves the vaccine and provides commercial manufacturing license for market introduction |
| Commercialization and post market studies | TRL-9 | Commercial launch of the new vaccine, Post marketing studies and surveillance (Phase IV clinical trial) |

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| 1. Reviewers – please declare if you are aware of any reason why any individual on the BactiVac Network Management Oversight Board should not review this proposal. The current Board is listed [here.](https://www.birmingham.ac.uk/documents/college-mds/immunology-immunotherapy/bactivac/bactivac-management-oversight-board-members.pdf) |
| Individuals with potential conflict of interest within BactiVac Network Management Oversight Board: |
| Suggested external reviewers (in case of conflicts of interest; full name and institution): |

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| 1. Full registered (legal) address of Lead Institution – please ensure that your contracts/legal team provide the correct information as details from here will be used on award letters/contracts for all successful applications |
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| 1. Financial administration for lead institution – if the financial administration of awarded funds is managed through an organisation other than that detailed in Section 18, please provide details and explanation |
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| 1. Signature – Lead applicant to please sign and date this form before submission. Electronic signatures are acceptable if the application is submitted from the Lead Applicant’s e-mail address | |
| Signature: | Dated: |

**Required additional documents**

Please include the following documents with your application:

* CV (2 page) and publications list (2 page) for all collaborators on the project
* Letter of Support from Head of Department of Lead Applicant’s Institute, this should be on official letter headed documentation
* Letter of Support from each Co-applicant/Partner in this application, on official letter headed documentation

**Application submission**

Please submit your application form and associated documents by **10 July 2022 (23.59 hours UK time)** to our BactiVac Admin Team at [bactivac@contacts.bham.ac.uk](mailto:bactivac@contacts.bham.ac.uk). Please do send any queries about the grant call to this address. All applications must be submitted in ‘**Word’** format. Application forms submitted in any other format (including pdf documents) will not be accepted though supporting documentation can be submitted in pdf format. Notifications of award will be made no later than 27 October 2022.

**Useful Resources**

* BactiVac [Catalyst Projects Application Guidance Document](https://www.birmingham.ac.uk/research/activity/immunology-immunotherapy/research/bactivac/catalyst-pump-projects.aspx)
* BactiVac [Catalyst Funding – Project Applications Frequently Asked Questions](https://www.birmingham.ac.uk/research/activity/immunology-immunotherapy/research/bactivac/catalyst-pump-projects.aspx)
* BactiVac [Privacy Policy](https://www.birmingham.ac.uk/research/immunology-immunotherapy/research/bactivac/BactiVac-Privacy-Notice.aspx)
* [BactiVac Terms and Conditions of Award](https://www.birmingham.ac.uk/research/activity/immunology-immunotherapy/research/bactivac/catalyst-pump-projects.aspx) ***\* Please note revisions may occur prior to award***
* List of [LMIC countries](https://www.oecd.org/dac/financing-sustainable-development/development-finance-standards/DAC-List-of-ODA-Recipients-for-reporting-2022-23-flows.pdf) *(all countries listed count as LMIC)*
* UK Government information on [Overseas Development Agency (ODA) strategic objectives](https://www.gov.uk/government/collections/official-development-assistance-oda--2)