

GUIDELINES FOR APPLICANTS - PhD PROJECTS

These guidelines should be read by principal investigators wishing to submit a **PhD project proposal** to the MRC Centre for Medical Mycology (MRC CMM) at the University of Aberdeen. Successful PhD project applications will go forward for selection by the current cohort of students studying the 1+3 MRes-PhD in Medical Mycology, who will transition to the PhD phase of their studentship in the new academic year (www.abdn.ac.uk/cmm/training). Successful PhD projects in this current call will start in early October 2017. Only students that perform to the required standards will transition to their PhD projects. Applications should be made using the **MRC CMM PhD Application Form** (found at www.abdn.ac.uk/cmm/training).

GENERAL INFORMATION

- The MRC Centre for Medical Mycology represents a joint investment of £6.5 million by the Medical Research Council (MRC) and the University of Aberdeen. The MRC CMM enables the Aberdeen Fungal Group (AFG) to utilise and expand its critical mass, promoting pioneering cross-disciplinary research that covers areas of scientific, translational and clinical importance. The award provides funding for 13 MRes-PhD studentships for the initial 5 years of the MRC CMM (1st July 2016 – 30th June 2021).
- The awarding body, on behalf of the MRC CMM, will be the University of Aberdeen, not the Medical Research Council (MRC). PhD project awards will be governed by the Research Council Training Grants terms and conditions, in addition to specific MRC CMM terms and conditions issued by the MRC. Details of the Research Council Training Grants terms and conditions can be found at <http://www.rcuk.ac.uk/documents/documents/termsconditionstraininggrants-pdf/>
- Individual awards/grants made under the MRC CMM scheme(s) will be treated as internal awards and will not be included in Pure under the lead applicant's or co-applicant's name.
- The process for selecting and awarding successful PhD project proposal is summarised below:
 - (a) Applications will be reviewed by the MRC CMM Management Board (MB) using an approved review and scoring system (based on the MRC Research Boards and Panels scoring system – available upon request) and taking account of all conflicts of interest. As a minimum, projects must be of a very high quality - internationally competitive and leading edge nationally - to be considered for an award. A minimum of 4 reviews with scores must be submitted for each project application before a final decision on an application can be made.
 - (b) Where there is disparity in the review(s) and score(s) of a project application, or there are insufficient non-conflicted reviewers on the MB, the application will also be independently reviewed and scored by one or more appropriate member(s) of the International Scientific Advisory Board (ISAB).

- (c) Final decisions on project awards will be ratified by MRC CMM MB, taking into account the review and comments from the individual reviewers and the stated objectives of the MRC CMM. The mean and median scores may both be considered in the decision making.
 - (d) Successful projects will be presented to the MRC CMM MRes students first and each student will be asked to select their top three PhD projects, from the pool of PhD projects approved by the MRC CMM MB. Students will be encouraged to meet individually with the applicants leading their top three selected projects (after the project presentations).
 - (e) Project applicants will be given the opportunity to interview the prospective PhD students that have chosen their projects. The applicants will have the option to accept or reject a student based on their interview and/or MRes performance.
 - (f) Award letters, including terms and conditions, will be issued by the MRC CMM to successful project applicants.
 - (g) PhD project applicants in receipt of a PhD project award/grant will be required to submit an annual report on the progress of the project to the MRC CMM for evaluation.
- The MRC CMM will only fund **directly incurred and Core Facilities** costs. Research expenses up to a maximum of £9000 can be requested. More detailed information can be found in **Q9 Finances**.
 - The MRC CMM will not supplement existing awards.
 - The MRC CMM will not fund expenditure already incurred.
 - The grant will be cash-limited at the point of award.
 - All information submitted on the MRC CMM application form will be treated as confidential (except the Lay Summary which will be published on the MRC CMM website if an award is made). All aspects of the peer review and decision making process will remain confidential.
 - Submitting an application in no way implies that support will be forthcoming. All PhD project applications are assessed in competition with one another. You are expected to inform the MRC CMM Manager (Dr Karen McArdle, e.karen.mcardle@abdn.ac.uk) if funding from a third party funding body will also be used for this research project and if you subsequently decide to submit a similar PhD project proposal to another funding body whilst this application is being considered. Non-compliance may lead to refusal to consider the application. If an application requests funds for the same costs on more than one application to the MRC CMM at any one time, this must be declared in the application(s).

ELIGIBILITY

- A PhD project application must have at least two applicants/PhD supervisors. One of the applicants must be an AFG principal investigator. Please indicate on the application form the lead applicant (main PhD supervisor) and the co-applicant (co-PhD supervisor). The lead applicant does not have to be an AFG principal investigator but must be a principal investigator employed at the University of Aberdeen.

- A PhD project can have a UK co-applicant(s) and/or a collaborator(s) from outside the University of Aberdeen e.g. a UK University and/or research institute, industry, small and medium sized enterprises (SMEs) and the NHS. Collaborators, industry and SMEs will not normally be eligible to request funds for their involvement in the research project.
- The lead applicant (main supervisor) and co-applicants (including the co-PhD supervisor) must have a contract of employment with their respective employers for the duration of the PhD project. The MRC CMM will request official proof of employment dates for an applicant(s), where appropriate. A lead applicant and co-applicant(s) must be able to guarantee that space and resources will be made available for the successful completion of the PhD project.
- PhD projects involving an external co-applicant(s) and/or a collaborator(s) will have the appropriate contractual agreement put in place between the University of Aberdeen and their respective institution.
- UK companies, SMEs and other third parties with a research interest in the field are eligible to make an “in kind” and/or a cash contribution to a PhD project proposal. However, the MRC CMM must advise the MRC promptly of any additional contributions and get approval to accept these additional contributions. Additional contributions from third parties will be treated as a separate award to the main PhD award and an appropriate contractual agreement will be put in place to cover this separate award.
- PhD students working on an MRC CMM PhD project will be registered at the University of Aberdeen only and must therefore be primarily based at Aberdeen. However, short research visits to external institutes are permitted and must be detailed in the application form.
- PhD students working on an MRC CMM PhD project will be assigned a mentor prior to starting the project. The mentor will be an AFG principal investigator that is independent of the PhD project and the University of Aberdeen appointed PhD advisor.
- If you have any queries regarding your eligibility to apply please contact the MRC CMM Manager, Dr Karen McArdle (+44 (0) 1224 437598 Email: e.karen.mcardle@abdn.ac.uk)

INTELLECTUAL PROPERTY AND COMMERCIALISATION

- Applicants must declare if the PhD project is likely to generate commercially exploitable intellectual property (IP).
- Applicants must also declare if any aspect(s) of the PhD project is subject to any existing patents, third party agreements (e.g. Material Transfer Agreements) or any other form(s) of IP protection.
- Please refer to the Research Council Training Grants terms and conditions, TGC 14 for additional information on Exploitation and Impact (<http://www.rcuk.ac.uk/documents/documents/termsconditionstraininggrants-pdf/>).

CONFLICT OF INTEREST

In line with Research Council Training Grants terms and conditions of award, members of the MRC CMM International Scientific Advisory Board (ISAB), MRC CMM MB, project applicants and collaborators must declare and manage any existing or potential conflicts of interest.

APPLICATION PROCEDURE

Completed PhD project applications must be submitted by the published closing date (see table 1.0). Applications will be forwarded to the MB for evaluation and scoring. Applications along with the evaluations and scores will be collated and distributed to the MB members for ratification. A final decision on projects that will go forward for presentation to the students will be made as quickly as possible but no later than 6 weeks after the closing date. Members of the MB with a conflict of interest will be requested to abstain from peer-review and decision-making. Applicants and students will be notified in writing shortly after the final allocation of PhD projects. No feedback on applications will be provided.

Table 1 Closing Dates for PhD Project applications

Funding Stream	2017	2018	2019
PhD projects (for MRes/PhD Studentships)	22 nd March	Late March	Late March

COMPLETING THE APPLICATION FORM

Applications must be submitted electronically (in pdf format) to mrccmm@abdn.ac.uk. Questions about funding and the application process should be directed to the MRC CMM Manager, Dr Karen McArdle at e.karen.mcardle@abdn.ac.uk.

Applications must be completed in typeface 11 point Arial font. Word limits must be adhered to and will be checked upon submission. Applications with smaller typeface or exceeding the word limits will be returned to the lead applicant for correction and resubmission within one week.

DEFINITION OF TERMS

AFG Applicant

A PhD project application must have an AFG principal investigator involved in the PhD project. The AFG applicant can be either the lead applicant or a co-applicant.

Non-AFG applicant

Principal investigators from other Schools at the University of Aberdeen can be the lead applicant (main PhD supervisor) on a PhD project proposal but must also have an AFG principal investigator as a co-applicant (co- PhD supervisor) on the project.

A principal investigator or equivalent from an external UK universities, research institute, industry, SME, and NHS can be co-applicant on a PhD project proposal. However, he/she cannot be the lead applicant/lead PhD supervisor but can be a co-PhD supervisor.

Lead Applicant

The lead applicant is the designated main supervisor of the PhD student and the main point of contact for the project. The lead applicant can be a non-MRC CMM/AFG principal investigator but must be a University of Aberdeen principal investigator and employee.

In addition to the day-to-day supervision, a lead applicant will be responsible for ensuring that reporting requirements and PhD student training needs are met.

Co-Applicant (Co-A)

A Co-A is a principal investigator or equivalent who will make a significant contribution to the research project. The **first named co-applicant** on the application form must be the designated co-supervisor of the PhD student.

Collaborator

A Collaborator is a researcher who will provide technical advice, reagents, samples or data for the project, but who would not normally be involved in the day-to-day conduct of the project and therefore is not a Co-Applicant. A Collaborator will not normally be eligible to request funds for their involvement in the research project.

The involvement of a collaborator in the project must be governed by an appropriate contractual agreement that does not conflict with the Research Council Training Grant and MRC CMM terms and conditions. For example, a Material Transfer Agreement, a Service Agreement and/or a Confidentiality Agreement. A copy of the signed agreement(s) must be forwarded to the MRC CMM Manager with the project application or immediately after an award is made and before the project starts.

NOTES ON COMPLETING THE QUESTIONS ON THE FORM

MRC CMM MRes-PhD studentship:

The format for these studentships is 1 + 3, where a student will complete an MRes in Medical Mycology in year 1 and a PhD research project in the remaining three years at the University of Aberdeen. A student will only progress to a PhD research project if he/she obtains the required standards of assessment as set by the University of Aberdeen. Early in the MRes year, the students will have the opportunity to select a PhD project from a list of peer-reviewed and approved projects. Students will be given the opportunity to discuss individual projects with the lead/co-applicants before a final selection/decision is made.

Students are of a high academic quality from UK/EU countries. The recruitment process requires that students demonstrate an ambition to pursue independent research in medical mycology or fungal immunology.

A total of **13 Studentships** are available in the MRC CMM, 2 of which were awarded in 2016 and the students are part-way through the 1-year MRes in Medical Mycology at the University of Aberdeen. Successful PhD projects from this call will go forward for selection by these two students recruited in 2016.

The PhD project must as a minimum be of a very high quality - internationally competitive and leading edge nationally, provide the knowledge, skills, training and mentoring to make the student internationally competitive. The project must be (1) cross-disciplinary (3) address/have relevance

to/advance understanding of one of the **three MRC CMM research priorities** and (4) fall within one or more of the **six MRC CMM research themes** (listed on MRC CMM website <http://www.abdn.ac.uk/cmm/research/index.php> and see **Q5** in the guidelines below).

These PhD awards/grants will support a stipend, UK/EU tuition fees and research expenses. Students, once in post, will have the opportunity to apply to the MRC CMM for travel grants to attend conferences and workshops (in separate funding calls). Please see **Q9** for more details on the funding that can be requested.

Q1 & 2 AFG APPLICANTS' and Non-AFG APPLICANTS' DETAILS

The information provided in these sections will assist the reviewers in building a picture of the investigators' track records.

Q3 COLLABORATION

All collaborations relevant to the proposed project should be detailed in the application. Please see the definition for a Collaborator in these guidelines and note the requirement for a contractual agreement(s) to cover individual collaborations.

Q4 LAY SUMMARY OF PROPOSED RESEARCH

The summary should be suitable for a lay audience and should not contain any sensitive or confidential information, as it will be published on the MRC CMM website.

Q5 ALIGNMENT WITH MRC CMM KEY THEMES AND RESEARCH PRIORITY AREAS

This is an important section in the application and great emphasis will be placed on how the project (1) addresses one or more of the 3 research priorities, (2) fits within the 6 research themes and (3) is cross-disciplinary. Applicants should also describe the translational potential of the project, and how this will be achieved.

MRC CMM/AFG research addresses **three main priorities areas** that need urgent attention.

1. The need to generate safer and more effective antifungal drugs.
2. The need to improve our ability to detect fungal infections, by developing robust, rapid, simple and cheaper diagnostics.
3. The need to better understand fungal virulence and host antifungal immunity, and to exploit these discoveries to help tackle these devastating infections.

Research within the MRC CMM/AFG is divided into **6 key themes**, generating **integrated cross-disciplinary** programmes of research that address the major challenges facing this field.

Research Themes:

1. Fungal cell surface dynamics and its impact on antimicrobial chemotherapy and host immunity.
2. Fungal components as antifungal drug targets, diagnostics, vaccine antigens and adjuvants.
3. Fungal growth, adaptation and morphogenesis in the context of infection.
4. Temporal host-fungal interactions and key mediators that influence disease establishment and progression at molecular, cellular and organismal levels.
5. Exploiting emerging technologies to generate global perspectives that broaden our mechanistic understanding of host-fungal interactions.
6. Unravelling patient susceptibility to enable directed diagnosis, treatment and prevention of fungal disease.

Q6 LOCATION AND MANAGEMENT OF PROPOSED PROJECT

Please outline where the PhD project will be carried out and what infrastructure and facilities will be available to support the project and associated staff and students. Describe the management arrangements between the lead applicant and the Co-A (s), where applicable. This is particularly important where part of the proposed PhD project will be carried out at a number of institutions. If the student will spend a period of time doing research at another institution describe how the student will move to this institution, when in the project timescale and for how long (e.g. percentage of time at each institution). Travel and subsistence costs for research visits should be costed for as part of the project budget

Q7 DETAILS OF THE RESEARCH PROPOSAL

The proposed research project must fit with the MRC CMM research priority areas and key themes as outlined in **Q5** in these guidelines. Describe the proposed research in no more than **1000 words** in typeface 11 point Arial font. Applications exceeding the word count or using smaller font will be returned for amendment with a request for resubmission within one week. Two figures/tables in total (not two of each) may be embedded within the text. However, legends must be restricted to 40 words per embedded item only.

A maximum of twenty references may be included and will not count towards the word count. Manuscripts that are “in press” or “submitted for publication” should not be included. Current research findings should be summarised in the background section, under the heading preliminary or pilot data. The background section should be limited to 500 words.

Q8 FUTURE GRANT APPLICATIONS

Please discuss if findings, results and/or data from this PhD project will form the basis for a future grant proposal to the Research Council (e.g. MRC, BBSRC), Wellcome Trust or other appropriate funder.

Q9 FINANCES

Please outline the total cost of the proposed research project and separate the costs being requested from the MRC CMM. Include any additional funding coming from a third party funders. Only direct costs, including Core Facilities will be funded. A list of acceptable costs that can be requested from the MRC CMM is given below:

PhD Projects (for MRes/PhD studentships):

Funding (stipend, tuition fees & research expenses) for these PhD projects is available to UK/EU students only. EU students must meet the MRC's residency criteria, i.e. they must have been resident in the UK for a period of at least three years leading up to the start of the degree programme. The current cohort of MRC CMM students meet these residency criteria,

9.1. Stipend: This is set at MRC UK stipend rate(s) and will be paid to the student directly for the three years of the PhD project. Current first year stipend rates are £14,296 per annum. These costs do not need to be requested in the PhD application.

9.2 Tuition Fees: UK/EU tuition fees are funded for the three years of the PhD project. These costs do not need to be requested in the PhD application.

9.3 Research expenses: The maximum amount that can be requested per studentship/project is £9000 per annum (3 years only).

Research expenses may include; materials and consumables, animal costs, other core facilities costs, small pieces of equipment (e.g. pipettes), research training, IT support, travel, accommodation and subsistence associated with the project (e.g. research visits at external institutes), workshops and external conferences.

Where animal costs exceed that covered in these research expenses, contributions from additional resources and/or funding must be detailed in the application form.

There will also be an opportunity for the PhD students to apply to the MRC CMM for travel grants to attend conferences and workshops (announced as separate call and once the students are in post).

Funds can be requested for (from the £9000 available per annum) a non-AFG and/or a non-Aberdeen co-applicant(s) for research to be conducted by the student in a non-AFG group and/or at external institutes. Collaborators, industry and SMEs will not normally be eligible to request research expenses. Please note that routine analysis or learning a new technique at an external institute is not research and may incur VAT.

9.4 Additional Funding: Please give details of funding from other sources that will be used or is being sought for this research project. Please describe in **Q14**, if these additional sources of funding are subject to any third party agreements or any other form(s) of IP protection. Also describe any restrictions or delays on data sharing and issues around IP right and exploitation.

Q10 JUSTIFICATION OF RESOURCES

10.1 Materials and Consumables: Provide a justification for all materials and consumables. For larger items please include the number of each item and unit price.

10.2 Animals: The MRC CMM budget will restrict the number of animal experiments that can be conducted, unless additional funds from other sources and/or funders are also used. In any case, please provide an accurate breakdown of the costs associated with the animal experiments and include; purchase and transport costs, maintenance costs, procedures costs and other associated costs. Justify the number of animal requested making reference to the experimental design and sample size calculation.

10.3 Travel, Accommodation and Subsistence (requested as part of the research expenses): Where appropriate, please propose a budget for travel, accommodation and subsistence for the occasions when the PhD student will conduct part of the PhD project at external Co-A's and/or Collaborator's institute. Please provide as much detail as possible as e.g. number of visits, duration of visits etc. and justify the number of research visits.

Q11 HUMAN PARTICIPANTS, BIOLOGICAL SAMPLES AND PERSONAL DATA RELATING TO LIVING OR DEAD PERSONS

Lead applicants, Co-A(s) and PhD students and associated institution(s) must ensure that all the relevant ethical, legal and regulatory approvals and requirements are in place before the proposed experiments using human participants, biological samples and personal data relating to living or dead persons commences and for the duration of such experiments. Please indicate on the project application if the PhD project involves the use of any of the above from outside the UK Please also

refer to the Research Council Training Grants terms and conditions relating to Research Governance TGC 4, Medical and Health Research (clause 22 – 26) at <http://www.rcuk.ac.uk/documents/documents/termsconditionstraininggrants-pdf/>. These policies and position statements will form part of the terms and conditions of an award of a research project.

Q12 USE OF ANIMALS

Lead applicants, Co-A(s) and PhD students and associated institution(s) must ensure that research involving the use of animals complies at all times with the current UK Home Office legislation (Animals (Scientific Procedures) Act 1986). Please indicate on the project application if the PhD project involves the use of animals and/or animal tissue outside the UK. Please reference Research Council Training Grants terms and conditions relating to Research Governance TGC 4, Use of Animals in Research (clause 20 – 21) at <http://www.rcuk.ac.uk/documents/documents/termsconditionstraininggrants-pdf/>. These policies and position statements will form part of the terms and conditions of an award of a research project. Lead applicants, Co-A(s) and PhD students and associated institution(s) must ensure that all the relevant home office and other approvals and requirements are in place before the proposed experiments using animals commences and for the duration of such experiments.

Q13 GENETICALLY MODIFIED ORGANISM

Lead applicants, Co-A(s) and PhD students and associated institution(s) must ensure the PhD project complies with the relevant Genetic Modification Safety Committees' regulations and codes of practice, or equivalent, as required by the Health and Safety Executive regulations in relation to research involving genetically modified organisms and management of biological risk. Lead applicants, Co-A(s) and PhD students and associated institution(s) must ensure that all the relevant regulatory approvals and requirements are in place before the proposed experiments using genetically modified organisms commences and for the duration of such experiments.

Q14 DATA MANAGEMENT AND DATA SHARING

Please refer to the Research Council Training Grants terms and conditions, specifically TGC14 Exploitation and Impact and TGC 15 Publications and Acknowledgement of Support at <http://www.rcuk.ac.uk/documents/documents/termsconditionstraininggrants-pdf/>

Q15 OUTREACH AND PUBLIC ENGAGEMENT

Applicants and students in receipt of an PhD project award from the MRC CMM are expected to have a plan for outreach and public engagement relevant to their specific PhD projects and to contribute to the overall public engagement strategy of the MRC CMM.

One of the major objectives of the MRC CMM is to disseminate our research as widely as possible by engaging with scientists, stakeholders, patients, partners, clinicians, industry, the public and other groups. Engagement with the general public can be achieved by utilising multiple methods of formal and social communication, live events and exhibitions and by generating freely available resources and information. Examples include; subject-specific YouTube films, exhibits at Doors Open days and science festivals, school outreach events, and hosting work experience and placement programmes for secondary school children and undergraduate students. MRC CMM activities will also be communicated through our website (www.abdn.ac.uk/cmm), Twitter

(@MRCcmm) and Facebook (at Aberdeen Fungal Group Facebook). An important component of this website will be to explain the nature of our research and its importance in lay terms. The MRC CMM will publish its biennial report on the website. In addition to these outreach activities, the MRC CMM members and other related parties can provide guest lectures on medical mycology to basic science and clinical undergraduates and postgraduates at universities throughout the UK, to raise awareness of this field. Moreover, MRC CMM members can be involved in national patient organizations and to present our research to patients and their relatives. MRC CMM staff and students will be offered training in media, presentation skills and public engagement, and will be encouraged to become STEM ambassadors. Public engagement activities, as detailed, above must be evidence based (e.g. public feedback forms, photographic evidence etc.). Where possible MRC CMM logos and banners should be included in all outreach activities.

Q16 PARTICIPATION IN MRC CMM ACTIVITIES

Those in receipt of an award from the MRC CMM will be expected to contribute and participate in activities and events that promote the MRC CMM and allow the MRC CMM to achieve its overall aims and objectives e.g. contributing to content for the website, organising workshops and seminars etc.

Q17 FINANCIAL ADMINISTRATOR *(For external non-Aberdeen co-applicants only, duplicate where applicable)*

Please provide the name and contact details of the finance officer that will be the point of contact if an award is made. This individual may also be contacted if there are any financial queries about the costs requested on the application form.

Q18 SIGNATURES

The PA, Co-A(s) and the Candidate applying for the Clinical PhD Fellowship (where appropriate) must sign the application form to confirm that the information provided in the application form is correct and has been checked and approved by their individual institutions.

Q19 APPROVAL BY THE ADMINISTRATING INSTITUTE AUTHORITIES *(For external non-Aberdeen co-applicants only, duplicate where applicable)*

All applications must be approved by the Head of Department/School or the appropriate individual and an officer responsible for the overall administration of the award (e.g. finance manager, registrar, and/or an authorised signatory on behalf of the external institute). In addition to approving the submission of the application, the authorities also confirm that there are no existing issues which may breach any of the terms and conditions of the award and which have not been declared in this application.