

Discovery Research Grants (previously known as International Project Grants) Call and guidelines – 2019 scheme

Action on Hearing Loss funds research into hearing loss and tinnitus to speed up the discovery and development of new medical treatments to protect and restore hearing, improve diagnosis of hearing loss, improve medical devices for hearing, and silence tinnitus, in line with our [Biomedical Research Strategy](#).

Our Discovery Research Grants aim to support projects that will generate knowledge to underpin the discovery and development of new treatments, or improve benefit gained from medical devices.

This year, we are also working with Alzheimer's Research UK to co-fund research that will increase our understanding of the common biological mechanisms underlying hearing loss and dementia.

Why encouraging research into common mechanisms underlying hearing loss and dementia is important

In recent years, increasing evidence has suggested a link between dementia and hearing loss. There is strong evidence that mild hearing loss doubles the risk of a person developing dementia, with moderate hearing loss leading to three times the risk, and severe hearing loss five times the risk. Hearing loss can be misdiagnosed as dementia, or make the symptoms of dementia appear worse.

People with dementia may have difficulty communicating with others, or have difficulty in processing what they hear, particularly if there are distractions, such as background noise. This difficulty in processing information (when there is competing information, whether auditory or otherwise) may be one of the first signs of cognitive impairment.

Further evidence shows an association between hearing loss and decline in memory skills. More research is therefore needed to clarify whether proper diagnosis and management of hearing loss, including provision of hearing aids, may reduce the risk and impact of dementia and some of the other associated co-morbidities, such as falls and depression.

In addition, little is understood about the link between dementia and hearing loss, and the processes underlying both conditions. It is therefore important to investigate these processes in more detail, to determine how the conditions are linked, whether via common pathological processes, by common functions or both, and how they impact upon each other. This will be important in developing interventions that can delay or prevent the progression of both dementia and hearing loss.

We therefore request research projects in the following areas:

1) Understanding the links between dementia and hearing loss

Original research that will:

- identify common biological mechanisms that underlie dementia and hearing loss, and how they lead to both conditions
- advance our knowledge of any causal link between hearing loss and dementia
- lead to the development of interventions that can delay or prevent the progression of both conditions, or prevent one condition from exacerbating the other

Projects submitted under this category will be considered for joint funding with Alzheimer's Research UK.

2) Improving the measurement and assessment of hearing disorders including tinnitus

Novel research that will lead to new tests or biomarkers to:

- improve the diagnosis of hearing disorders, including tinnitus
- identify the type and location of damage underlying hearing disorders
- predict outcomes, evaluate interventions or help select the most appropriate treatment
- help set up devices to better meet an individual's needs
- help select appropriate patients for clinical trials of potential new treatments (patient stratification)
- robustly measure treatment responses in clinical trials

This includes, but is not limited to, genetic, physiological or behavioural approaches.

3) Improving medical devices for hearing

Forward looking research to improve approaches to:

- fitting hearing devices (e.g. hearing aids and cochlear implants)
- develop new signal processing strategies

- improve patient rehabilitation strategies
- improve the interface between a cochlear implant and the auditory nerve
- catalyse the development of novel medical devices to aid hearing

4) Understanding and prevention of hearing disorders

Original research that will:

- identify the causes of hearing disorders
- improve understanding of the molecular and cellular changes associated with different types of hearing disorders
- develop relevant *in vitro* or *in vivo* models of human hearing disorders
- contribute towards the development and evaluation of therapies to prevent hearing problems

5) Restoration of hearing

Cutting-edge research that will:

- identify biological pathways that could be targeted to trigger the regeneration of damaged cell types
- advance drug or gene-based approaches to activate biological pathways to restore function or trigger cell regeneration
- advance cell-based therapies to repair damage to the auditory system

6) Silencing tinnitus

Innovative research that will:

- identify the causes of tinnitus
- improve our understanding of the biological basis of tinnitus
- develop relevant *in vitro* or *in vivo* models of human tinnitus
- develop and evaluate strategies to alleviate tinnitus

Additional notes for applicants

- Please note that you may only submit **one** preliminary application as the lead applicant. You may be named as a co-applicant or collaborator on other applications.
- We encourage applications in the area of tinnitus, as they are currently under-represented in our portfolio.
- Projects must be defined pieces of research with clearly stated objectives, experimental plan and expected outcomes. Applications to cover solely, or mainly, equipment costs, will **not** be accepted.
- Projects should be able to demonstrate a route by which outcomes could be exploited for the benefit of people with deafness, tinnitus or hearing loss, and also in the context of dementia.

- **Please note that we do not fund social research, or research focussed on the design or evaluation of healthcare services.**

Summary of grant:

Duration:	Up to 3 years.
Eligibility:	Applicants can be from any university or research institute in any country
Value:	Up to £160K in total, funding will not exceed £55K in any one year

Application procedure:

There is a two-stage application process for the Discovery Research Grant (an overview of the process, and timings, is shown overleaf):

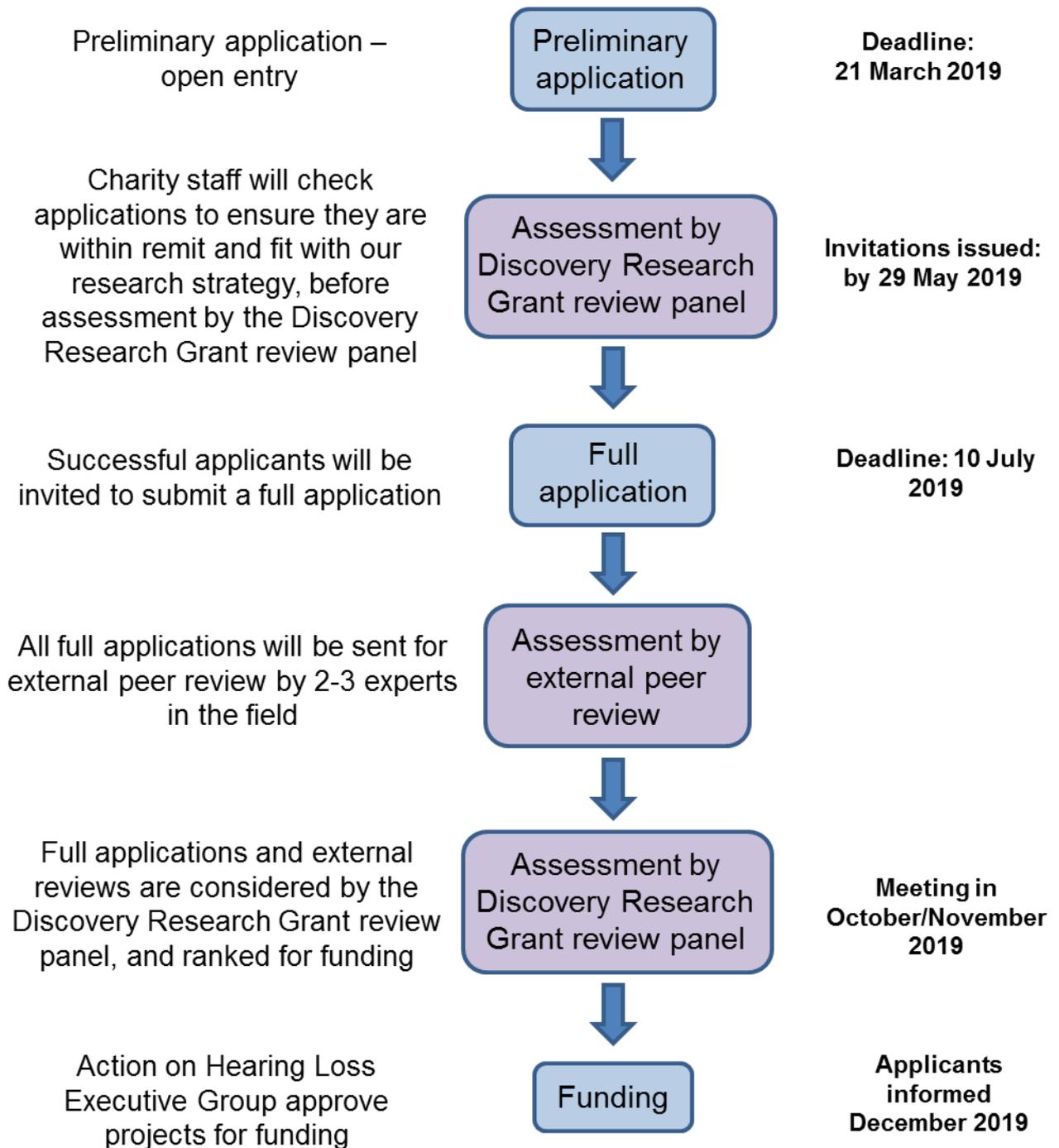
- 1. Preliminary application** – All applicants are required to submit a preliminary application. Preliminary applications will be considered by our Discovery Research Grant review panel¹, who will rank them, and identify the best proposals to take forward to the full application stage.
- 2. Full application** - Successful applicants will be invited to submit a full application. This application will be subject to external peer review, and final consideration by our Discovery Research Grant review panel.

Preliminary application forms can be downloaded from our website. There is an accompanying guidance document to help with completing the form – **please download it and read it carefully** before completing your application form.

The process of selecting preliminary applications to move forward to the full application stage will be very competitive, and we therefore ask that you do not submit speculative applications. It is important for this process to work and to be fair to other applicants that preliminary outlines accurately reflect any later invited applications. As such, all full applications will be checked against preliminary applications.

¹ The Discovery Research Grant review panel is comprised of Professor Abigail Tucker (King's College London), Professor Doug Hartley (University of Nottingham), Dr Michael Stone (University of Manchester), Professor Michael Lovett (Imperial College London), Professor Corne Kros (University of Sussex), Dr Roland Schaeffe (University College London), Professor John Culling (Cardiff University), Professor Ian Forsythe (University of Leicester), and Dr Padraig Kitterick (University of Nottingham). In addition, two members of the Alzheimer's Research UK Grant Review Board (to be confirmed) will join the panel for the 2019 round of funding.

2019 round



To submit a preliminary application, please email the completed preliminary application form as an **attached MS Word document** with a file name in the format of SurnameApplicant1_DRGPre19.doc or .docx e.g. Smith_DRGPre19.doc, to:

ProjectGrant@hearingloss.org.uk

All preliminary applications must be received on or before Tuesday 21 March 2019.

For further details:

Telephone: +44(0) 20 3227 6158
Email: ProjectGrant@hearingloss.org.uk
Web: www.actiononhearingloss.org.uk/researchfunding

Deadlines

Preliminary applications:	21 March 2019
Full applications:	10 July 2019
Final decision:	December 2019

A summary of our current terms and conditions is included on our website for your reference – please note that these are subject to change.