

# Hearing Industry Research Consortium

# Request for Proposals (RFP) 2022:

# When hearing loss is not due to presbycusis: similarities and differences to the age-related hearing loss

## Brief Description of Purpose and Opportunity

The Hearing Industry Research Consortium wishes to support pre-competitive research that advances understanding of how hearing care professionals could better support people with hearing loss causes different than presbycusis.

Researchers may suggest perspectives to improve the generic design and provision of hearing aids, but should not be concerned with the development of specific features of hearing-aid systems.

The funding pool for this RFP is 300,000 US Dollars, and the period for execution of projects under this RFP is between two and three years from 1 January 2023. It is expected that one or two project proposals will be funded. In case of submissions for the full amount of 300’000 USD we encourage submissions to be structured such that they could be partially funded and co-funded with other submissions.

A detailed description of the application procedure, as well as the guidelines for research under this scheme, terms and conditions, and the proposed research area, can be found in the following sections.

# Research Area 2022

Age-related hearing loss (presbycusis) is not only prevalent in human population, but also inevitable. The question is not whether but when – each of us will experience it, given we live long enough, depending on individual genetics and general health. However, there is also a large population that experience hearing loss before the onset of presbycusis.

In this request for proposal, we invite investigations into different hearing loss types to that of age-related hearing losses. We are interested in proposals that investigate underexplored areas of HL with high and/or growing prevalence such as is for example the hearing loss due to the ototoxic agent cisplatin, hearing losses that fluctuate over time, and noise induced hearing loss to name a few examples.

Up to 93% of patients receiving cisplatin chemotherapy will develop progressive and irreversible sensorineural hearing loss which leads to a decreased quality of life in cancer survivors (Waissbluth and Daniel, 2013).

Recent research shows that the development of hearing loss due to cisplatin could be seen as a model of an accelerated age-related hearing loss (Ramkumar et al. 2021, Haugnes et al., 2018). However, it could also be that cisplatin ototoxicity follows a different dynamic - with early stages being similar to the presbycusis model yet progressing much faster towards a more broadband hearing loss.

Fluctuating HL often associated with Ménière’s Disease, autoimune inner ear conditions (Liu et al 2019) and noise induced hearing loss (Chen et al., 2020) are other examples of HL origins that could be selected as origin of the proposal.

Regardless of the cause, the general question of interest is whether looking into different HL causes can enable us to gain deeper understanding of the link between the type of hearing loss, difficulties experienced when listening and the interventions that lead to the best outcomes from treatment with hearing aids.

Please note that this request for proposal is not meant for research into different drug regimes, anti-ototoxic drugs, or any pharmaceutical research linked to ototoxicity. Equally, any research proposal on ototoxic drug effects outside of the specified field linked to hearing impaired listeners will be excluded. Netiher is this request for proposal meant for research into specific and or proprietary hearing aid algorithms and their parametrization.

## Examples of research topics include, but are not limited to:

* Development of a cisplatin cochlear damage model (in different stages), corresponding audiogram changes and patient-reported outcomes.
* Presbycusis and the severe hearing loss, is it only a matter of time?
* How to treat fluctuation hearing losses with current hearing aid technology

**References**

Chen, Kou-Huang, Shih-Bin Su, and Kow-Tong Chen. "An overview of occupational noise-induced hearing loss among workers: epidemiology, pathogenesis, and preventive measures." *Environmental Health and Preventive Medicine* 25.1 (2020): 1-10.

Haugnes, Hege S., et al. "Hearing loss before and after cisplatin-based chemotherapy in testicular cancer survivors: a longitudinal study." *Acta Oncologica* 57.8 (2018): 1075-1083.

Landegger, Lukas D., Demetri Psaltis, and Konstantina M. Stankovic. "Human audiometric thresholds do not predict specific cellular damage in the inner ear." *Hearing research* 335 (2016): 83-93.

Liu, Hui, et al. "Fluctuating sensorineural hearing loss." *Audiology and Neurotology* 24.3 (2019): 109-116.

Ramkumar, Vickram, et al. "Oxidative Stress and Inflammation Caused by Cisplatin Ototoxicity." *Antioxidants* 10.12 (2021): 1919.

Waissbluth, Sofia, and Sam J. Daniel. "Cisplatin-induced ototoxicity: transporters playing a role in cisplatin toxicity." *Hearing research* 299 (2013): 37-45.

## Procedure

## Submission

To submit a proposal, complete the application form available on the IRC website [www.hearingirc.com](http://www.hearingirc.com), and submit the completed application form as a **single** PDF file on the proposal submission form at http://proposals.hearingirc.com. You will know that your application has been received when you receive a confirmation via e-mail.

## Review

Proposals will be reviewed by the IRC board and their nominated representatives. The review process may include further dialogue with the applicant for clarification and/or revision.

## Deadlines

Submission of proposals: 31st August 2022.

Announcement of grant winner by 31st December 2022.

## Contact

Further information and enquiries may be directed to ‘contact@hearingirc.com’.

The mission, activities and membership of IRC are described in detail on the IRC website [www.hearingirc.com](http://www.hearingirc.com).

## Guidelines

Projects must be defined pieces of research with clearly stated objectives, experimental plan, and expected outcomes. The level of ambition should correspond to the funding magnitude.

The funding pool for this RFP is 300,000 US Dollars, and the time period for execution of projects under this RFP is 2-3 years from 1st January 2023. It is envisaged that one or two project proposals will be funded.

There is no restriction regarding how many proposals may be submitted by the same investigator or institution.

Proposals may include aspects of co-funding from other sources. However, it must be possible to separately identify what the IRC Grant is supporting, and co-funding must not hinder the fulfillment of the terms and conditions of the IRC Grant.

The proposal should indicate if the cost is scalable to 150,000 US Dollars.

The proposal should provide evidence that the proposed research team has experience in all of the relevant disciplines that impact the successful execution of the project.

## Terms and Conditions

The terms and conditions for IRC research grants are given below where IRC is referred to as “we”, “us” or “our”, the Institution administering the grant is referred to as “you”, “your” or “yours”, and the Principal Investigator managing the execution of the Research is referred to as “PI”.

**Research Practice**

* + The PI must conduct the Research as it is described in the Application and in accordance with any other reasonable requirements notified to you by us from time to time.
	+ You must obtain institutional and personal licenses and consents from relevant ethical committees as necessary for proper conduct of the Research, and adhere to guidelines from relevant authorities in your Territory.

**Finance**

* + The IRC Grant is payable only to you and may only be passed in whole or in part to a third party outside your institution in accordance with explicit provisions of the submitted project plan.
	+ The IRC Grant will be paid in two annual installments during the Term. The first payment will be made on or before the Start Date, or once a counter-signed copy of the offer letter is received, whichever is later. The second payment will be made within one month of your submission of the progress report at 12 months, if IRC’s evaluation of that report determines that satisfactory progress is being made on the Research.
	+ IRC policy is to pay indirect costs (institutional overhead) amounting to max. 15% of the total grant amount.
	+ Payments will be made in US Dollars and the sums paid over to you will be inclusive of any currency conversion fees that may be incurred.
	+ The IRC Grant must be used exclusively for the purpose of the Research.
	+ If we become aware that the IRC Grant or any part of it is not being used exclusively for the Research we may withhold any payments not yet made, and recover any part of the IRC Grant which has not been properly used.
	+ One year after the Start Date you must send us a signed statement detailing the IRC Grant income and expenditure. Within two months of the End Date, you must send us a statement detailing the overall income and expenditure.
	+ You must return any of the IRC Grant which remains unspent at the end of the Term.

**Dissemination and Publicity**

* + The findings from the Research must be published in an appropriate form, usually as one or more papers in a peer-reviewed journal, preferably as open access articles. Failure to do so will jeopardize any further sponsorship of the PI’s research by IRC.
	+ IRC’s contribution to the Research must be acknowledged every time the Research is published or disseminated.
	+ The PI must inform IRC of any press statements about the IRC Grant or the results of the Research, and should consider formulating such statements jointly with IRC.

**Reporting and Activities**

* + IRC will nominate one of its board members as a Project Owner for the granted project. The Project Owner will be the PI’s primary point of contact with the IRC regarding issues of substance during the course of the Research.
	+ The PI will submit a written progress report to the Project Owner every six months after the Start Date, detailing progress of the Research and identifying successes, failures and, if appropriate, any circumstances which may prevent the Research from being completed within the Term.
	+ Efforts should be made for the PI to meet the Project Owner in person for a verbal report at the end of the first and second year of the Research.
	+ Given reasonable circumstances of location and events, the PI may be requested to make a report in person to the IRC board.
	+ On reasonable notice, you will permit a person delegated by IRC to observe the Research.
	+ Within three months of the End Date, the PI will also provide us with a comprehensive report of the Research.
	+ You grant us the right to use any non-confidential information from the reports for publicity purposes.

**Intellectual Property**

* + The topic areas within which IRC issues Requests for Proposals are considered pre-competitive and unlikely to generate valuable Intellectual Property (IP). For this reason, and for simplicity of administration, it is a requirement that you do not take any steps to protect any IP which might arise during the project, but on the contrary that the PI publishes the results of the Research in a timely and complete manner, such that the results remain free of protective restrictions and available for all.

**Variation and Termination**

* + No amendments to the grant will be effective or enforceable unless agreed by us and evidenced in writing.
	+ The PI must inform us as soon as practicable of any significant divergence from the original aims and directions of the Research. We may withhold any payments not yet made if we are no longer satisfied that the research is in keeping with our objectives.
	+ If you or the PI do not comply with the terms of this offer we may give you 28 days written notice to remedy the non-compliance or provide acceptable evidence it will be remedied in a timely fashion. If you do not remedy the failure or provide suitable evidence, we may terminate the IRC Grant, and you will not be entitled to any further payments.
	+ If we believe that satisfactory progress is not being made on the IRC Grant, we will notify you in writing. If there is a not a prompt and sufficient improvement, we will terminate the Grant with immediate effect and you will not be entitled to any further payments. Any decision as to whether satisfactory progress is being made will be entirely at our discretion.

**General**

* + You are responsible for ensuring that the PI adheres to all of the terms of the Grant.
	+ Any staff recruited by you in connection with the Research are your employees and you shall be solely responsible for them and for any costs, taxes and liabilities arising under any present or future employment law or regulations.

**Governing Law**

* + Without prejudice to your obligations to comply with the laws and regulations of your Territory, the terms of this offer will be interpreted in accordance with the laws of Denmark, and courts of Denmark will have exclusive jurisdiction.

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