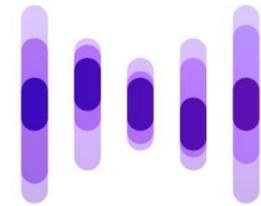


Call for Research Proposals: Health technology for more healthy years of life



Health technology
for more healthy years of life
— we are HTRIC

The Health Technology Research and Innovation Cluster (HTRIC) call focuses on the entire chain from basic research through development and engineering to clinical assessment and implementation of human-centred health technology. Proposals will be valued for their innovation, originality and feasibility. Moreover, a clear and novel cooperative research between at least FSE and UMCG, together with impact and urgency of the project, would be crucial criteria for a successful proposal.

General Information

The pressure on healthcare is rising and the challenges are substantial. Scientific and technological innovations are an absolute must in strengthening the entire knowledge chain between basic science and clinical practice. Together these can lead to fewer invasive procedures to patients, more advanced medical intervention procedures, faster recovery and earlier detection. As a connector within a (still) fragmented landscape, HTRIC is committed to bringing curious people, innovative research, technology and clinical practice together.

Purpose

HTRIC's outstanding PhD programme offers research talents the opportunity to conduct inter-disciplinary research on health technology. Technology is to be interpreted in a broad sense, yet it should be a convincing link in the chain between basic science and clinical practice. The proposed research concerns an innovation or technology that could lead to a clinical application. Projects that directly involve technological innovation in a clinical setting will be favoured.

For the 2023 call for proposals, applications should fit with one or more of HTRIC's themes:

[Operating Theatre of the Future](#)

Surgical techniques with calculated accuracy

The implementation of robot-assisted, high complexity operations in surgery is taking place steadily. The combination of the knowledge and expertise in robotics, navigation and computer technology at FSE and a high-quality, innovative research team in the surgical discipline at UMCG takes this research line to a higher level. Computer-assisted surgery technology in conjunction with robot-assisted surgery will ensure greater accuracy in minimally invasive procedures. Patient risk is in turn minimised, and operations are performed more quickly and with higher efficiency.

[Replacement and Improvement in the Human Body](#)

From biomaterials to 3D technology

Modern medicine cannot exist without the use of biomaterials and nanotechnology. Well-known examples are implants such as prostheses and artificial heart valves, while there are exciting innovations in the works for intelligent implants that offer new or renewed functionality. After damage from cancer, trauma or age, functional recovery can be stimulated through the use of biomaterials. The use of new materials and specific, custom-made implants not only yields substantially shorter operation times, it also results in increased efficiency and reduced morbidity. In conjunction with the use of antibacterial coatings, new materials offer reduced risk of infection.

[Innovative Technology with Local Precision](#)

Observation, monitoring and targeted treatment

Monitoring plays a significant role in the clinical setting as well as at home. By using personalised devices (sensors and diagnostic tools), we strive to develop innovative and personalised healthcare technology that is not only used to promote personal healthcare management, but also to enable diagnostics and treatment tailored to the patient. Various partners in the Groningen ecosystem are already deeply involved in the development of innovative medical tools, sensor technology and medical software.

What to apply for?

For the 2023 call, a total of four PhD positions are available, two for students at the Faculty of Science and Engineering (FSE) and two for students at the Faculty of Medical Science (FMS) at the UMCG. The students will be employed at the University of Groningen.

Granted projects will include a bench fee of €6000.

Who can apply?

Researchers at FSE or UMCG with a permanent or a tenure-track position are eligible to be Principal Investigator (PI) of an application for this call. Every PI can apply only once in the present call. HTRIC Research Award winners from last year (2022) cannot apply to the present call. In order to guarantee a truly interdisciplinary project, the following additional conditions apply:

1. Each proposal is supported by at least two PIs:
 - For a PhD position in FSE: first applicant from FSE and the second from UMCG.
 - For a PhD position in FMS: first applicant from UMCG and the second from FSE.
2. The first applicant will serve as the first supervisor of the PhD student if the grant is awarded, and eventually as the first promotor.

Assessment

Proposals are limited to a total of six pages and have the following outline:

1. Brief background to the topic;
2. Aims of the proposed research;
3. Description of the research plan, including timeline and explanation of how the topic fits to one of the three themes of HTRIC mentioned above;
4. Short description of proposed trajectory to bring the new application to the community (market);
5. Societal or clinical impact/benefit.

Proposals will be assessed on:

1. Originality and innovation
2. Clear and novel cooperative research between at least FSE and UMCG, and other partners (if applicable)
3. Quality of the proposed plan, including feasibility
4. Potential impact including readiness for user adaptation and urgency of the project

The relevance of the proposed UMCG/FSE collaboration within HTRIC, in addition to the endorsement, participation and cooperation with medtech companies (e.g. [Life Cooperative](#)) and University of Applied Sciences (e.g. Hanze and/or NHL Stenden) will be regarded as an added benefit.

The assessment will be carried out by the UMCG/FSE evaluation committee consisting of: Sjoerd Bulstra (UMCG), Erik Van der Giessen (FSE), Hélder Santos (UMCG), Marleen Kamperman (FSE) and Johannes Wolters (Life Cooperative).

Additional Information

The accepted research proposals are expected to be part of a yearly joint evaluation with a HTRIC committee and deliver a pitch at the HTRIC Annual Meeting.

Timeframe for the 2023 call

4 th October – 30 th November:	Deadline for the submission of the proposals (by e-mail to info@htric.nl) in a single PDF file.
1 st December – 31 st January:	Assessment and ranking of the proposals by the evaluation committee. If necessary, the committee can decide to interview (20-30 min) an applicant.
6 th February:	Applicants are informed about the decisions of the evaluation committee.