



**Collaborative Bilateral Research Program Bavaria - Québec
 StMWK and Fonds de recherche du Québec**

ARTIFICIAL INTELLIGENCE IN HEALTH

Program Category: International collaboration

AI IN HEALTH	
<p>1- REGISTRATION SUBMISSION (MANDATORY)</p> <p>SEPTEMBER 22, 2021 4 p.m. (Bavaria time) 10 a.m. (Québec time)</p>	<p>FRQS Program Manager Fatma Boulouednine 514 873-2114 EXT. 3455 Baviere.Quebec.IA@frq.gouv.qc.ca</p>
<p>2- PROPOSAL SUBMISSION</p> <p>OCTOBER 13, 2021 4 p.m. (Bavaria time) 10 a.m. (Québec time)</p>	<p>WKS at BayFOR Senior Scientific Officer (WKS) Dr. Florence Gauzy +49 (0) 89 9901 888 180 gauzy@bayfor.org</p>

As science becomes more global and complex, many research questions cannot be addressed without international collaboration between researchers from different sectors. For this reason, Québec and Bavaria have developed a new Bilateral Research Call with the aim of creating a leverage effect for scientific excellence and encouraging researchers from Bavaria and Québec to develop together research projects with novel and unused approaches. These collaborations will allow major scientific breakthroughs, in the short and medium term, by combining and potentiating the strengths, expertise and structural levers of both regions, as well as by promoting the transfer of knowledge.

This Call for proposals is jointly conducted by:

- WKS at Bavarian Research Alliance (WKS at BayFOR)* on behalf of the Bavarian State Ministry of Science and the Arts (StMWK)
- Fonds de recherche du Québec, developed and managed by FRQS

*The Bavaria-Québec/Alberta/International Scientific Office (WKS) at Bavarian Research Alliance (BayFOR) is managing this call on behalf of the Bavarian State Ministry of Science and the Arts (StMWK).

CONTEXT

Artificial Intelligence (AI) is one of the most critical technological development that our societies are facing. Applied to health, AI is a fast growing field and is prerequisite for an absolutely necessary transformation of health care, aimed at more efficient care of the population. AI in health includes topics as different as bioinformatics, computer aided medical procedures, intelligent robotics for health care, machine learning and deep learning algorithms for medical image processing, drug development, and many more. The developments made over the last ten years are all of particular importance for economy and society. Québec and Bavaria have invested significant efforts in advancing knowledge, technology, and infrastructure in this field. The current call is a further step towards joint achievements. The capacity for discovery and innovation in the specific health sector will be greatly enhanced by pooling different and complementary expertise in the AI and life sciences sectors.



PROJECT ELIGIBILITY

Priority themes	<p>The following themes are priorities for this program:</p> <p>Relevant topics where further development of Artificial Intelligence is an added value to the development of products, tools, interventions or applications in the field of health.</p>
Objectives	<p>The main objective of this program is to establish new collaborative efforts or reinforce existing collaborations to advance knowledge and technology in Artificial Intelligence for Health. The program will also allow to develop a critical mass in Artificial Intelligence research in health and transversal skills.</p> <p>Projects must be structured in such a way as to bring an original added value that researchers, funded by each funding site, could not reach by themselves.</p>
Language	<p>IMPORTANT: Because this program is international, and the proposals are common to both teams, <u>the proposals must be written in English.</u></p>

APPLICANT ELIGIBILITY

Conditions	<p>Research team structure</p> <ul style="list-style-type: none"> • One Principal Investigator from Bavaria who will represent the project and will assume the internal and management direction, according to the conditions/ administrative requirements of the funding site to which they refer • One Principal Investigator from Québec who will represent the project and will assume the internal and management direction, according to the conditions/ administrative requirements of the funding agency to which they refer <p>Can be added to the team:</p> <ul style="list-style-type: none"> • Up to 1 co-Investigator from Bavaria and 1 co-Investigator from Québec, no minimum • Collaborators participating to the project without access to funds. Collaborators may come from outside Québec or Bavaria. No minimum or maximum <p>The research teams submitting a project under this call for proposals must be composed of researchers working in institutions eligible under the conditions / administrative requirements of the funding sites to which they refer (see below for more details).</p>
Bavaria	<p>In Bavaria, the call is open to researchers (post-doctorate or higher-level scientific staff) at Bavarian state universities and state universities of applied sciences that receive funding from the Bavarian government, at EVHN, at KSFH as well as at KUE and HFPH.</p> <p>Applicants in Bavaria are advised to contact the scientific officer in charge of the call to check eligibility and general conditions before submission.</p>



<p>Québec</p>	<p>Eligible statuses</p> <p>For Principal Investigators :</p> <ul style="list-style-type: none"> • University researcher (status 1) • Clinical university researcher (status 2) <p>For co-Investigators :</p> <ul style="list-style-type: none"> • University researcher (status 1) • Clinical university researcher (status 2) • College researcher (status 3) <p>Postdoctoral trainees are only eligible to this program as collaborators.</p> <p>The participation of at least one (1) M.Sc. or Ph.D. student or a postdoctoral to the project is mandatory for the Québec team.</p> <p>In addition, all researchers of the Québec team must be affiliated to a Québec university, or have an affiliation to a college-level training institution (including college centers for technology transfer (CCTT)), under the conditions described above.</p>
<p>Single application</p>	<p>A researcher may submit only one project under this Call for Proposals as a Principal Investigator but can participate to more than 1 project as a co-Investigator.</p>
<p>Employment and domicile</p>	<p>For Bavaria :</p> <p>This call for proposals follows the rules for grants of the State of Bavaria.</p> <p>For Québec:</p> <p>The Principal Investigator and the co-Investigators must:</p> <ul style="list-style-type: none"> • Be employed by a managing institution and be domiciled in Québec at the time the application is submitted (see section 2.1 of the CGR)
<p>Professional associations/orders</p>	<p>Clinical university researchers must prove that they are members in good standing of the Québec professional order governing them, have a valid license to practice in Québec and have professional liability insurance.</p>
<p>Ethics (Québec)</p>	<p>Principal Investigator(s) and co-Investigators must comply with the ethical regulations as defined in sections 5.4 and 5.5 of the CGR).</p>
<p>Basic training in research ethics (Québec)</p>	<p>Basic training in research ethics is mandatory for all FRQS awardees when their research project or program involves human subjects.</p> <p>The term "research project involving human subjects" applies when the research project involves:</p> <ul style="list-style-type: none"> • Living human subjects • Cadavers or human remains • Tissues, biological fluids, gametes, embryos or fetuses, cells or genetic material • Personal information on file. Personal information is any information concerning a person which allows the person to be identified <p>Awardees must successfully complete levels 1 and 3 of the Online Tutorial in Research Ethics set out by the <i>Ministère de la Santé et des Services sociaux</i> (MSSS).</p>



Principal Investigators and co-Investigators must complete the training **maximum 3 months after receiving the first payment of their grant.**

SUBMISSION OF THE REGISTRATION FORM (MANDATORY)

Submission must be done to both funding sites with the same and identical PDF:

Bavaria: Applicants from Bavaria are asked to submit the completed registration form as a PDF via email at gauzy@bayfor.org

Québec: Applicants from Québec must submit the completed registration form as a PDF via email at Baviere.Quebec.IA@frq.gouv.qc.ca

The registration form is mandatory and will serve for the constitution of the review committee. Applicants will therefore need to have submitted a registration form to be eligible to submit a full application.

SUBMISSION OF THE APPLICATION FOR FUNDING AND REQUIRED DOCUMENTS – PROPOSAL

Incomplete applications and applications that do not meet the eligibility criteria outlined in this document may be withdrawn from the competition.

Applications, or any document, received after the competition deadline of October 13, 2021, at 4 pm (Québec) or 10 am (Bavaria) shall be not be considered and shall be deemed ineligible.

Any information in excess of the maximum number of pages for each section of the application shall be removed from the submission and shall not be considered in the review process. Any attachment to the application that is not required under the competition rules shall not be submitted to the review committee.

All documents must be integrated into a single (1) PDF document. The CVs of all Investigators, including the detailed contributions, should be inserted one after the other in the PDF document.

Submission must be done to both funding sites with the same and identical PDF:

Bavaria: The application form must be filled in English. However the title and the abstract must also be in German, since they may be used by WKS at BayFOR for promotion and dissemination purposes.

Applicants from Bavaria are asked to submit the completed application form as a PDF via email at gauzy@bayfor.org

Québec: The application form must be filled out in English. However, the title and abstract must also be in French, since they may be used by the FRQ for promotion and dissemination purposes.

Applicants from Québec must submit the completed application form as a PDF via email at Baviere.Quebec.IA@frq.gouv.qc.ca

The funding sites reserve the right to validate the authenticity of any document or information provided in the application with relevant authorities.

Bavaria Investigators The complete application form must be submitted to WKS at BayFOR by the Principal Investigator and must include:

- Application form (See form in the Toolbox)
- CV for Principal Investigator and co-Investigator, if applicable



- Letter of support from the administrators of the institution or university department in which the research will be carried out (for the PI only)
- Letter of support from a collaborator or a partner, if applicable

Québec Investigators

The complete application must be submitted to the FRQS by the Principal Investigator of the managing institution and must include:

- Application form (See form in the Toolbox)
- [Canadian Common CV](#) , [Funding CV version for FRQNT, FRQS or FRQSC](#) (last update between June 1st, 2020 and the Call for proposals deadline) for the Principal Investigator and the co-Investigator, if applicable
- Detailed contributions (last update between June 1st, 2020 and the Call for proposals deadline) for the Principal Investigator and the co-Investigator, if applicable
- Clinician: a letter from the director of the clinical department or the dean of the faculty specifying the number of hours for which the applicant will be released from his/her clinical obligations to carry out the research project (only for clinicians who are not recipients of an FRQS career award)
- Letter of support from the administrators of the institution or university department in which the research will be carried out (for the PI only)
- Letter of support from a collaborator or a partner, if applicable

IMPORTANT NOTE

For more information, read the Drafting a CV for the Fonds (Préparer un CV pour les Fonds) in the program Toolbox.

TERM AND AMOUNT OF THE GRANT

	Budget Bavarian Team** (Maximum)	Budget Québec Team*** (Maximum)
Total budget/research project	€225,000	CA\$225,000
Period	3 years	3 years
Projects funded	Minimum of 3 projects	
Funding start date	December 1 st , 2021	

* Indirect research costs are eligible for the Québec's team and represent 27% of the total funding (additional to the budget).

**Awardees from Bavaria will be funded by StMWK

IMPORTANT NOTE: In Bavaria, based on the evaluation results from the joint evaluation committee, the successful applicants shall submit an application for funding to the Bavarian State Ministry for Science and the Arts (StMWK). The application form will comprise a short project description including a budget calculation. Funding will be awarded subsequently as a direct allocation of funds to the applicant's university.



***Awardees from Québec will be funded by FRQS.

<p>Québec:</p> <p>Additional amount for eligible status 3</p>	<p>College researchers with teaching duties who join a research group as a co-Investigator shall each receive <u>an additional amount of up to 20% of their gross salary</u>. This amount will be paid directly to the college institution to compensate for part of the salary to release the researcher from teaching duties. Applications must include a supporting document of 1 page The principal investigator must identify the college researchers for whom a release from teaching duties is request ed.</p> <p>Should funding be granted and the principal investigator accept it, a form meant specifically for the amounts related to a release from teaching duties will be available. Details to come at the time of funding.</p>
<p>Management</p>	<p>For Bavaria:</p> <p>In Bavaria, the call is open to researchers (post-doctorate or higher-level scientific staff) at Bavarian state universities and state universities of applied sciences that receive funding from the Bavarian government, at EVHN, at KSFH as well as at KUE and HFPH.</p> <p>For Québec:</p> <p>The list of institutions that can administer funding from the FRQ is limited to the managing institutions recognized by the FRQ, including universities, CIUSSS, CISSS, some institutions of the healthcare network and colleges.</p> <p>The managing institution is the employing institution of the funding recipient (see section 6.2 of the CGR).</p> <p>List of managing institutions recognized by FRQ (in French). The grants will be managed according to the respective general rules of the funding agencies.</p>

ELIGIBLE EXPENDITURES

<p>Eligible expenses such as salaries, research material, equipment and other expenses related to the project are subject to the regulations and practices of the agency that will fund the project.</p> <p>Exchanges of students and postdoctoral fellows are encouraged.</p>	
<p>For Bavaria researchers</p>	<ul style="list-style-type: none"> • Eligible expenses such as salaries, research material, equipment and other expenses related to the project are subject to the regulations applied in Bavaria • Applicants in Bavaria are advised to contact the scientific officer in charge of the call to check eligibility and general conditions before submission
<p>For the Québec researchers</p> <p>Eligible</p>	<p>In addition to the list of eligible and non-eligible expenses detailed in section 8 of the FRQ CGR, the following expenses are eligible or non-eligible:</p> <ul style="list-style-type: none"> • Master's and doctoral awards or scholarships and postdoctoral fellowships and supplements • Travel and accommodation costs for Québec researchers going to Bavaria (maximum of 1 person / year, reasonable expenses)



	<ul style="list-style-type: none"> • Participation to conferences (up to 3% of the annual grant amount for Québec funding recipients, as of the second year of the grant) • Costs related to joint publication of articles
Non-eligible	<ul style="list-style-type: none"> • Remuneration of the Principal Investigator(s), co-Investigators and collaborators • All indirect expenditures related to layout organization or reorganization, facilities leasing and maintenance or the indirect costs covered by the host institution • Funds cannot not be transferred outside of Québec

EVALUATION – PROPOSAL

Evaluation process	<p>Each proposal will be reviewed by a joint scientific committee, composed of international experts from clinical and scientific domains, selected by the FRQ and WKS at BayFOR. Representatives from the bilateral ministerial working group Bavaria-Québec will attend the review committee meeting in an advisory capacity as to the existing research cooperation environment between Bavaria and Québec. Members of this scientific committee will be in charge of ranking all proposals, based on discussions during the scientific review committee meeting.</p>
Evaluation criteria	<p>Research project – 40%</p> <ul style="list-style-type: none"> • Compliance with the priority themes of the call • Clarity of the objectives and scientific excellence of the project • Originality and innovative aspects of the project • Scientific and technical appropriateness of the project, choice of methods • Added-value of the bilateral cooperation on the project and capacity to leverage existing research strengths and resources • Added-value of AI in response to the specific issue <p>Research team 20%</p> <ul style="list-style-type: none"> • Complementarity of expertise of the researchers from Bavaria and Québec involved in this proposal • Track record of the researchers and international scientific level of the research teams <p>Feasibility (including appropriate budget) 20%</p> <ul style="list-style-type: none"> • Realism, significance and rigour in defining the project structure, expected results and identification of milestones; contingency plan • Realism of research schedule and relevance of the follow up indicators • Efficient use of available resources and infrastructures on both sides • The requested budget is in line with the proposed project <p>Project Impacts 20%</p> <ul style="list-style-type: none"> • Impacts on the research advancement in AI for health for Bavaria and Québec • Transfer to the scientific and clinical community • Impacts of the project on the development of new concepts and models, as well as on the development of novel, unused approaches and methods • Potential impacts of the proposed approach(es) on health care



RESEARCH OUTCOMES AND KNOWLEDGE TRANSFER

Reports submission	<p>By accepting the funding, recipients commit to provide:</p> <ul style="list-style-type: none"> • Annual brief joint scientific report and a final joint scientific report maximum 3 months after the end of funding for the FRQ and WKS at BayFOR • Annual financial reports and a final financial report at the dates indicated by the FRQ and WKS at BayFOR
Use and dissemination of the results by the partners	<p>Subsidy recipients authorize the funding agencies to use the final report and published research outputs (from a scientific publication, a conference, a seminar, a symposium or a e-publication), notably for reproduction, translation, implementation or public dissemination through whatever means, along with other uses. This use will solely be for non-commercial purposes and will comply with copyright legislation.</p>
Knowledge mobilization (only for Québec)	<p>The FRQS encourages awardees to lead and contribute to knowledge mobilization activities (transfer, sharing, development, outreach and dissemination) with practice settings and the public. More information is available in the knowledge mobilization document in the Toolbox.</p>
Open Science	<p>Bavaria: Awardees are encouraged to promote and practice open science according to the EU's open science policy.</p> <p>Québec: In accordance with the FRQ's open access policy (<i>Politique de diffusion en libre accès des Fonds de recherche du Québec</i>), all awardees will make their scientific publications available in open access in the twelve months after they are published. Go to the FRQ's open science page for more information.</p>

EQUITY, DIVERSITY AND INCLUSION

	<p>The partners seek to support a research ecosystem based on equity, diversity and inclusion. The individuals who receive funding are encouraged to prioritize the EDI principles within the context of their research activities. Further details are available in the FRQS's statements on equity, diversity and inclusion.</p>
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APPLICANT AGREEMENT

For Bavaria	<p>In Bavaria, based on the evaluation results from the joint evaluation committee, the successful applicants shall submit an application for funding to the Bavarian State Ministry for Science and the Arts (StMWK). The application form will comprise a short project description including a budget calculation. Funding will be awarded subsequently as a direct allocation of funds to the applicant's university.</p>
For Québec	<p>By submitting a proposal, the candidate commits, among other things, to:</p> <ul style="list-style-type: none"> • Comply with the obligations outlined in the CGR, the Policy Regarding Open Access to Published Research Outputs of the FRQS as well as the terms and conditions stipulated in the form and the program rules • Submit additional files linked to the grant, if requested by the FRQ



- Comply with the ethics, integrity and responsible conduct standards of FRQS as outlined in the document **Standards en éthique de la recherche et d'intégrité scientifique for the FRQS**, and in the **Policy for the Responsible Conduct of Research of the Fonds de recherche du Québec**

HOST INSTITUTION AGREEMENT

Québec

The host institution commits to:

- Provide functional laboratory or research facilities, equipment and infrastructure necessary to carry out the research project
- Offer an environment that respects ethical and integrity standards as outlined in the ethics and scientific documents for the **FRQS** and the **Policy for the responsible conduct of research** of the Fonds de recherche du Québec

INTELLECTUAL PROPERTY

Funding sites acknowledge that awardee researchers and their host institution possess the intellectual property rights, under the internal regulations of the host institution.

All institutions involved in the project are encouraged to discuss about a collaboration agreement.

PARTNERS

WKS at Bavarian Research Alliance on behalf of the Bavarian State Ministry of Science and the Arts (StMWK)

Fonds de recherche du Québec



APPENDIX (only for Québec's researchers) Text in French only

PROTECTION DES RENSEIGNEMENTS PERSONNELS ET SCIENTIFIQUES DU FRQ

Les formulaires remplis dans le cadre du présent programme visent à recueillir des renseignements personnels et scientifiques à votre sujet. Ces renseignements seront utilisés et conservés par les Fonds de recherche du Québec (FRQ). Les FRQ sont assujettis à la *Loi sur l'accès aux documents des organismes publics et sur la protection des renseignements personnels* (RLRQ, c. A-2.1) (Loi sur l'accès).

Dans le contexte des activités des Fonds, il est important de noter que :

- Les renseignements personnels et scientifiques exigés sont utilisés pour l'évaluation des pré-propositions et des propositions, pour la gestion du programme et des crédits alloués ainsi que pour l'évaluation interne et externe du programme. Ils sont également utilisés, agrégés avec les données des autres candidats, pour générer des statistiques, inventaires, évaluations et analyses en lien avec le mandat des Fonds qui vise à promouvoir et aider financièrement l'ensemble de la recherche dans le domaine de la santé.
- La collecte des renseignements prévue dans les formulaires est obligatoire pour permettre l'analyse et l'évaluation des lettres d'intention et des demandes complètes, à défaut de fournir toutes les informations prévues au formulaire, les Fonds ne pourront procéder à l'étude de la demande.
- Les personnes qui ont accès aux renseignements recueillis par les Fonds sont les membres des comités d'évaluation (incluant des experts externes), des consultants, ainsi que le personnel autorisé au sein des Fonds. Les personnes qui ont accès à ces données s'engagent à en respecter le caractère confidentiel.
- Le contenu des demandes, tant au chapitre des renseignements personnels qu'à celui des informations scientifiques est confidentiel et n'est communiqué qu'avec le consentement de la personne concernée ou du signataire de la demande ou conformément aux dispositions prévues par la Loi sur l'accès.
- Toute personne a le droit d'accès aux renseignements personnels ou scientifiques qui la concernent et qui sont détenus par les Fonds. Elle peut exiger de faire corriger tout renseignement personnel qui s'avère inexact, incomplet ou équivoque. Elle peut s'adresser au responsable de la Loi sur l'accès au Fonds pour obtenir des informations sur les procédures d'accès, de rectification ou la protection des renseignements personnels et les droits de recours prévus par la Loi sur l'accès.
- Les trois Fonds de recherche du Québec (Fonds de recherche du Québec – Nature et technologies, Fonds de recherche du Québec – Santé et Fonds de recherche du Québec – Société et culture) partagent leurs services administratifs conformément à la *Loi sur le ministère de l'Enseignement supérieur, de la Recherche, de la Science et de la Technologie* (RLRQ, c. M-15.1.0.1). Par conséquent, le FRQS, comme Fonds gestionnaire, partagera les renseignements personnels et scientifiques fournis dans les formulaires avec des membres du personnel du FRQNT et du FRQSC dont la collaboration est requise pour assurer une administration optimale des programmes de financement et une saine gestion des fonds publics.
- Dans le contexte du présent programme, les renseignements personnels et scientifiques fournis à BayFOR dans les formulaires d'inscription et de demande pourraient être partagés avec les FRQ. Les rapports d'évaluation scientifique seront échangés entre les agences ou sites de financement. Les personnes qui ont accès à ces renseignements s'engagent à en respecter le caractère confidentiel.