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French Priority Research Programme (PPR) on antibiotic resistance:

Call for junior and senior researcher positions (chairs)

Consultation address for the call for projects: <https://anr.fr/chaires-amr-2022>



Closing date: 05/09/2022 at 11:00 (Paris time)



ABSTRACT

Following the adoption of the global action plan to combat antimicrobial resistance adopted by WHO in 2015 and the publication of the French interministerial roadmap for the control of antimicrobial resistance in November 2016, the French Government through the General Secretariat for Investment has decided to set up a priority research program (PPR) on antibiotic resistance endowed with €40 million over ten years. This program, now part of France 2030 plan, aims to implement an ambitious research program that brings together all French forces, to propose new public health strategies and measures to reduce and optimize the use of antibiotics in human and veterinary medicine in order to reverse the resistance curve, in line with international actions.

In this context, Junior and Senior interdisciplinary chairs will be funded to strengthen French research on antibiotic resistance. The priority will be to recruit researchers with expertise that will favor the development of investigations of excellence in the field antibiotic resistance

In a first step, a national call for applications has been organized by Inserm in consultation with academic research organizations concerned with antibiotic resistance. This new call, organized by ANR, represents the second step of selection for junior and senior researcher positions. Applicants selected in the first step are now invited to propose a research project that will be evaluated by an international jury.

IMPORTANT DATES

Call for proposals deadlines

Deadline for uploading project submission files (see § 5 concerning file content and conditions of submission):

September 05th, 2022 at 11AM (Paris local time)

website interface :

<https://france2030.agencerecherche.fr/aap-amr-chaires>

IMPORTANT NOTICE

This call is only open to candidates who have been selected by Inserm as a result of their application to the French Priority Research Programme (PPR) on Antibiotic resistance Call for junior and senior researcher positions.

SIGNED APPLICATION FILE

Persons authorized to represent the host institution and the partner institutions, if any, must sign a letter of commitment that confirms its contribution in terms of auxiliary funds, human resources, premises, etc. over the duration of the project, as specified in the submission documents. This letter must be scanned and uploaded to the above-mentioned website before the call for proposals deadline.

CORRESPONDENCE AND QUERIES

ppr-antibioresistance@anr.fr

Scientific project officer : Gabriel Matherat

Programme manager : Jean-Marc Cavaillon

Please read this entire document carefully prior submission

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1. Context and objectives of the call for proposals

France remains a country that over-consumes antibiotics and appears to be one of the European countries most affected by antibiotic resistance. Multi-resistance to antibiotics is therefore a major public health problem in our country. Following the global action plan to combat antimicrobial resistance adopted by WHO in 2015 and following the publication in November 2016 of the interministerial roadmap for the control of antimicrobial resistance in France, the French Government through of the General Secretariat for Investment has decided to set up a priority research program (PPR) on antibiotic resistance endowed with €40 million over ten years, now integrated in France 2030 plan.

In the context of this French Priority Research Programme (*Programme prioritaire de recherche, PPR*) on antibiotic resistance (AbR), 7.5 M€ have been devoted to support senior researcher positions (1 M€ each) and junior researcher positions (500 k€ each). These calls aim to attract, without nationality considerations, (i) senior scientists of excellence, to develop multi-disciplinary research projects on antibiotic resistance in France, favoring a One Health approach when possible or relevant. Candidates aiming to fully integrate the French research system are encouraged. These positions will be hosted in an established laboratory on the French territory.

(ii) young scientists to set up and lead a research team within an established laboratory in France and develop projects of excellence on antibiotic resistance.

The research project should also favor interdisciplinarity and create synergy between the different types of research (fundamental, environmental, clinical, translational, public health, etc., in human and veterinary medicine) whenever relevant. The objective is to stimulate and support the emergence of diagnostic, preventive and therapeutic innovations and to achieve better use of antibiotics.

The research project of the candidates will have to cover at least one of the following 4 research themes pertinent to all three health sectors (human, animal and the environment) to develop multi-disciplinary research projects on antibiotic resistance in France, favoring a One Health approach whenever relevant (see below).

Summary of the 4 research themes of the PPR:

- Dynamics and control of the emergence, transmission and spread of antibiotic resistance (*Challenge 1*)

We are facing a global dissemination of antibiotic resistance. Taking action against this affliction requires studying the mechanisms of emergence, transmission and spread of antibiotic resistance, including in the environment, animal and human ecosystems, using a combination of mechanistic and novel information-based technology approaches. The ultimate objective is to model processes in order to assess and predict the level of risk of acquisition, transmission and spread of antibiotic resistance.

- Optimising the use of antibiotics in human and veterinary medicine (*Challenge 2*)

To develop and evaluate new tools, methods or strategies to develop antibiotic stewardship practices and improve the appropriateness of antibiotic prescriptions and use, such as: (i) rapidly differentiating bacterial infections from other types of infections, and characterising antibiotic resistance mechanisms and susceptibility and assessing the impact of these diagnostic tests on clinical practices; (ii) minimising the effects of dysbiosis on human, animal and environmental microbiomes ; (iii) controlling epidemic risks to reduce transmission and avoid the excessive use of antibiotics; (iv) evaluating best practices, taking into account risks and benefits of innovations, to limit the development of antibiotic resistance; (v) optimising strategies for prescription and use of antibiotics (preventive or curative) to reduce the risk of resistance in

humans, animals, and the environment. The development of diagnostic, modelling, data mining and deep learning tools are encouraged.

- Individual, ethnological and sociological, economic, political and cultural determinants of antibiotic resistance (*Challenge 3*)

It is important to improve our understanding of decision-making processes underlying antibiotic use and to identify environments and mechanisms that improve prescription and usage. It is also necessary to analyse and identify ways to promote infection prevention and control practices and minimise the release of antibiotics into the environment. This requires analysing, understanding and characterising contextual determinants and social factors, identifying economic logics, individual or professional practices, legal frameworks, dialogues, situations, observing population groups, social, institutional and private actors, and locations for decision-making and communication of the problematic. The objective is to identify the social and economic impacts of these behaviours and practices, as well as their consequences.

- Therapeutic innovation (*Challenge 4*)

New therapeutic and preventive strategies must be considered to counter the development of antibiotic resistance through a holistic approach that integrates environmental considerations, animal contexts and human health. This scientific challenge aims to identify and develop innovative therapeutic and preventive alternatives that respect commensal flora and non-targeted bacterial ecosystems. The identification of new molecules, the repositioning or combination of existing molecules, immunotherapy, phage therapy or faecal transfer are at the heart of this challenge. If necessary, all these strategies can be combined with modelling and artificial intelligence approaches.

2. Expectations

2.1. MAIN PROJECT CHARACTERISTICS

The candidate, together with a French host laboratory, must submit a research project, describing the research challenges, the scientific hypothesis, the way the research will be implemented, and its putative outcomes.

2.2. ELIGIBLE CANDIDATES AND COORDINATING INSTITUTIONS

This call is restricted to scientists pre-selected by Inserm in the “*French Priority Research Programme (PPR) on Antibiotic resistance Call for junior and senior researcher positions*”, based on their scientific achievements (first-step of the selection process). Only selected scientists received an invitation to submit their research project.

The research project must be conducted in a French host laboratory.

The intellectual property generated by the research project will be the property of the French institutional partners of the project, according to their usual rules including rights of the inventors protected by the French law.

The host laboratory should have activities linked to AbR and give its written agreement to host the applicant if he/she is selected. The host laboratory must be involved in the design of the research project to ensure it has all the equipment needed for the proposal, to guarantee its feasibility and that the best conditions are met for its success.

The host laboratory will have to provide the candidate with a dedicated research area of about 50m² for junior positions and over 80m² for senior positions.

2.3. PROJECT DURATION

Projects may start as early as the 1st trimester of 2023 for a duration ranging from 18 to 60 months for senior positions and 48 to 60 months for junior positions.

3. Peer-review of the submission documents

3.1. SELECTION PROCEDURE

Only laureates selected in the “Antibiotic resistance Call for junior and senior researcher positions” operated by Inserm, are invited to submit a research project in this second step of selection. The evaluation process will be organized by ANR. Eligible projects will be evaluated by an independent Scientific Committee with an international dimension.

In agreement with the ambitions and requirements of the call, the selection procedure involves:

- A scientific Committee composed of top-leading international scientists representing the various fields of the call. The broad, international cross-section of panelists will guarantee a thorough analyses and compilation of the individual evaluations of each project. If necessary the Scientific Committee may call upon external expertise. The Scientific Committee will write a report presenting:
 - i. A list of project proposals considered fundable, along with explicit recommendations for improvements where relevant;
 - ii. A list of project proposals potentially fundable upon modification, as recommended by the Scientific Committee;
 - iii. A list of projects proposals not recommended for funding, pointing out shortcomings.
- The CEERI¹ (Comité des écosystèmes d'enseignement, de recherche et d'innovation) composed of representatives of the French Government (Ministry in charge of Research and Secretariat General Pour l'Investissement) and qualified experts. The CEERI will propose a decision to the Prime Minister, based on the evaluation made by the Scientific Committee.

The selection procedure comprises the following steps:

- Inspection of project proposal admissibility by the ANR in accordance with the criteria stipulated in § 3.2;
- Evaluation of all project proposals meeting the admissibility criteria by the Scientific committee and, if necessary, by external experts.
- Final project evaluation by the Scientific Committee (see criteria in § 3.3);
- Transmission of the final evaluation report to the CEERI for examination and proposition for selection of candidates;
- Proposition of a list of selected candidates by the CEERI to the SGPI;

¹ The CEERI was designated in the convention between state, the Agence Nationale de Recherche (ANR) and Caisse des dépôts et consignations (CDC) from June 2, 2021 relative to the French investment for the future programme (action « Financement structurel de l'écosystème de l'éducation, de l'enseignement supérieur, de l'innovation et de la valorisation »).

- Decision by the Prime Minister of the definitive list of beneficiaries and amount of financial support awarded
- Publication on the ANR website of the list of projects selected for funding.

All persons involved in project evaluation must comply with the ANR's Code of ethics, and particularly its stipulations relating to confidentiality and conflict of interest. The Code of ethics is available on the ANR website².

At the end of the evaluation procedure, the composition of the Scientific Committee and the schedule for any foreseeable continuation of the call for proposals are posted on the ANR website.

3.2. ADMISSIBILITY CRITERIA

The electronic files, completed and signed by coordinating institution in accordance with the procedures described, must be submitted within the deadlines and in the required format.

The project must fit the scope and criteria of the call for proposals described in § 2.

The coordinating institution must be an existing legal entity — i.e. an institution of higher education and research (universities / research bodies...).

Submissions that fail to satisfy the admissibility criteria at the time of initial screening will not be passed on to the Scientific Committee for evaluation and will not be eligible for funding under any circumstances.

The coordinating institution (University, Research organizations, ...) will contribute to the budget of the project, in different ways potentially including cash and in-kind salaries, equipment, running costs...

Only projects that deal with at least one of the four main topics of research presented in paragraph 1 will be submitted to the experts.

3.3. EVALUATION CRITERIA

Submissions that satisfy the admissibility criteria will be assessed by the Scientific Committee and by external experts (if necessary) following the criteria below:

1/ SCIENTIFIC EXCELLENCE AND AMBITION OF THE PROJECT

- Relevance of the project in relation to the objectives of the Priority Research Programme on antibioresistance.
- Novelty, originality and quality of the proposal in relation to the state-of-the-art
- Clarity of research objectives and hypotheses.
- Quality of preliminary data by the applicant that support the research hypotheses.
- Appropriateness of the methodology, management of scientific risks.
- Feasibility.
- Ability of the project to address the research issues covered by the chosen research theme.

2/ QUALIFICATIONS, COMPLEMENTARITY AND RELEVANCE OF THE APPLICANT AND HOST LABORATORY

- Ability of the applicant to lead the proposed project.
- Quality of the host laboratory.
- Complementarity of the applicant and the host laboratory relative to the project objectives.

² <https://anr.fr/en/anrs-role-in-research/commitments/scientific-integrity/>

3/ ORGANISATION AND RESOURCES USED

- Adequacy between the proposed budget (including the budget being applied for in the proposal) and the stated objectives.
- Identification and management of scientific risks.
- Relevance of the project schedule, consistency of deliverables, feasibility of proposed milestones.
- Availability of the necessary tools

4/ EXPECTED IMPACTS

- Expected outcome to limit, prevent, counteract or fight antibiotic resistance.
- Ambition for the improvement of French leadership in the field.
- Expected high-level scientific output and impact.
- Potential economic, social or cultural impact.
- Expected valorization of the findings: ability to translate research findings into actionable knowledge, including through explicit private partnerships.

4. General provisions for funding

4.1. FUNDING

The total budget for this call is 7.5 M€. This call is part of the initiative “*Programmes Prioritaires de Recherche*”, of the plan France 2030. The eligible expenses are specified in the financial rules of the call for proposals available on the ANR website.

The distribution of financial allocation over the duration of the project is detailed in the final funding agreement set up by the ANR. The funding can only be awarded to higher education institutions (public, or private non-profit), to research organizations, or to umbrella structures with power to act as legal entities.

Businesses and profit institutions of higher education can be granted partner-institution status but will not receive any funding under the project funding.

Funds will be paid out to the coordinating institution. These funds can subsequently be transferred to the partner institutions under the conditions made clear in the financial rules of the call for proposals.

The **3 to 5-year funding** can be of maximum **500 000 euros for junior researchers** (≤ 10 years of experience since completion of PhD). **1.5 to 5 years funding can be of maximum 1 million euros for senior researchers** (more than 10 years of experience since completion of PhD).

4.2. OTHER PROVISIONS

Awarding funds to a project does not relieve the partner institutions of their obligations concerning the rules, regulations, and Code of ethics relevant to their area of activity, if applicable.

On behalf of all the partner institutions, the coordinating institution commits to keeping the ANR informed of any changes likely to modify the content, partnership structure or schedule of the project between the time of submission and the date of publication of the definitive list of finalists.

4.3 OPEN SCIENCE

As part of the ANR's contribution to the promotion and implementation of open science, and in line with the National Plan for Open Science at the French level (PNSO) and Plan S at the international level, the ANR's grantees commit to ensure immediate open access to peer-reviewed scientific publications and to adopt a FAIR approach (Findable, Accessible, Interoperable, Reusable) to research data, guided by the principle: "as open as possible, as closed as necessary". Therefore, all scientific publications resulting from ANR projects funded in the framework of the PPR, will be made available in open access under the Creative Commons Licence (CC-BY) or equivalent via one of the following routes:

- Publication in a natively Open Access journal
- Publication in a subscription journal that is part of a transformative agreement or in a transformative journal
- Publication in a subscription journal using the Right Retention Strategy (RRS), in accordance with the procedures indicated in the grant agreement.

Moreover, the coordinator and partners of projects funded by the ANR from 2022 commit to submit at the time of publication at the latest, the full text of the scientific publications (version Author Accepted Manuscript or Version of Record) in the national open archive HAL, and to mention the ANR research project reference (e.g. ANR-22-CE64-0001).

The ANR recommends the deposit of preprints in open platforms or open archives and encourages the use of permanent or unique identifiers (DOI or HAL Id). Furthermore, the ANR recommends the publication in natively open access journals or open access books.

Finally, the coordinator of the project commits to provide a first version of the Data Management Plan (DMP) within 6 months of the start of the project in accordance with the terms and conditions communicated in the grant agreement.

5. Submission conditions

5.1. CONTENT OF THE SUBMISSION FILE

The submission file must include all the information needed for achieving rigorous scientific and technical assessment of the project. It must be completed before the call for proposals submission deadline (dates and times indicated on page 2 of this document).

The submission forms and financial rules that describe funding conditions will be available for download from the ANR call for proposals website page (see address on page 1).

The administrative data must be entered directly on the submission site (address indicated here on page 2). The submission document, the letter of commitment, and the financial annex must be uploaded to this same site.

IMPORTANT

NO ADDITIONAL ELEMENT WILL BE ACCEPTED AFTER THE SUBMISSION DEADLINE

The submission file should include:

- A document in English providing a detailed description of the research project;

- The administrative information relevant to the project, entered directly using the dedicated online data-entry interface;
- A financial annex;
- A letter of commitment from the host institution.

5.2. SUBMISSION PROCEDURE

It is mandatory for the submission documents to be transmitted by the candidate as follows:

- **IN ELECTRONIC FORMAT:**
 - Before the deadline;
 - On the submission website in accordance with the recommendations given in 5.1.
- **AS A SCANNED AND SIGNED VERSION:**
 - Letter of commitment from the host institution, must be uploaded to the submission website.

Beyond the deadline, this electronic upload is the only version made available to the evaluation panel for peer-review.

5.3. SUBMISSION RECOMMENDATIONS

Given that compliance with the submission deadline is mandatory, Principal Investigators / applicants are strongly recommended:

- to upload the project onto the submission website no later than 24 hours before the deadline date so that any last-minute problems can be dealt with through the helpline;
- to regularly consult the call for proposals website, which continually undergoes updates (website URL indicated on page 1 of this document);
- to contact the correspondent by e-mail if necessary (address indicated on page 2 of this document).

COMPLEMENTARY INFORMATION

The complete details of the PPR are available on the National Antibiotic resistance Portal:

<https://ppr-antibioresistance.inserm.fr/en/>

IMPORTANT DATES

- **5th September 2022:** Deadline for online submission
- **4th trimester 2022:** Publication of the list of selected laureates
- **From the 1st trimester, 2023:** Start of the contract

CONTACT DETAILS

PPR directorate: direction-ppr-antibioresistance.i3m@inserm.fr

Technical assistance relative to the ANR platform: ppr-antibioresistance@anr.fr



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Contacts

Information concerning the administrative process (constitution of the file, online procedures, aid rates) can be obtained from the ANR by e-mail:

ppr-antibioresistance@anr.fr