

## “Preclinical Research in rare diseases: translational steps in large animals”

The Foundation For Rare Diseases (FFRD, Fondation Maladies Rares) is pleased to launch its 2023 call for translational research projects dedicated to the **development of experimental models and evaluation of therapeutic strategies in large animals.**

Submission deadline for pre-proposals: **February 23, 2023, 5:00 pm (CET)**

### Rationale

In the field of rare diseases as well as for more common diseases, the understanding of physiopathological mechanisms and the evaluation of innovative therapeutic strategies largely rely on animal models and mainly rodents. Translational research is at the interface between the proof of concept in cells or small animal models and clinical application in patients. At this stage, the use of large animal models is necessary to be as close as possible to the human situation. It can allow to confirm the relevance of a therapeutic proof of concept or to demonstrate the feasibility, efficiency, and safety of a therapeutic approach. The present call launched by the Foundation For Rare Diseases aims at directly support intermediate key steps of preclinical research projects towards clinical development for human patients.

### Program description

The objective of this call is to support scientific projects at the interface between the *in vivo* proofs of concept - usually in rodents - and the development of clinical applications in patients to improve human well-being. Thus, results should provide essential indications for further clinical development: creation of a specific pathological model, test of the relevance, feasibility, efficiency or safety of a therapeutic approach for human patients.

**Toxicology studies are not eligible to this call. Eligible projects are validation of a proof of concept from an *in vivo* model.**

#### Main requirements:

- The project must rely on **validated preliminary data**,
- The project should in **no way substitute research steps in small animal models** - rodents in particular,
- At this early stage of clinical application, **the use of a large animal must be justified in terms of specific need and relevance to human pathology.**

The project should answer one or several of the following objectives:

- To contribute to a better understanding of the disease, to provide a new model or predictive marker of severity or evolution,
- To define new clinical, biological, or imaging biomarkers,
- To demonstrate the feasibility, efficiency, or safety of a therapeutic product administration in a relevant large animal model,

- To perform pilot study of toxicology and biodistribution mandatory for further development of the future therapy,
- To contribute to technological optimization,
- To develop a new and necessary technical know-how.

The program must use **a limited number of animals**. Application to the national drug agency (ANSM, [www.ansm.sante.fr](http://www.ansm.sante.fr)) may require more animals and other experiments such as detailed biodistribution, toxicology or dose-response studies that are not in the scope of this call.

The experimental protocol should be clearly exposed particularly regarding the number of animals, technical protocols, procedure time, elements of follow-up, endpoints and samples that will be analyzed - clinical, biochemical, histological and biological. Experimental structure and conditions must be appropriate and achievable milestones properly defined and scheduled.

A detailed timetable has to be provided as well as a detailed budget that should cover the whole procedure.

### **This program is open to research projects covering all rare diseases.**

For rare cancers, the French National Cancer Institute (INCa) and the FFRD have defined jointly the following criteria:

- High throughput sequencing projects concerning primary malignant tumors should be addressed to INCa,
- Projects concerning benign tumors as well as systemic rare diseases involving tumor development will be evaluated within this call.

For neuromuscular disorders, a close concertation with AFM-Téléthon might define the best suited support regarding perimeters of respective calls.

The aim of the call is in compliance with the goals set by the International Rare Diseases Research Consortium (IRDiRC).

### **Overheads are not allowed by the FFRD.**

### **Specific conditions of experimentation**

Animals in the scope of this call are usually rabbits, minipigs, pigs, sheep, cats, dogs and non-human primates but other models may be eligible. The applicant is invited to contact FFRD by email at [aap-bio@fondation-maladiesrares.com](mailto:aap-bio@fondation-maladiesrares.com) to check the eligibility of other animal models.

Experiments in large animals must be performed in adapted research structures in agreement with the European regulatory agencies (Directive 2010/63, décret 2013-118). Thus, the project will require a close interaction between the research team of the applicant and the dedicated platform.

Selection of the platform should be based on (1) relevance for the project in order to optimize handling of the project by the platform, (2) expertise of the platform on specific animal models, (3) availability of specific techniques/equipment required for the project on the platform and (4) capacity of the platform to perform the project within the schedule.

If needed, the FFRD can help the applicant to identify an adapted structure to develop the project.

If the project is selected for funding, it should be submitted for ethical approval by the Ministry of Higher Education and Research. Funds will only be delivered after obtention of the ethical approval.

## Instructions and Guidelines

### Eligibility

The principal investigator must belong to a French research team, affiliated to academia (research team working in universities, other higher education institutions or research institutes) and/or to clinical/public health sector (research team working in hospitals/public health organizations). **Early career scientists are encouraged to apply as principal investigators.**

### Funding

FFRD will provide financial support for a **maximal amount of 100 k€ per project.**

Funding will cover costs of the platform that may include purchase, housing, running costs and technician cost for experiments.

Funding is not intended to cover equipment, operating or personnel costs in the applicant laboratory.

### Submission and schedule

Applications will be submitted in two steps for this call. Submissions can only be performed on the appropriate eAwards platform:  
[https://ffrd.evision.ca/eAwards\\_applicant/faces/jsp/login/login.xhtml?lang=EN](https://ffrd.evision.ca/eAwards_applicant/faces/jsp/login/login.xhtml?lang=EN)

Provisional schedule:

Launch of the call	January 5, 2023
Submission deadline for pre-proposals	February 23, 2023, 5:00 pm (CET)
Notification of results for pre-proposals	Beginning of April 2023
Submission deadline for full proposals	June 15, 2023, 5:00 pm (CET)
Notification of final results	October 2023

Pre-proposals will be selected by a scientific *ad hoc* committee composed by experts and FFRD Scientific Advisory Board members. Full proposals will be evaluated by external experts and then selected by the scientific *ad hoc* committee. Results will be communicated by e-mail to the principal investigator.

### Resubmissions and applicants already funded

Applicants resubmitting projects are required to provide a detailed answer to the comments provided by the scientific committee of the FFRD at the previous session and highlight changes in the revised version.

Applicants belonging to a research team already funded by the FFRD since 2017 must provide a detailed report on the results and impacts of all ended project(s).

For ongoing projects, a detailed progress and / or preliminary data report is required.

Report forms are available on the applicant portal or upon request by using: [aap-bio@fondation-maladiesrares.com](mailto:aap-bio@fondation-maladiesrares.com). Please attach all reports to the proposal.

### **FAIR policy / IRDiRC policies and guidelines**

By submitting a project to this call, applicants will adhere to the FAIR guiding principles for scientific data management and stewardship (<https://www.nature.com/articles/sdata201618>).

The project partners are expected to follow IRDiRC policies and guidelines. For more information see <http://www.irdirc.org>.

### **Communication**

Applicants must be aware that title of funded projects and principal investigator name and affiliation(s) will be published on the FFRD website (<http://fondation-maladiesrares.org>).

### **Acknowledgement Policy**

Applicants must acknowledge the FFRD in all communications related with the project (posters, oral communication, scientific publications etc.) as a funding source using the following terms “Foundation For Rare Diseases” or “Fondation Maladies Rares” and/or using the appropriate logo (available upon request).

Reference(s) of the publication(s) must be sent to the FFRD by e-mail to [aap-bio@fondation-maladiesrares.com](mailto:aap-bio@fondation-maladiesrares.com).

The project partners are expected to follow IRDiRC policies and guidelines. For more information see <http://www.irdirc.org>.

### **Contact**

Please contact [aap-bio@fondation-maladiesrares.com](mailto:aap-bio@fondation-maladiesrares.com) for any question related with this call.