"ALEXANDER FLEMING"
Biomedical Sciences Research Center

InfrafrontierGR/PHENOTYPOS

2nd Call for Proposals
InfrafrontierGR/Phenotypos Research Infrastructure
Free Access call – June 2020

Free of charge mouse model development service

Context and aim of the Call

InfrafrontierGR/Phenotypos (www.infrafrontier.gr) is the Greek Research Infrastructure for the Molecular, Behavioral and Phenotypic Analysis of Mouse Models for Human Chronic Degenerative Diseases. The infrastructure provides access to first-class expertise and tools for biomedical research, with core services covering the systemic phenotyping of mouse mutants in Greek regional mouse clinics, and the generation, archiving and distribution of mouse mutant lines through the Greek node of the European Mouse Mutant Archive (EMMA)

The main objective of this call is to **deliver free-of-charge, one novel mouse model of human disease** to the biomedical research community (academic and non-academic) based in Greece. The novel mouse line should advance knowledge of human disease and should be of widespread use in biomedical science. Recent advances in genome editing technology will be used to develop the new mouse model.
Access to this free-of-charge-service will be granted mainly on the basis of the applicant's research plans and the potential impact of the proposed novel mouse line on the wider biomedical research community.

Call information and application form

For more information, including eligibility criteria, selection procedure and call application form please see the **Full Call text below.**

Deadline for submissions: **10/08/2020**.
Proposal submission will be done electronically. See Full Call below for application instructions.

European Union
European Regional Development Fund
HELLENIC REPUBLIC
MINISTRY OF ECONOMY & DEVELOPMENT
SPECIAL SECRETARY FOR ERDF & CF
MANAGING AUTHORITY OF EPAnEK
EPAnEK 2014-2020
OPERATIONAL PROGRAMME
COMPETITIVENESS
ENTREPRENEURSHIP
INNOVATION
ΕΣΠΑ 2014-2020
Partnership Agreement 2014 - 2020
Co-financed by Greece and the European Union

Full Call text

Trans-Regional Access (TA) activity of the InfrafrontierGR/Phenotypos project
Free of charge mouse model development service

The InfrafrontierGR/Phenotypos project supports eligible customers with a **free-of-charge mouse model development service** implemented as a Trans-regional Access activity supporting **a total of one (1) project** in this Call.

The access unit offered covers the **production of a minimum of a single heterozygous mouse line, carrying the gene alteration of choice**.

The model development services will be run by the BSRC Fleming Transgenics Facility and may involve one of the **three main mouse transgenic technologies**:

1. CRISPR/Cas9 method for the production of genome-edited mouse line. The service includes prediction of off-target sites, preparation of sgRNA's and Cas9 mRNA/protein, and delivery into zygotes to generate F0 founder mutant animals. Selected F0 animals will be bred to germ line to produce F1 genome edited animals. Possible allele types that can be generated should be small insertions or deletions (indels).
2. Blastocysts injection method of gene-targeted embryonic stem cells (ESC) for the generation of a new mouse line carrying a disrupted or mutated genetic locus. Already validated gene-targeted ES cell clones must be provided from either international consortia such as IKMC, or other sources, at the Investigator's cost. For each project a minimum of two independent ES cell clones will be requested to maximize the probability to obtain a germline-transmitting chimera. Breeding of chimeras result in the generation of the F1 mutated founder line.
3. DNA microinjection method in the pronucleus of zygotes for the generation of transgenic mice, carrying an inserted cassette in their genome. The DNA construct will be provided by the investigator accompanied by a proof that the transgene can be detected in genomic DNA by a functional assay, as well as a gel photo where integrity and quantity of the DNA is documented with the help of a known DNA marker. The minimum of 3 transgenic founders will be delivered for every construct injected.

Newly developed mouse models will be made available to selected applicants within an average of 12 months following provision of all required information to start the mouse production.

The generated mouse models will be made available to the scientific community. An optional grace period of up to 1 year for mouse resources may apply, with immediate release of mouse resources after expiry of the grace period. Mouse mutant lines will be deposited into the INFRAFRONTIER/EMMA repository for subsequent use by the scientific community. A collaboration agreement will be established between BSRC Fleming and applicant.

Cost: Access to the InfrafrontierGR/Phenotypos model development service is **free of charge**. Validated gene-targeted ES cell clones must be provided at the applicant's cost. Shipment cost of the newly developed mouse models must be covered by the applicant.

Eligibility: Applications for the InfrafrontierGR/Phenotypos TA call can be submitted by applicants based in Greece, except the region of Crete. An additional call for Crete-based applicants will be published. Members of the InfrafrontierGR/Phenotypos infrastructure are not eligible for applying, with the exception of Democritus University of Thrace, Department of Molecular Biology and Genetics. Applicants should be able to demonstrate access to mouse hoteling and analysis facilities.

Applications: Applications for the model development free access call are made via the following **application form**, which must be sent electronically **to infrafrontierGR@fleming.gr by August 10, 2020**. The form includes a short description of the project focusing on research plans for utilising the newly developed mouse model that is being generated by the InfrafrontierGR-Phenotypos TA service plus its impact on the wider biomedical research community.

Selection procedure: InfrafrontierGR/Phenotypos mouse production capacities will be subject to a review procedure which will be initiated after call for applications is closed. The review will be based on a short description of the project involving the mouse mutants to be produced by the TA service. In addition to scientific merit of applicants, soundness and feasibility of the proposal, research plans, and the beneficial impact of the proposed novel mouse line on the wider biomedical research community will be assessed. A mixed panel of members of InfrafrontierGR/Phenotypos and potentially of external evaluators will assess service requests supported by this activity. Applicants will be informed of the outcome of the evaluation within 6 weeks after the end of the call for which the application was submitted.

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InfrafrontierGR/PHENOTYPOS

INFRAFRONTIER-GR:
AN OPEN ACCESS INFRASTRUCTURE FOR THE DISEASE-ORIENTED ANALYSES OF PRECISION MUTATIONS

WHAT WE DO

CREATE
Precision mutations in the mouse

ANALYZE
In disease settings for human health

STORE
in the European Biobank (EMMA)

SHIP
To a world of research

OUR MISSION

A Hellenic Infrastructure of Excellence in Biomedical Research that provides innovative mouse resources and tools to study gene function in human disease and evaluate new therapeutics

OUR PRINCIPLES

- Harmonisation with International Quality Standards
- Open Access services
- Data FAIRification
- 4Rs

DISEASE AREAS WE SCREEN

- **Inflammatory Bowel Disease**
- **Arthritis**
- **Infection**
- **Neurodegeneration**
- **Mental Disability**
- **Metabolic Disorders**
- **Cancer**

THE MOUSE AS A MODEL

- 30 Nobel prizes
- Preclinical Evaluation of Therapies
- Human and Mouse Pathophysiological Processes are well Correlated
- Straightforward Genetic Manipulation

WHAT WE OFFER

Standardised Evaluation Procedures
- 10 Phenotyping & Metabolic Pipelines
- 80 SOPs

Validated Mouse Models

Non-invasive & Invasive Methods

Secondary to Tertiary Phenotyping

State-of-the art Infrastructure
- FACS
- µCT imaging
- Proteomics
- Ultrasound imaging
- Optical / X-ray Imaging
- PET/CT imaging
- Endoscope imaging
- Histopathology infrastructure
- Biochemical Analyser
- Hematology Analyser
- Gene Editing infrastructure

THE PARTNERS

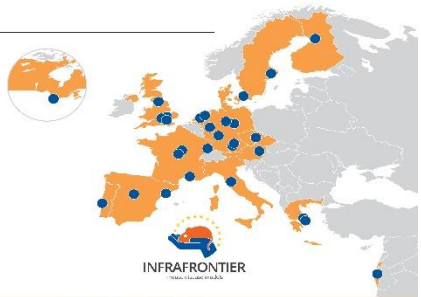
"ALEXANDER FLEMING"
Biomedical Sciences Research Center

HELLENIC REPUBLIC
National and Kapodistrian University of Athens

DEMOCRITUS UNIVERSITY OF THRACE

FORTH

BRFAA



www.infrafrontier.gr | www.infrafrontier.eu

ΕΠΑνΕΚ 2014-2020
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ΕΣΠΑ 2014-2020

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