



Instituto
de Medicina
Molecular

João Lobo
Antunes

Sharing experiences of a NIH-funded project

Instituto de Medicina Molecular João Lobo Antunes (iMM)

International programmes for research and innovation funding: opportunities for health, translational and clinical research

20 May 2019

(International Clinical Trials Day)



PERIN Portugal in Europe Research and Innovation Network



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Overview of iMM

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NIH funded project at iMM

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Main limitations for NIH success

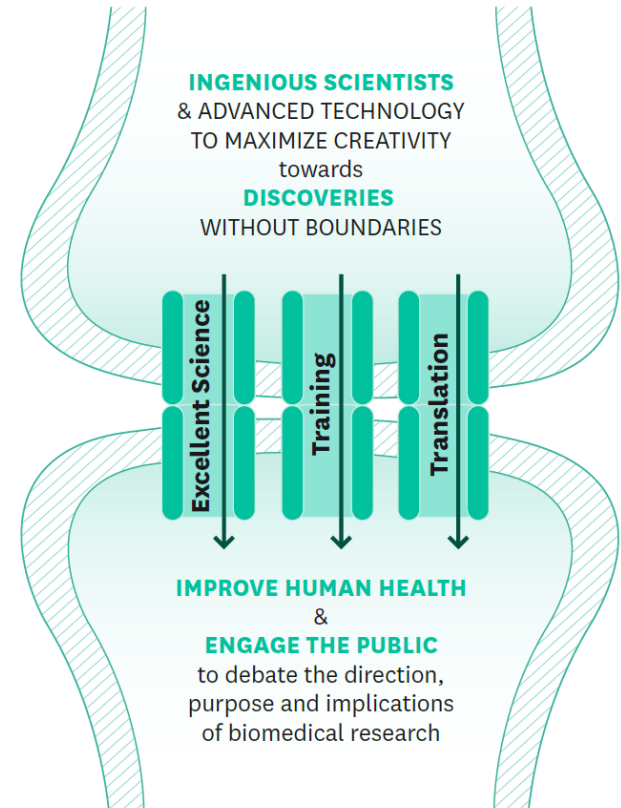
04

Tips to improve our success in NIH funded projects

Chasing Questions



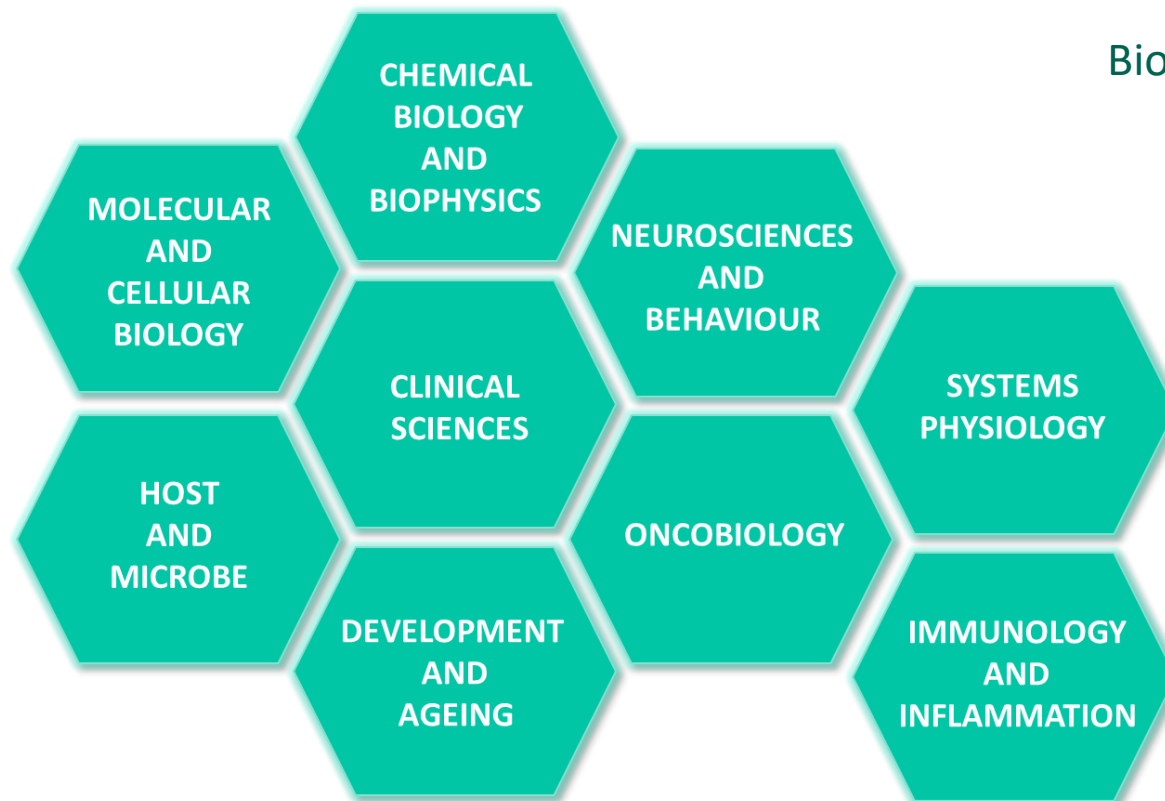
Lisbon Medical Academic Centre (CAML)



Freedom to chase key questions

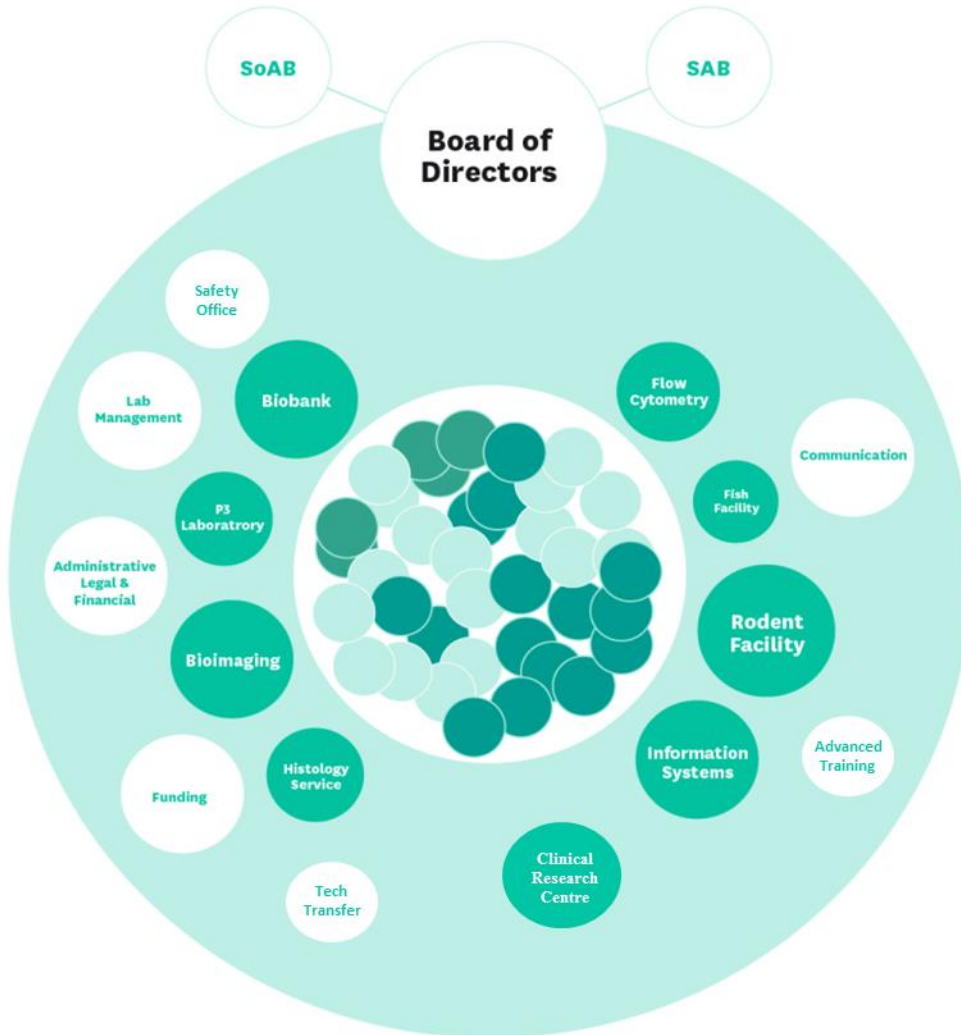
Interest Groups for Multidisciplinarity & Critical Mass

Basic
Translational
Clinical
Biomedical Research

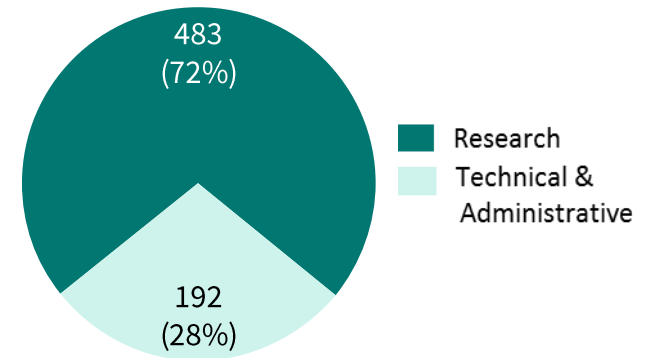


In a collaborative ecosystem of 675 people

Facilities acting as internal providers for the research groups



Group Leader	34
PostDocs	83
PhD students	141
MsC Students	82
BsC Students	15
Researchers	128



Facilities - Administrative staff	38
Facilities - Technical staff	74
Lab technical staff	80

iMM Internationalization

Resulting in worldwide joint publications

Internationalization:
Number of Publications in collaboration
1 ————— 320

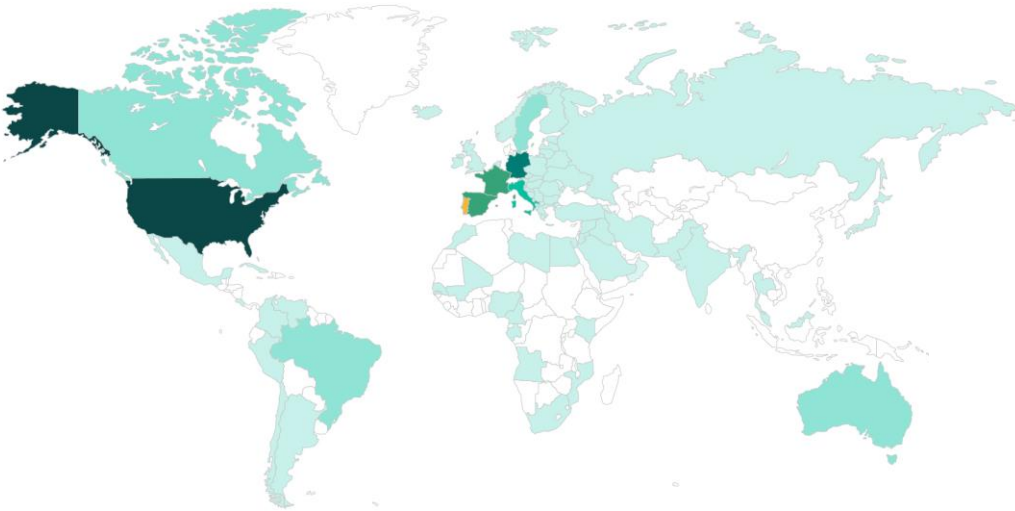


Figure 1 IMM's worldwide partners in joint publications (research groups from 78 different countries). Stronger tonalities represent countries with higher number of publications in collaboration with IMM.

Bringing cultural diversity and best practices from around the globe
Over 30 Nationalities

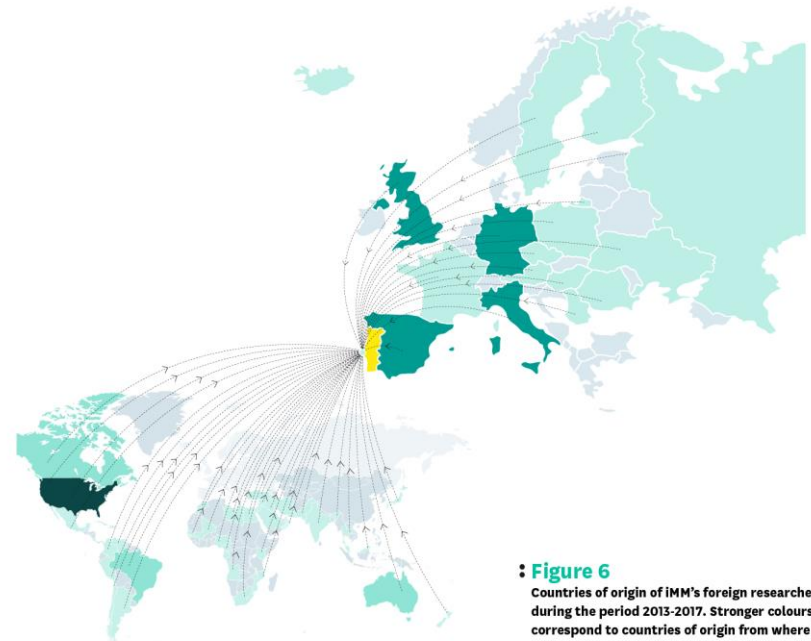


Figure 6 Countries of origin of IMM's foreign researchers during the period 2013-2017. Stronger colours correspond to countries of origin from where higher number of foreign researchers came to IMM.

Collaboration with research groups from 78 different countries

iMM Competitive Funding

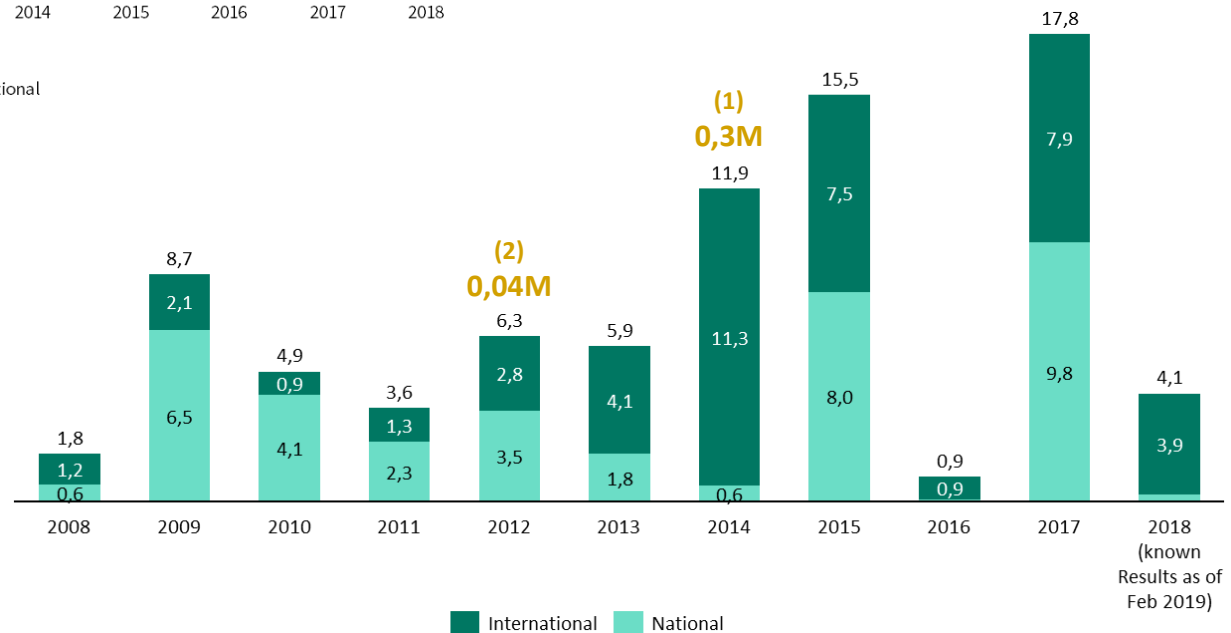


Funding Sources Evolution of Diversity

NIH

Funds Secured (Values in Million Euro)

NIH



(known Results as of Feb 2019)

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• NIH project

Before the call

Scientific capacity

- Previous work



Partner's work together on peptide strategies for viral infections, namely Human parainfluenza viruses, resulting in joint publications

- Team & Expertise



Anne Moscona –Molecular virology and antiviral approaches



Nuno Santos –Biochemical and biophysical membrane processes



Stefan Niewiesk - *in vivo* models for peptide efficacy assessment



Sam Gellman – Protein design

- Idea for new project



Development of a new broad-spectrum antiviral strategy based on inhibiting membrane fusion during viral entry

Department of Health and Human Services

Part 1. Overview Information

Participating Organization(s)	National Institutes of Health (NIH)
Components of Participating Organizations	National Institute of Biomedical Imaging and Bioengineering (NIBIB) National Cancer Institute (NCI) National Eye Institute (NEI) National Human Genome Research Institute (NHGRI) National Institute of Allergy and Infectious Diseases (NIAID) National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) National Institute on Deafness and Other Communication Disorders (NIDCD) National Institute of Dental and Craniofacial Research (NIDCR) National Institute on Drug Abuse (NIDA) National Institute of Environmental Health Sciences (NIEHS) National Institute of General Medical Sciences (NIGMS) National Institute of Neurological Disorders and Stroke (NINDS)
Funding Opportunity Title	Bioengineering Research Grants (BRG) (R01)
Activity Code	R01 Research Project Grant

Funding Opportunity Purpose

➔ What type of projects does this call wants to fund?

- 1) apply a multidisciplinary approach to the solution of a biomedical problem; and
- 2) integrate, optimize, validate, translate or otherwise accelerate the adoption of promising tools, methods and techniques for a specific research or clinical problem in basic, translational, or clinical science and practice.

A BRG application may propose design-directed, developmental, discovery-driven, or hypothesis-driven research and is appropriate for small teams applying an integrative approach that can increase our understanding of and solve problems in biological, clinical or translational science.

• NIH project

The call

Background

→ Why does NIH want to fund Bioengineering Research?

Many major biomedical research problems are best addressed with a multidisciplinary approach that bridges the life and physical sciences.

Principles and techniques in quantitative sciences such as physics, mathematics, chemistry, computer sciences, and engineering are increasingly applied to good effect in biomedical research.



- i) The project must deliver on the **need the FOA** intends to fill, not the need of the researchers/institution
- ii) The projects should clearly serve the **mission** of one or more of the **NIH Institutes or Centers** participating in the FOA

The call

The project

Engineering protease-resistant α/β foldamer peptides for broad-spectrum antivirals



Mission

Conduct and support basic and applied research to better understand, treat, and ultimately prevent infectious, immunologic, and allergic diseases.

NIH project

The call

Confirmation

Project



Objectives of FOA & sponsor's mission

Research Funding > Scientific and Financial Contacts for NIH Bioengineering Program Announcements

Research Funding

Scientific Program Areas

Division of Applied Science & Technology +

Division of Discovery Science & Technology (DDST) +

Division of Health Informatics +

Scientific and Financial Contacts for NIH Bioengineering Program Announcements

Inquiries regarding scientific and management issues, or other concerns related to the EBRG, BRG, or BRP funding announcements at specific NIH Institutes or Centers can be directed to the scientific contacts. Budgetary questions can be directed to the

National Institute of Allergy and Infectious Diseases (NIAID) - BRG only

Scientific Contact

Nancy Ernst, Ph.D.

Program Officer, Bacteriology and Mycology Branch

5601 Fishers Lane, RM 7E35

Rockville, MD 20892

Phone: 240-669-5076

Email: nancy.ernst@nih.gov

Financial Contact

Vandhana Khurana

Grants Management Specialist

5601 Fishers Lane

Bethesda, MD 20892-9824

Telephone: 240-669-2966

Email: khuranav@niaid.nih.gov



Idea of the project aligned with NIAID's focus areas & scope of FOA



Designing/writing the project

- i. The purpose of FOA
- ii. The indications for Research Strategy

PHS 398 Research Plan Component

- *how the technology developments being proposed address the biomedical problem identified in the application;*
- *the significance of the proposed work;*
- *quantitative benchmarks for success;*
- *anticipated risks and limitations; and*
- *alternative strategies to overcome potential pitfalls.*

The call



Foreign Institutions

Non-domestic (non-U.S.) Entities (Foreign Institutions) are eligible to apply.
Non-domestic (non-U.S.) components of U.S. Organizations are eligible to apply.
Foreign components, as [defined in the NIH Grants Policy Statement](#), are allowed.

Reviewers will assess whether the project presents **special opportunities** for furthering research programs through the use of unusual talent, resources, populations, or environmental conditions that exist in other countries and either are **not readily available in the United States** or **augment existing U.S. resources**.



iMM in project: *The foreign site is **required** because of **unique features** that are **essential to the project** and **cannot be found elsewhere**, as detailed below. Note, we have already collaborate with the investigators in Portugal as evidenced by **joint publication** and the preliminary data presented.*

Scientific Compliance



- Aligned with FO purpose
- Aligned with Institute's mission
- Adequate Team / Expertise
- Writing according to research plan indication
- Resources and Institutional capacity ensured
- Budget*

National Institute of Allergy and Infectious Diseases (NIAID) - BRG only

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* OHs – max 8% DC (internal approval)

Institutional Compliance

SF424 (R&R) Comprehensive Application Guide

U.S. Department of Health & Human Services > National Institutes of Health >

NIH National Institutes of Health Office of Extramural Research | Grants & Funding NIH's Central Resource for Grants and Funding Information

Entire Site Search this Site

eRA | NIH Staff | Glossary & Acronyms | FAQs | Help

HOME ABOUT GRANTS FUNDING POLICY & COMPLIANCE NEWS & EVENTS ABOUT OER

Home » About Grants » How to Apply - Application Guide

How to Apply - Application Guide

Use the application instructions found on this page along with the guidance in the funding opportunity announcement to submit grant applications to NIH, the Centers for Disease Control and Prevention, the Food and Drug Administration, and the Agency for Healthcare Research and Quality.

Prepare to Apply

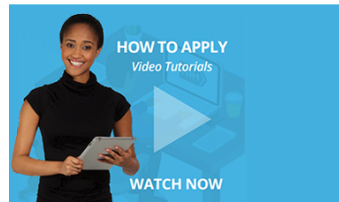
- Systems and Roles
- Register
- Understand Funding Opportunities
- Types of Applications
- Submission Options
- Obtain Software

Write Application

- Write Your Application
- Develop Your Budget
- Format Attachments
- Rules for Text Fields
- Page Limits
- Data Tables
- Reference Letters
- Biosketches

Submit

- Submit, Track, and View
- How We Check for Completeness
- Changed/Corrected Applications



How to Access Grant Application Forms

Form Number	How To Access	Play Video Tutorial
SF 424 (R&R)	<p>There is no universal form set available for download. Each funding opportunity announcement guides you to the systems (e.g., ASSIST, Workspace, system-to-system solution) through which you can access the application forms.</p> <p>Screenshots of the forms are available at the end of the application form instructions, but you must use the forms associated with the FOA for submission.</p>	

Related Resources

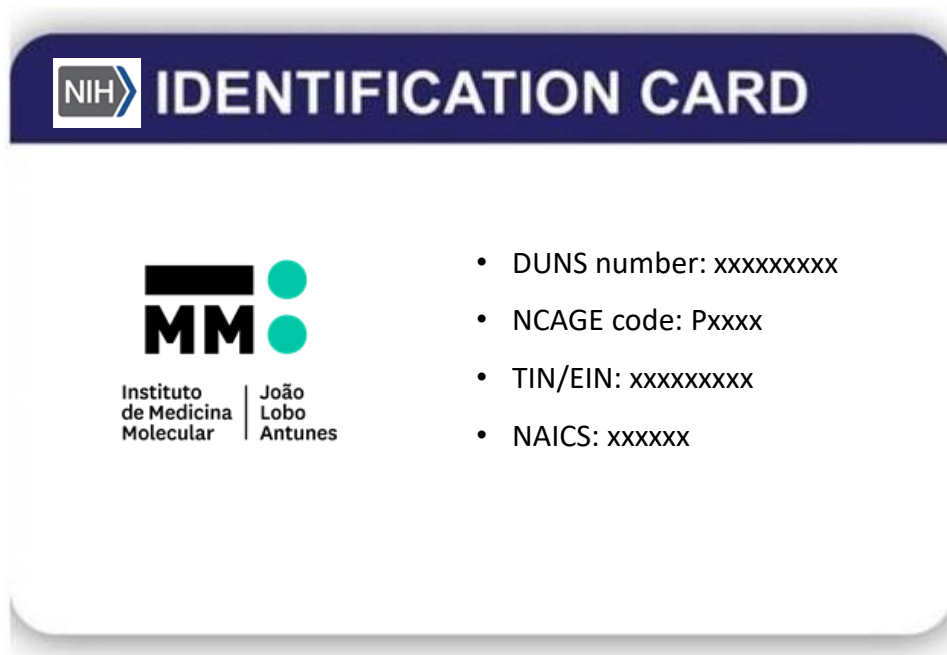
Due Dates and Policies

- Due Dates
- Submission Policies
- Dealing with System Issues

After Submission

- Receipt and Referral
- Peer Review

The call



Registration of Institution in advance
(min. 2 months before deadline)

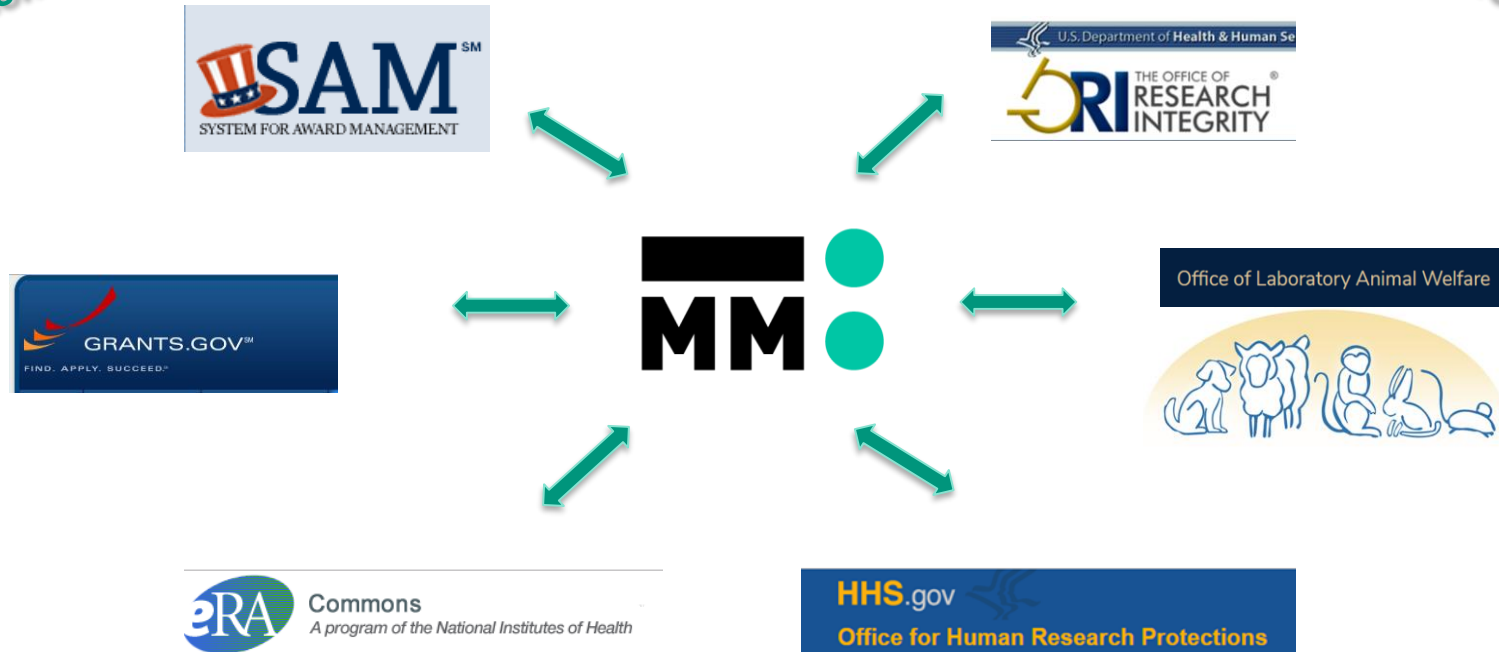
- Data Universal Numbering System, the **D-U-N-S®** Number, global business identification
- NATO Commercial and Government Entity (**NCAGE**) code
- Employer Identification Number (**TIN/EIN**)
- North American Industry Classification System (**NAICS**)

NIH project

The call

Application & Management

Compliance



Professional Support

[Grants.gov Customer Support](#) (Questions regarding Grants.gov registration and submission, downloading or navigating forms)
Contact Center Phone: 800-518-4726
Email: support@grants.gov

GrantsInfo (Questions regarding application instructions and process, finding NIH grant resources)
Telephone 301-710-0267
TTY 301-451-5936
Email: GrantsInfo@nih.gov

eRA Service Desk (Questions regarding ASSIST, eRA Commons registration, tracking application status, post submission issues)
Phone: 301-402-7469 or 866-504-9552 (Toll Free)
TTY: 301-451-5939
Email: commons@od.nih.gov

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NIH project

Call limitations



❖ Evaluation criteria

*Applications from foreign organizations or international organizations will be evaluated and scored during the initial review process using the standard review criteria. In addition, the following will be assessed as part of the **review process and award decision**:*

- *Whether the project presents **special opportunities** for furthering research programs through the use of unusual talent, resources, populations, or environmental conditions in other countries that are **not readily available in the United States** or that **augment existing U.S. resources**.*
- *Whether the proposed project has **specific relevance** to the mission and objectives of the IC and has the potential for significantly **advancing the health sciences in the United States**.*

❖ *Research grant applications from foreign organizations or international organizations **may not be funded** unless **approved by the IC National Advisory Council or Board**.*

Note, these additional criteria are not applied to applications from domestic organizations with foreign components or applications in response to an FOA requesting applications from foreign organizations only.

❖ Institutional compliance



- Strong institutional support (especially pre-award)
- Institutional requirements not always easy to comply with
- Preparation in advance
- Dedicated time to search for adequate topics



- Technical support extremely helpful

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Tips to improve our success in NIH funded projects

Improving PT success



- Identify niches/added value projects
(unique talent, resources, populations, environmental)
- Strong partners from the US
- Internationalization (Career development grants, Fogarty grants)
- Prepare in advance
 - liaison with scientific officers
 - get familiar with IC mission/objectives
- Reply to prescription of the call (top-down but quite open)
- Subscribe weekly NIH Funding Opportunities and Notices e-mail
- Strengthen institutional support

Thank You



**Instituto
de Medicina
Molecular**

**João Lobo
Antunes**