

## Medalis CALL FOR RESEARCH PROPOSALS

### *Instructions for Authors:*

**The call for proposal Medalis** is defined as follows:

**The Strasbourg Drug Discovery and Development Institute (IMS)** is based on 3 pillars federating its research activities (Medalis), training (EURidis) and innovation / technology transfer (INEdis), all centered on the discovery and development of new drugs.

Twelve academic research teams form the IMS, each providing conceptual and technological bases for therapeutic innovation and having demonstrated previous activity of valorization / transfer. Thanks to a recognized fundamental research activity and an integral part of national and international networks, IMS aims to develop finalized projects from the entire Strasbourg scientific community, ranging from *in silico* studies to setting up of preclinical studies, the creation of intellectual property, the setting up of industrial partnerships and the creation of companies. His field of interest focuses on small molecules and peptides for therapy, diagnosis and inherent technologies.

<https://ims.unistra.fr/>

**Eligibility:** The Medalis call for proposal is willing to finance several excellent projects dealing with development of active molecules/new concepts in any therapeutic areas. Are also eligible technological projects/ development of original cellular *in vitro* or *in vivo* animal models, which could accelerate the development of innovative therapeutics and diagnostic. The project must have a short/medium term strategy of patent(s) applications and/or start-up creation.

The project must include at least one of the Medalis partners listed in appendix 1. The principal investigator must be member of one of the Medalis team. Collaborations with researchers outside of these teams are possible but will be financed through the principal investigator (no money transfer). Priority will be given to the most innovative project(s) and those, which mark a break with everything that preceded them.

**Format:** A single pdf file has to be sent to Ghislain AUCLAIR via email (gauclair@unistra.fr)

**Deadline for submission:** 26<sup>th</sup> June 2023, 20h00

**Results:** November 2023

### **Financial support:**

Medalis offers the possibility to finance two types of projects:

**Exploratory grant:** Maximum 50k€ over 12 months

**Consolidated grant:** Minimum of 2 teams including at least 1 Medalis team, for a maximum of 18 months and maximum 300k€

Consolidated grant can be the extension of an exploratory grant

The grant must be exclusively used to finance the project selected. Grantees undertake to present the project twice a year to the SAB. Renewal of the subvention can be authorized pending consumption of at least 90% of the initial subvention.

**Eligible costs are:**

- Operating costs (consumables, reagents, animals etc...)
- Mission expenses related to the project (travels; congress fees, ...)
- Equipment<sup>1</sup>
- Subcontract costs (externalization of experiments, production etc...)
- Recruitments on temporary work contract (post-docs, engineers **but not PhD students...**) of persons who are strictly assigned to the project can be authorized only after using the human power of the IMS engineer team (see appendix 2). (add in the budget table the requested HR – Cell biology, Chemistry, Bioinformatic, In vivo models, Proteomic - by indicating the specialty and the % of contribution)

The project has to be written in English and mention the following items:

<b>Title of the project/Acronym</b>	
<b>Date:</b>	
<b>Team leader name:</b>	
<b>Team leader email: Phone: Cell Phone</b>	
<b>Unit:</b>	

**1. Project description:**

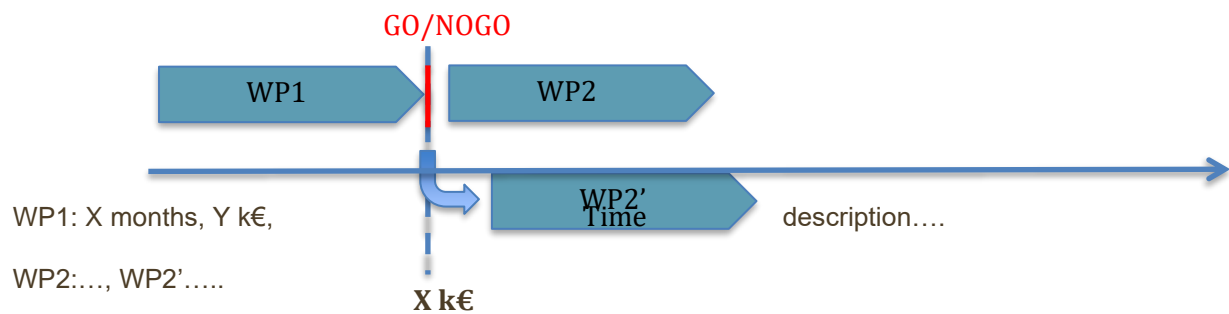
- Duration in months as well as starting and ending dates
- Project already financed by Medalis? (Yes or No)
- if yes, please join a short summary of the last phase of the project as an appendix<sup>2</sup>.
- Total cost of the project
- Amount requested from Medalis
- Collaboration with Medalis Partners (see appendix 1)
- Collaboration with other partners (names, institutions, cities, countries):.....
- Other financial support(s) granted to this project (Name, amount, period)
- Links with other existing Medalis projects
- If in the project description new molecular entities are mentioned, please include the molecular structures as appendix.
- Detailed justification of the requested funding (the table “Financial summary” has to be completed)
- **The table has to be completed for each partner of the project and a final summary table (see p 6-7)**

***Don't forget to mention the referees we should not contact due to conflict of interest!***

<sup>1</sup>Equipment is defined for material costs >4000€ HT per unit. A quote has to be sent with the application form for equipment cost >20 000€ HT.

<sup>2</sup> A project in continuation will not be considered if more than 10% of the initial budget is still available. Please indicate the remaining financial amount at the date of the submission, and if the project started with the DDD challenge.

2. Project abstract (maximum ½ page)
3. Project description (maximum 3 pages), and the final goal you would like to reach (value, services platform, etc.).
4. Decision tree (work package, go/no go, timeline, cost/work package, alternatives in case of no go...)



5. Competition description and the place of the project compared to current solutions (target, indication, sensitivity, etc.)
6. Financial summary of the project (see p 6-7)

### **Planning AAP 2023:**

14<sup>th</sup> April – 26<sup>th</sup> June 2023

**CALL FOR RESEARCH PROPOSALS (AAP)**

June – November 2023

**Reviewings**

November 2023

**Project presentation**

November 2023

**Results**

June 2024

**Progress presentation**

**Contact:** Ghislain AUCLAIR, [gauclair@unistra.fr](mailto:gauclair@unistra.fr)

## Appendix 1: Medalis partners:

Partner Medalis	Name	Email	Unit
1	Sylviane MULLER	Sylviane.muller@unistra.fr	UMR 7242
2	Christopher MUELLER	c.mueller@ibmc-cnrs.unistra.fr	UMR 3572
3	Dominique BONNET	dominique.bonnet@unistra.fr	UMR 7200
4	Frédéric BIHEL	frederic.bihel@unistra.fr	UMR 7242
5	Frédéric SIMONIN	frederic.simonin@unistra.fr	UMR 7200
6	Françoise DANTZER	francoise.dantzer@unistra.fr	UMR 7199
7	Alain WAGNER	wagner@unistra.fr	UMR 7242
8	Dominique BAGNARD	bagnard@unistra.fr	UMRS 1119
9	Pascal VILLA	pvilla@unistra.fr	UMS 3286
10	Sarah CIANFERANI	sarah.cianferani@unistra.fr	UMR 7178
11	Frédéric BOISSON	frederic.boisson@iphc-cnrs.fr	UMR 7178
12	Alexandre DETAPPE	a.detappe@icans.eu	UMR 7178

## Appendix 2: Inedis engineers:

### CELL BIOLOGY

#### CELLULAR BIOLOGY

- Cell culture (adherent lines, stem cells in suspension, primary culture)
- Culture of brain organoids
- Histology (vibratom and cryostat sections)
- Immunohistochemistry & immunofluorescence
- Transfection (JET PEI, Mirus) & Infection (lentivirus)
- Production & purification of proteins
- Angiogenesis test
- ELISA, MTT, MTS, Western Blot

#### DEVELOPMENT OF PROTOCOLS

- Flow cytometry (FACSCalibret Macs Quantify)
- DuoLink (ligature proximity test)
- Xcelligence (proliferation and migration test)

#### MOLECULAR BIOLOGY AND BIOCHEMISTRY

- RTqPCR, cloning, site-directed mutagenesis

### PROTEOMIC

#### PROTEOMIC ANALYSIS BY MASS SPECTROMETRY

- Sample preparation: Electrophoresis gels, gel digestion, protein assay, cell lysis, tryptic digestion, purification, desalting
- Mass spectrometry: LC-MS/MS, timsTOF Pro, Q Exactive HF-X, label-free quantification (spectral count and XIC), de novo analyzes
- Software: HyStar, otof Control, Xcalibur, Chromeleon, Mascot, Proline, Skyline, MaxQuant

### CHEMISTRY

#### CHEMISTRY

Medicinal chemistry, chemistry of fluorine, sulfur and phosphorus

#### SYNTHESIS

Organic synthesis, multi-step synthesis

#### PURIFICATION

Chromatography on silica gel (manual and automated), distillation, recrystallization

#### ANALYZES

NMR (1D and 2D), HPLC, GC, MS, IR, LC/MS

#### SOFTWARE

ChemOffice, SciFinder, Topspin, Mestrenova

### MICROFLUIDIC

#### MICROMANUFACTURE

CAD (Clewin, Autocad)  
Photolithography (MJB3) of negative and positive photoresists  
Microengravings on glass in RIE  
Micropatterning of cells on glass coverslips  
Manufacture of microfluidic chips in PDMS  
Coupling micropatterning and microfluidics

#### CELLULAR BIOLOGY

Cell culture (adherent lines and primary culture of mouse hippocampal and cortical neurons)  
Immunofluorescence

#### MICROFLUIDIC

Cell cultures and co-cultures in microfluidic chips  
Microfluidics of drops

#### ANALYZES

ImageJ  
Matlab  
Graphpad Prism

#### OTHERS

3D prints  
Microengravings  
Laser cutting  
Arduino

### Financial summary of the project

<b>Partner n°</b>			Cost in euros (with VAT)
<b>Operating costs</b>			0
<b>Platform costs (ex: chemistry = 500€/month)</b>			
<b>Equipment costs</b>			
Please, indicate a name and a reference.			
Equipment 1			
Equipment 2			
Equipment 3			
<b>Subcontract costs</b>			
<b>Travel costs</b>			
<b>Personnel costs</b>			
Please, indicate the position title (post-doctorate, Engineer)	Number of months	Monthly gross salary	Cost in euros (with VAT)
<b>TOTAL PROJECT (Without IMS engineer costs)</b>			<b>0€</b>
<b>IMS engineer team</b>	Number of months	Part time (%)	n/a
<b>IMS engineer team</b>	Number of months	Part time (%)	5000*(X months)*%
<b>Cell biology</b> <input type="checkbox"/>	Ex: 3 months + 6 months	30%	= ((5000x3*0.3)+(5000*6*0.25))=12000€
<b>Microfluidic.</b> <input type="checkbox"/>			
<b>Chemistry</b> <input type="checkbox"/>			
<b>Proteomic</b> <input type="checkbox"/>			
<b>TOTAL PROJECT</b>			<b>0 €</b>

			Cost in euros
<b>Operating costs</b>			0
<b>Platform costs (ex: chemistry = 500€/month)</b>			
<b>Equipment costs</b>			
Please, indicate a name and a reference.			
Equipment 1			
Equipment 2			
Equipment 3			
<b>Subcontract costs</b>			
<b>Travel costs</b>			
<b>Personnel costs (see appendix 2)</b>			
Please, indicate the position title (e.g. post-doctorate, Engineer)	Number of months	Monthly gross salary	Cost in euros
<b>TOTAL PROJECT (Without IMS engineer costs)</b>			<b>0€</b>
<b>IMS engineer team</b>	Number of months	Part time (%)	$5000 \cdot (X \text{ months}) \cdot \%$
Cell biology <input type="checkbox"/>	Ex: 3 months	30%	=
Microfluidic. <input type="checkbox"/>	+		$((5000 \times 3 \cdot 0.3) + (5000 \cdot$
Chemistry <input type="checkbox"/>	6 months	25%	$6 \cdot 0.25)) = 12000€$
Proteomic <input type="checkbox"/>			

**TOTAL PROJECT 0€**