



## VACANCY NOTICE – 2023-IPR-S4001-FGIV-022707

### FG IV Scientist - Exploratory Research Project

#### Immunocompetent bioprinted 3D models to assess human immune responses on-chip (IMPRESSION)

<b>Type of contract</b>	Member of the European Commission's contract staff, Function Group IV (article 3b of the <a href="#">Conditions of Employment of Other Servants</a> )
<b>Duration of contract</b>	36 months employment contract for the Exploratory Research Project Immunocompetent bioprinted 3D models to assess human immune responses on-chip (IMPRESSION). Employment contracts for this category of staff can be renewed up to maximum 6 years.
<b>Area</b>	Biotechnology
<b>Place of employment</b>	Ispra (IT)
<b>Indicative basic salary</b>	3877,47 - 5616,29 € (applicable as of 1 <sup>st</sup> of July 2022) For more detailed information please consult: <a href="#">Working Conditions</a>

#### WE ARE

The [Joint Research Centre \(JRC\)](#) provides independent, evidence-based knowledge and science, supporting EU policies to positively impact society.

The current vacancy is in the Technologies for Health Unit of the Directorate for Health and Food of the JRC. The mission of the Directorate is to protect health and promote wellbeing by ensuring that EU policies and regulations make the best use of scientific knowledge, evidence and standards.

The Technologies for Health Unit aims at providing support to EU health and food policies with safe, sustainable and innovative solutions and technologies, by evaluating available evidence, performing state-of-the-art measurements and generating knowledge for use throughout the policy cycle.

The Scientific Development Programmes Unit is in charge of the overall JRC Exploratory Research Programme.

The vacancy is within the **Exploratory Research Project Immunocompetent bioprinted 3D models to assess human immune responses on-chip (IMPRESSION)**. The JRC Exploratory Research Programme is a strategic initiative characterised by ideas that might lead to novel results and qualitatively enrich current JRC scientific work.



## **WE PROPOSE**

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The jobholder will carry out scientific and technical tasks within the Exploratory Research Project Immunocompetent bioprinted 3D models to assess human immune responses on-chip (IMPRESSION) with special emphasis on the design, biofabrication and validation of a 3D cell model for immunological applications, in particular related to precision medicine, that includes a cellular component, appropriate cell microenvironment and microfluidic perfusion.

The successful candidate will:

- Conceptualise the 3D model, including the cellular model, and encode the bioprinting process that will be used for biofabrication;
- Print the 3D model with viable immune cells using an extrusion Bioprinter (Cellink, BIOX) and perform the microfluidics connections to sustain perfusion;
- Test the viability and relevance of the 3D bioprinted model by analysing the release and expression of specific biomarkers by using immunochemistry methods, ELISA or biomolecules microarrays;
- Evaluate the immune response of the bioprinted 3D model to pathogen antigens and COVID vaccines, for which antigen-presenting cells and muscle cells have to be added to the cellular model;
- Prepare a proposal for a Putting Science into Standards (PSiS) workshop and liaise with the bioprinting community to assess the needs for standardizing bioprinting processes.

## **WE LOOK FOR**

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A scientist with the following essential qualifications:

- A Doctoral diploma in Biotechnology, Bioengineering, Biology, Biomedicine, Biophysics, Immunology, Medicine or related field. Alternatively, completed university studies of at least three years attested by a diploma and at least five years professional experience in a field relevant to the position;
- Extensive knowledge/experience in Bioprinting, Biofabrication or Biophysics techniques;
- Good knowledge in the area of immunology, cell biology or in-vitro testing;
- Good oral and written communication skills in English (B2).

In addition, the following competences will be considered as an advantage:

- Knowledge of CAD design, microfabrication techniques, vaccine/therapeutics development, assessment of biomolecular interactions or standardization procedures;
- Knowledge of other languages;
- Solid record of research activities relevant for the post including publications in international peer-reviewed journals;
- Ability to work in a team and in a multi-cultural environment;
- Good communication skills to present project results to specialist as well as non-specialist audiences.

The candidate is expected to be creative and work independently.

## **HOW TO APPLY**

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If you are **already on a valid CAST FG IV reserve list**, or you **have already applied to one of the calls below**, you can directly submit your application at <http://recruitment.jrc.ec.europa.eu/?type=AX>.

**Interested candidates should provide a CV and cover letter explaining their motivation and aptitude for the vacancy and the described research areas and tasks. In the list of**



**publications accompanying the CV, please highlight your five most relevant publications.**

If not, before applying to this position, **you must register** for one of the two following:

- the [Call for Expressions of Interest | EU Careers \(europa.eu\)](#) (CAST Permanent FG IV), which is used by a wide range of organisations (institutions, bodies, offices and agencies of the European Union), or
- the [specialised call for researchers](#) (JRC Call COM/1/2015/GFIV – Research), which is mainly used by the JRC.

Note that each of the calls above has **different minimum eligibility requirements and different selection tests**.

*The JRC cultivates a workplace based on respect for other people and the environment, and embraces non-discriminatory practices and equality of opportunity. In case of equal merit, preference will be given to the gender in minority.*