CALL FOR PFIS 2027 CANDIDATES – CALL FOR PFIS 2027 CANDIDATES - Predoctoral Research Training Fellowships in Health Research

The Institut de Recerca Biomèdica Catalunya Sud (IRBCatSud) is launching a call to identify candidates interested in applying for Predoctoral Research Training Fellowships in Health Research (PFIS) within the framework of the Spanish Institute of Health Carlos III (ISCIII) funding programme.

IRBCatSud is a biomedical research institution that integrates and coordinates biomedical research across the Camp de Tarragona and Terres de l'Ebre regions. The institute brings together the research activities of the university hospitals in both healthcare regions and the Universitat Rovira i Virgili (URV).

RESEARCH LINES AND PROJECTS

IRBCatSud offers four predoctoral research opportunities linked to different research lines within the institute.
Candidates may apply for the research line that best matches their academic background, previous experience and scientific interests.

RESEARCH LINE 1 - Liver Research Unit

SINUS-MAP: Multimodal mapping of the hepatic sinusoid during cirrhosis progression and regression: identification of mechanisms, cell–cell communication networks and therapeutic targets.

The main objective of the SINUS-MAP project is to unravel the cellular and molecular mechanisms driving the progression and regression of chronic liver disease, with a particular focus on the hepatic sinusoid. To achieve this goal, we will combine spatial transcriptomics and proteomics of human liver samples with advanced experimental models to characterise disease-associated cellular phenotypes, reconstruct intercellular communication networks, and identify and validate novel biomarkers and therapeutic targets.

The successful candidate will have the opportunity to pursue a PhD within an internationally recognised research group, working on an innovative, nationally funded research project that combines cutting-edge technologies, experimental hepatology and clinically relevant questions.

Specific tasks:

- Processing and molecular characterisation of human and experimental liver samples.

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- Generation and analysis of spatial transcriptomic and proteomic profiles of the hepatic sinusoid.
- Integration of multi-omics data to identify disease-associated molecular signatures, cell–cell communication networks and novel therapeutic targets.
- Functional validation of selected therapeutic targets using advanced in vitro, ex vivo and in vivo models of chronic liver disease.

Specific candidate characteristics:

- Degree in biochemistry, biotechnology, biomedicine, biology, pharmacy, or related fields.
- Master's degree in biomedical research, molecular and cellular biology, biotechnology, omics sciences, or related disciplines. Candidates currently undertaking their Master's degree are also encouraged to apply, provided they complete their studies and obtain the qualification before September 2027.

It will be valued:

- Strong motivation to pursue a PhD in a leading, internationally connected biomedical research group.
- Scientific curiosity, critical thinking, enthusiasm and willingness to learn new experimental and analytical approaches.
- Basic experience in molecular and cellular biology and/or omics data analysis.
- Accreditation to work with laboratory animals for scientific purposes.
- Good communication skills in English and ability to work collaboratively.

We are looking for a motivated and ambitious early-career scientist eager to build a scientific career in a stimulating, supportive and internationally oriented research environment. Extensive previous research experience is not expected, as comprehensive training in advanced experimental and analytical technologies will be provided throughout the PhD.

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RESEARCH LINE 2- Precision Environmental Health Lab (PrEHeaL)

CLINICAL-EXPOSOMICS: Translating Environmental EXPOSure and Multi-OMICS Signatures into CLINICAL Decision Support for Childhood Obesity care

The main objective of the CLINICAL-EXPOSOMICS project is to translate environmental exposure and multi-omics signatures into practical decision-support tools to improve cardiometabolic risk assessment and tailor interventions in children with obesity in paediatric healthcare. To achieve this goal, we will integrate exposomics, metabolomics, and epigenetic analyses of plasma from a well-characterised cross-sectional cohort of children with obesity, with either metabolically healthy or unhealthy obesity phenotypes, before and after a nutritional intervention.

Specific tasks:

- Exposomics and metabolomics analyses of biological and environmental samples using high-resolution mass spectrometry.
- Integration of multi-omics signatures to distinguish cardiometabolic risk profiles.
- Development and validation of clinically interpretable prediction models to support risk stratification and personalised intervention strategies in paediatric obesity care.
- Validation of the models in independent paediatric cohorts and in vitro models.

Specific candidate characteristics:

- Degree in chemistry, biochemistry, biotechnology, biomedicine, or related fields.
- Master's degree in Omics Sciences, Biostatistics, Biomedical Research or related fields. Candidates currently undertaking their Master's degree are also encouraged to apply, provided they complete their studies and obtain the qualification before September 2027.

It will be valued:

- Strong motivation to pursue a PhD in Environmental Health.
- Scientific curiosity, critical thinking, enthusiasm and willingness to learn new experimental and analytical approaches.
- Previous experience in preparing biological and environmental samples for mass spectrometry analysis.
- Previous experience in chromatography-mass spectrometry and In vitro studies.
- Good communication skills in English and ability to work collaboratively.

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RESEARCH LINE 3 - Neurociencia Clínica y Epidemiológica (NeuroÈpia)

Study of the association between pregnant women's omega-3 fatty acid and polyphenol levels and offspring prenatal and postnatal neuroimaging measurements (DLongEffects)

The main objective of the **DLongEffects** project is to o investigate the association between omega-3 fatty acid and polyphenol levels during pregnancy and improvements in human brain development through neuroimaging measures. Furthermore, we are going to analyze the association between several neuroimaging parameters and child neuropsychological functions. The study sample is based in three population-based birth cohorts and most of the data is already collected.

Specific tasks:

- Learn statistical tools and epidemiological methods to lead analyses and papers related with this project.
- Integration of biomarkers on nutritional status to investigate health effect profiles.
- Learn data treatment, data analyses and data interpretation in neuroscience phenotypes from neuro-sonographies and magnetic resonance.
- Learn mediation analyses between diet, brain structure and neuropsychological functions.
- Learn fieldwork tasks related with epidemiology field and cohort studies.

Specific candidate characteristics:

- Degree in medicine, biomedicine, biology, nutrition, psychology or related fields.
- Master's degree in biomedicine, biology, psychology, epidemiology, public health, bioinformatics, biostatistics and related fields.

It will be valued:

- Previous experience in the research field.
- Already being a coauthor of a scientific papers.
- High English level.

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RESEARCH LINE 4: Infección y Inmunidad (INIM)

Plasma Risk Omics for Mechanistic Identification and Stratification of Early Immune Non-Recovery in People Living with HIV (PROMISE-INR)

The PROMISE-INR project aims to uncover the molecular mechanisms driving poor immune recovery in people living with HIV despite successful antiretroviral therapy. By integrating clinical data with cutting-edge multi-omics technologies, the project seeks to identify novel biomarkers and therapeutic targets to improve long-term health outcomes.

What we offer:

- Join a nationally recognised research group within CIBERINFEC
- Integration into a multidisciplinary team of clinical and basic researchers
- Training in translational multi-omic research, scientific writing, and data analysis
- Opportunities for scientific publications and conference attendance

Specific candidate characteristics:

- Degree in Health or Life science (e.g. Medicine, Biomedicine, Biotechnology or related fields).
- Master's degree granting access to a PhD programme (e.g. immunology, bioinformatics).

Specific tasks:

- Creation and management of clinical and laboratory databases
- Processing of biological samples
- Application of relevant molecular biology techniques and analysis of experimental data

Desirable qualifications:

- Experience with laboratory techniques, bioinformatics, statistics, or omics data analysis
- Scientific communications and/or conference communications
- Participation in competitive research projects
- English communication skills

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PFIS FELLOWSHIP CONDITIONS

The funding and employment conditions will be subject to the official PFIS 2027 call published by the Spanish Institute of Health Carlos III (ISCIII).

The award of the fellowship will depend on compliance with the eligibility requirements established in the official call, as well as the evaluation of the candidate and the corresponding research project.

EXPRESSION OF INTEREST

Interested candidates are invited to submit the following documents:

- Updated Curriculum Vitae.
- Academic transcripts for undergraduate and master's studies.
- A brief motivation letter indicating the research line or project of interest.
- Information regarding their academic status and admission or pre-admission to an official doctoral programme.

Applications should be submitted to **recruitment@irbcatsud.cat** or through the IRBCatSud website: https://www.irbcatsud.cat/es/treballa-amb-nosaltres/ and **will be accepted until 31 January 2027, or until a suitable candidate is selected, whichever occurs first.**

The selection process will take into account the candidate's scientific profile, academic record, motivation and research potential, as well as compliance with the eligibility requirements of the PFIS call.

HR EXCELLENCE IN RESEARCH (HRS4R)

IRBCatSud holds the European accreditation 'Human Resources Strategy for Researchers' (HRS4R), complying with the general principles of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers. IRBCatSud enforces an internal recruitment policy following Open, Transparent and Merit-based Recruitment (OTM-R) guidelines.

EQUAL OPPORTUNITIES AND NON-DISCRIMINATION

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IRBCatSud guarantees equal opportunities and treatment for all candidates, promoting personal autonomy, universal accessibility and inclusion in accordance with Articles 9.2, 10, 14 and 49 of the Spanish Constitution and the International Convention on the Rights of Persons with Disabilities.

In the event of a tie during candidate evaluation, priority will be given to hiring individuals with disabilities. In the event of a tie between candidates of different genders, priority will be given to the least represented gender within the research group or department.

We look forward to receiving your applications.

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