

Position Description

Group of research topics: Nutrition and Health

Position is funded by	<ul style="list-style-type: none"> - COFUND, Marie Skłodowska-Curie Actions (MSCA), Horizon 2020, European Union - Eurecat, Centre Tecnològic de Catalunya - RMIT University (RMIT), Australia
Research Host	Eurecat, centre Tecnològic de Catalunya
PhD awarding institution/s:	Dual PhD awarded by the University of Girona (UdG) and RMIT
Locations	<ul style="list-style-type: none"> - Primary: Reus, Tarragona, Spain - Secondary: Melbourne, Australia - Annual workshops in Reus/Barcelona, Spain
Contract	Full time, fixed term (36 months) with the option to extend up to a maximum of 48 months
Gross annual salary	23.725 EUR
Preferred start date	01/02/2023
Deadline for applications	19/09/2022 (Reference: EUT-DC3)

Your choice of research topics (only one of these projects will be funded):

Project 1: Understanding the role of gut-brain axis	Project 2: Role of microbiota to improve nutritional strategies for a healthier ageing	Project 3: Omics-based approach for understanding ageing
Information from large-scale human cohorts (n=300 and n=1030) with a wide range of age (from 23 to 99 years old) already characterized and to be further characterized by omics profiling will be used to study metabolic pathways affected by ageing, with special attention on gut microbiome. Results will be translated to preclinical models by means of xenotransplantation or targeted microbiota manipulation to underscore the molecular mechanisms linking microbiome ageing with alterations in key overarching physiological processes that take place during the ageing process. Information obtained from these approaches by next generation sequencing and downstream RNA-seq,	Information from large-scale human cohorts (n=300 and n=1030) with a wide range of age (from 23 to 99 years old) already characterized and to be further characterized by metabolomics profiling will be used to study metabolic pathways affected by ageing, with special attention on gut microbiome. The information provided by these analyses will be further used in preclinical models of ageing to identify and design new oral treatments, including probiotics, postbiotics, or other nutritional and pharmacological approaches, targeting gut microbiota to restore physiological processes that are dysregulated during the ageing process.	Information from large-scale human cohorts (n=300 and n=1030) with a wide range of age (from 23 to 99 years old) already characterized and to be further characterized by omics profiling will be used to discover associations between gut microbiome, metabolic elements of the gut-brain axis, and cognitive decline. Key elements of the microbiome affected by ageing will be studied in preclinical models to underscore the alterations on the gut-brain axis involved in ageing-related cognitive decline. Information obtained from these approaches by next generation sequencing and downstream RNA-seq, metabolomics, metagenomics, and genomic bioinformatics analysis will be further used to isolate and



metabolomics, metagenomics, and genomic bioinformatics analysis will be further used to isolate and characterize new probiotics against ageing-related diseases.		characterize new psycho-biotics against cognitive and behavioral alterations associated with ageing.
Supervisors: Josep M del Bas (EUT) and Jordi Mayneris (IDIBGI) and Thi Thu Hao Van (RMIT), Daniel Das (co-director RMIT)		
Research Fields: Metabolism, Molecular Biology, Applied science		

For more information on the Projects, contact us: redi.help@rmit.edu.au

Are you REDI? (Expected Profile)

Project 1

Your background and skills: Master's degree in nutrition, metabolism, biotechnology or other master's degree in related fields. Good skills in report writing. Self-motivated and autonomous. Knowledge in omics technologies and omic data analytics tools are also valued

Your work experience: Not required.

Your research experience: Not required.

Project 2

Your background and skills: Master's degree in nutrition, metabolism, biotechnology or other master's degree in related fields. Good skills in report writing. Self-motivated and autonomous.

Your work experience: Not required.

Your research experience: Not required.

Project 3

Your background and skills: Master's degree in nutrition, metabolism, biotechnology, or other master's degree in related fields. Good skills in report writing. Self-motivated and autonomous. Good skills in report writing. Self-motivated and autonomous. Knowledge in omics technologies and omic data analytics tools are also valued.

Your work experience: Not required.

Your research experience: Not required.

For more information about the general conditions of the REDI Program and the Eligibility Criteria, please visit: <https://www.rediprogram.eu/>



Employment Benefits and Conditions

EUT offers a 36-months full-time work contract (with the option to extend up to a maximum of 48 months), indicatively starting on 01/02/2023. The position will be based in Reus (Spain). International travel is foreseen, including to Australia (up to 12 months) and Spain (one week per year). At EUT, there is a probation period of three months and there are 40 working hours per week.

The remuneration, in line with the European Commission rules for Marie Skłodowska-Curie grant holders, will consist of a gross annual salary of 23.725 EUR gross per year. Of this amount, the estimated net salary to be perceived by the Researcher is 1.380 EUR per month. However, the definite amount to be received by the Researcher is subject to national tax legislation.

Benefits include:

- 27 days paid holiday leave.
- Sick leave.
- Parental leave.
- The candidate will have access to Eurecat facilities and laboratories.
- 1,000€ yearly travel allowance to cover flights and accommodation to participate in the annual workshop at RMIT Europe in Barcelona/Reus (Spain).
- 10,000€ allowance to cover flights and living expenses for up to 12 months in Australia.

Learn more on [RMIT](#), [Eurecat](#), and [UdG](#) on our website:

<http://www.rediprogram.eu/about/#hostinstitutions>

PhD enrolment. Successful candidates for this position will be enrolled by the following institutions:

Admission at Eurecat

You will be enrolled as Doctoral Student at Eurecat for the entire duration of the assignment. At admission, you will need to supply:

- CV
- Cover Letter
- Language certificates

More information: <https://eurecat.org/en/eurecat/work-with-us/>

Admission at UdG

You will be enrolled as Doctoral Student at UdG for the entire duration of the assignment. At admission, you will need to supply a degree certificate and the transcript of records of a Bachelor and Master (original and photocopy) related to Biomedical Sciences and have completed a master's degree in a field related to the scientific area of the programme.

Homologation of a degree issued under a foreign education system is not required, but the UdG must verify that the degree certifies a level of training equivalent to an official Spanish master's degree and qualifies the applicant for admission to doctoral studies in the country where it was issued. Admission on this basis does not imply homologation of the foreign degree or its recognition for any purpose other than admission to doctoral studies.



The academic committee will consider applications that do not meet these requirements on a case-by-case basis. In general, preference will be given to applicants who hold a master's degree in the sciences as defined in the Bologna Process guidelines.

For the recognition of degree equivalency, the academic committee for the programme will assess to what extent the qualification in question corresponds to one of the master's degrees listed above in terms of the number of credits and the subjects studied. The academic standing of the institution that awarded the degree will also be considered.

Students who hold a master's degree or have completed postgraduate studies recognised by the UdG as equivalent to one of the master's degree's will be admitted to the doctoral programme automatically.

Candidates should demonstrate an interest in the research projects carried out within the framework of the programme; critical and analytical skills; initiative and perseverance in their academic work; the ability to work in a team; and the ability to communicate effectively, both orally and in writing.

More information: [link programes doctorat UdG](#)

Admission at RMIT University

You will also be enrolled as Doctoral Student at RMIT for the entire duration of the assignment. At admission, you will need to supply:

- CV
- Complete transcripts for all academic qualifications
- Research proposal or statement of interest in an available research project
- Language certificates
- List of referees

More information: <https://www.rmit.edu.au/research/research-degrees/how-to-apply>

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