



**RESEARCHER  
FOR THE  
INTEGRAL ORGANIC WASTE  
MANAGEMENT PROGRAM**

## About IRTA

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**IRTA** is a research institute owned by the Government of Catalonia ascribed to the Department of Agriculture and Livestock. It is regulated by Law 04/2009, passed by the Catalan Parliament on 15 April 2009, and it is ruled by private regulations. IRTA is one of the CERCA centers of excellence of the Catalan Research System.

IRTA's purpose is to contribute to the modernization, competitiveness and sustainable development of agriculture, food and aquaculture sectors, the supply of healthy and quality foods for consumers and, generally, improving the welfare and prosperity of the society.



## mission

To contribute to the modernization, improvement and promotion of competitiveness and sustainable development in the Agriculture, Food and Aquaculture sectors, providing safe, quality foods to the final consumer and generally contributing to the global improvement of human welfare.



## vision

To become the scientific reference and a force for innovation, and technology transfer. We aim to be the strategic partner of the food industry.agro-food sector.



## values

1. Commitment
2. Creativity
3. Learning
4. Innovation
5. Leadership
6. Respect
7. Service Vocation

## RESEARCH PROGRAM

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The **Organic Waste Integral Management** program develops new knowledge on environmental monitoring and quantification as well as development of technologies in the field of sustainable management of organic residues produced by the different activity sectors (agricultural, farming, industrial and urban), bringing in an integrated focus of the problematic and transversal of technological and management solutions. Researchers of GIRO are members of the AGAUR Consolidated and funded Research Group TERRA (Technology, Environment, and Resource Recovery for Agriculture, SGR 1290), which aims to identify and evaluate current global concerns about the sustainability of food production from a holistic perspective.

Their lines of work are:

- **Composting.** New applications. Markers to compare systems. Biofiltration and process control methods. Hygiene and safety conditions in composting plants and relation with incoming materials and process control. Mathematical process modelling.
- **Anaerobic digestion.** Tools for the quick diagnosis of digesters and digestible waste. Models to integrate knowledge, simulation, diagnosis and optimization. Simple calibration models for diagnosis and optimization. Pre-treatments to increase biodegradability. Toxic effect reduction methods. Biological production of hydrogen. Application of advanced reactors to treat organic waste.
- **Process innovation.** Microbiological aspects and development of diagnosis tools. Population dynamics in biological reactors. Processes to eliminate or recover nutrients. Bioelectricity. Bioremediation of soil and aquifer contaminants. Combined treatment systems. Combination of biological, physical and chemical processes based on the resulting products. Evaluation methods for combined management and treatment systems.
- **Environmental Sustainability Quantification.** Application of Life Cycle Assessment (LCA) and life cycle-based footprint tools to assess the sustainability of the agri-food sector. Refinement of LCA, with a focus on inventory protocols for the agri-food sector (modelling nutrients and pesticide emissions) and impact categories related to agricultural processes (e.g. land use, water consumption, eutrophication and pesticides toxicity)

## ROLE PROFILE

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IRTA is currently seeking a **Researcher** specialized on the domains of eco-design, environmental systems analysis and modeling, and sustainable development in general. He/she will lead our team on topics related to the environmental impact assessment associated with all the stages of the life-cycle of products, processes, and services in the agri-food sector. This vacancy is intended for an individual that ambitions to become a reference institutional actor, for local and international–public and private–stakeholders, on R&D related to global circular economy and the sustainability issues in agriculture.

We welcome talented candidates with a consolidated profile on Life Cycle Assessment (LCA), Life Cycle Costing, environmental footprinting, and other related impact assessment methodologies. Strong competences in scientific leadership, projects’ acquisition and coordination (especially from EU calls), along with an excellent publication track, are expected.

## DUTIES AND RESPONSIBILITIES

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- To lead the research group of Environmental Sustainability Quantification (ESQ) at IRTA.
- To design and implement a successful strategic plan for the consolidation and growth of the ESQ group, based on economic sustainability and scientific excellence.
- To work transversally with the other research groups from the GIRO program (i.e. environmental technology, microbiology, and monitoring), and establish new synergies across the other research programs from IRTA.
- To represent IRTA in initiatives that are related to the environmental assessment and sustainability of the agrifood sector.

## REQUIRED EXPERIENCE AND QUALIFICATIONS

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### Requirements:

- PhD on Agriculture Sciences, Environmental Sciences or related discipline.
- Deep knowledge of Life Cycle Assessment theory and practice, including data quality and uncertainty analysis.
- Experience on environmental footprinting and quantification for the agrifood sector.
- Proficiency on methods and models applied on the life cycle impact assessment stage.
- Experience at reputed international institutions.
- Experience as research leader

### Desirable:

- Expertise in environmental modelling.
- Knowledge of the Environmental Footprint Initiative.
- Academic teaching experience.
- Experience in scientific management and direction of research groups.

### Skills:

- Communication and team working attitude.
- Good integration in multidisciplinary teams.
- Organization and motivation.
- Compromise and cooperation.
- Results-oriented.
- Customer-oriented.
- Pro-activity.

## TERMS OF APPOINTMENT

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This is a **full-time position** with the possibility of the successful candidate to be recruited as IRTA's permanent staff after a probationary period of one year. Gross salary will be commensurate with the qualifications and experience.

IRTA offers a rich environment for knowledge development and exchange where to develop a scientific career, and possibilities for professional promotion according to the attained achievements.

## LOCATION: IRTA TORRE MARIMON, CALDES DE MONTBUI

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Caldes de Montbui is a spa town located in the Vallès Oriental, in the province of Barcelona (45Km from Barcelona). The town is located between the massifs of Sant Llorenç de Munt and Montseny at the foot of Mount Farrell (805 m) and the valley of the Riera Caldes, which crosses the municipality from north to south.

Caldes is a zone of fractures and folds that have resulted in the upwelling hot springs, which gush more than 74°C, one of the highest in Europe.

Thanks to this natural resource, the town enjoys a privileged condition that has greatly influenced its urban development and its historical legacy, and traditional culture. Roman origins have left many traces that make up our heritage, such as the spa tradition, the Roman Baths and the arrangement of the old part of the town.

The spas offer the main attractions of Caldes de Montbui but add others: the flora and fauna of the environment, sports facilities, and centers dedicated to culture, moving sales, festivals and traditions.

## BARCELONA

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### *A city with character*

Barcelona is an open, vibrant and creative city with a busy cultural, political, business and commercial life. It is a metropolis where every imaginable language can be heard, as well as a city that invites its residents and visitors alike to discover its Catalan culture and traditions.

### *The Catalan capital*

Barcelona is the capital of Catalonia, a country whose nation boasts a long history, enjoying self-government as an autonomous region in the Spanish State. It is situated on the north-east coast of the Iberian Peninsula, facing the Mediterranean Sea and bordered by Andorra and France along its north. Catalonia also has its own language, Catalan, which grew out of Latin, as did Spanish, French, Italian and Portuguese. Catalan is its official language, together with Spanish, and is used regularly in every walk of life. In addition, most of the people working in international trade and the country's main tourist areas speak English and other languages as well. Barcelona has always attracted people from all over the world, making it even more **multilingual and special**. It is the people living there, with their different backgrounds and cultures, who make it so **cosmopolitan, diverse and intercultural**.



### *Economic powerhouse of a prosperous region*

One of the biggest metropolitan areas in Europe has grown up around the capital, consolidating Barcelona as an **outstanding business, technological and industrial centre, as well as a major economic powerhouse**. In fact, the city has always stood out for its intensive business and commercial activities and proved its ability to modernise and adapt itself to the new times. It has become such a magnet for global talent that it is now a European centre for business creation, especially in **leading sectors** such as information and communication technologies, biotechnology, sustainability, design and aeronautics. The city also plays host to several of world's most important international trade fairs, such as the **Mobile World Congress** and the **Barcelona Meeting Point**. Innovation is another Barcelona's hallmarks: it is the number-one smart city in the Spanish State and the fourth in Europe. It is also one of the cities with the highest quality of life in the world and the life expectancy of its residents is among the highest in Europe.





## KEY STEPS IN THE SELECTION PROCESS

If you wish to be considered for this position, please, go to the link:

<http://www.irta.cat/en/work-at-irta/>

and register yourself. You should load your **CV** in Adobe Acrobat pdf format before the 10th of March 2021. All information will be in the strictest confidence.

During the recruitment process, the Human Resources Department will keep you informed in which step is your application.

Register to have full access  
to our job vacancy  
publications and future  
opportunities



Deadline timing job ref. 04/21 Researcher for the integral organic waste management program	
30 days	Publication and diffusion of the job advertisement on IRTA's website, EURAXESS Jobs, social media and other specific recruitment places.
5 following working days	Distribution of the pre-selected CVs which match eligibility criteria to the Selection Committee. Communication via e-mail with the not pre-selected candidates who will not be further included in the process.
20 following working days	Selection Committee: - Communication via e-mail with the not-selected candidates by the Selection Committee. - Interview with selected candidates by the Selection Committee. - Accord of the Selection Committee stating the selected candidate and detailed reasoning for the decline of the rest of the candidates. - Communication via e-mail with the interviewed and not-selected candidates.
5 following working days	Provision by the selected candidate of requested legal and official documentation to the HR department to coordinate the start of the candidate.
Second trimester of 2021	Start of employment (approximately)