



RESEARCHER working on
**Chemometrics and Photonic
spectrometric technologies for
food characterization and fraud
detection in the food system.**

About IRTA

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

THE PROGRAM OF FOOD QUALITY AND TECHNOLOGY

The Agri-Food and Technology Research Institute (IRTA) is owned by the Government of Catalonia ascribed to the Department of Agriculture. Its general objectives are to promote research and technological development in the area of agri-food, to facilitate the transfer of scientific advances and to evaluate its own technological advances whilst seeking the utmost coordination and collaboration between the public and private sectors. IRTA's commitment to fulfil its values (Commitment, Creativity, Learning, Innovation, Leadership, Respect and Vocational Service) means that the development of its scientific activity is carried out in agreement with the European Charter for Researchers. As a result, IRTA has received the seal of “*Excellence in Human Resources*” granted by the European Union (HRS4R), following the applicable procedures and quality standards in accordance with current legislation.

Food quality and technology program is composed by researchers with a wide expertise on processing technologies, use of novel ingredients in different food matrices and the production of food products with innovative properties. Expertise on several technologies such as near infrared, and dielectric spectrometry, laser backscattering imaging, hyperspectral, electromagnetic induction and X-ray based devices (such as Computed tomography, microcomputed tomography, dual- and multi- X-ray absorptiometry).

IRTA-MONELLS has 3,200 m² of pilot plants dedicated to food processing technologies (microwave, radiofrequency equipment, high hydrostatic pressure, ...). IRTA has analytical laboratories for chemistry equipped with material and devices to perform most of the meat quality analysis. There is also a laboratory prepared to perform classical and molecular microbiology for quantification, identification, and typification of foodborne pathogens, including working area with biosafety level 2 to carry out challenge testing with food-borne pathogens. There is also a laboratory equipped with different spectrometric devices: near infrared, dielectric spectrometry, hyperspectral imaging system, and others. A mobile computed tomography unit has been recently acquired.

ROLE PROFILE

IRTA is currently seeking an experienced researcher, with initiative and leadership abilities. Experience on spectral systems, chemometrics and on the development and construction of optical sensors will be appreciated, as well as good knowledge on programming on different platforms (for Python, C++, R, pc, PLCs, web, cloud, mobile) for the development and implementation of applications on different platforms.

The position is subordinated to a Beatriu de Pinós grant, still not opened (see conditions of the last call in <https://agaur.gencat.cat/en/beques-i-ajuts/convocatories-per-temes/Ajuts->

[per-a-la-incorporacio-de-personal-investigador-postdoctoral-al-sistema-catala-de-ciencia-i-tecnologia-dins-del-programa-Beatriu-de-Pinos-BP-2020](#)).

For scientific/technical doubts, please contact elena.fulladosa@irta.cat

DUTIES AND RESPONSIBILITIES

- [1] Design, development and testing of spectrometric systems tailored for the control and monitoring of food products at the food industry.
- [2] Study the interaction between the spectra (vis/NIR/dielectric,...) and the target food products.
- [3] Development of software and/or applications for different interfaces (smartphones, PLCs, pc,..) for commercial use of the spectrometric systems.
- [4] Definition of new projects in relation with the exposed topics (chemometrics, food fraud detection, implementation of control and monitoring technologies at the food industry, and others), especially in the frame of Horizon Europe and National projects.

REQUIRED EXPERIENCE AND QUALIFICATIONS

- 1) Be in possession of a PhD degree obtained between 2014 and 2019.
- 2) Have, at the time of joining the host organisation, a minimum of two years of postdoctoral experience outside Spain.
- 3) English or Spanish speaking

TERMS OF APPOINTMENT

Experienced researchers will benefit from 3-year employment contracts. See last BP call for approximate financial support (the call is still not launched and exact amount cannot be provided).

The annual gross salary will be 34,565.44 Euros (gross monthly salary: 2,468.96 x 14 payments).

LOCATION: MONELLS (GIRONA)



Photo credit: [Núria](#)



Monells is located at 25 Km. from Girona city.

GIRONA





Girona is the capital of the region of Girona and the province of Girona, north-east of Catalonia, the municipality is 100 km. Barcelona, 40 Km. Costa Brava and 96 Km. Perpignan.

The city of Girona is located at the confluence of the rivers Onyar, Güell and Ter Galligants at an altitude of 70 m, the plan called Girona. Girona limits the north with the municipalities of Sant Julià de Ramis and Sarria de Ter; to the east, and the Celrà Juià; southeast, the Fourth; southwest, with Fornells de la Selva and Vilablareix; and west of the Salt and St. Gregory. For more information, please visit the following link: <http://www2.girona.cat/ca>

KEY STEPS IN THE SELECTION PROCESS

If you wish to be considered for this position, please, go to our page <http://www.irta.cat/en/work-at-irta/>. There you can apply for this offer by registering in our Job Centre. You should load your CV in Adobe Acrobat pdf format before **[31/12/2021]**. All information will be in the strictest confidence.

CALENDAR

When the call opens (expected February 2022), IRTA and the chosen candidate will submit a proposal. It's expected that in 6 months the candidate will begin the work, if the project is founded.