







*IRTA is a research institute owned by the Government of Catalonia ascribed to the Ministry of Climate Action, Food and Rural Agenda. IRTA is one of the CERCA centres of excellence of the Catalan Research System. Our 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. We are granted by the EU with the [HRS4R](#) distinction for “HR Excellence in Research” and thus we offer a rich environment for knowledge development and exchange where to develop a scientific career, and possibilities for professional promotion according to the attained achievements. Check our initiatives [here](#).*

## PhD candidate for the Marine and Continental Waters Program

[ref. CPI1524]

IRTA is currently seeking an enthusiastic and motivated PhD candidate to join the Marine and Continental Waters Program. We invite applications from ambitious candidates with relevant research experience and passion to conduct research and innovation activities on the project titled: **“Synergies between bio/technological strategies for the comprehensive research of marine toxins and harmful algae blooms”**. This project aims to exploit the synergies from the combination of novel mass spectrometry (MS) approaches and biochemical strategies based on cells and other biorecognition molecules to study harmful algae blooms (HABs). The candidate will be included in an inter-disciplinary team and will perform research on chemical ecology of HABs by **MS, metabolomics, cell-based assays, biochemical assays, and ecotoxicology assays**; marine toxins role in situ by **MS Imaging, microscopy and immunochemistry**; and unknown toxins by **MS and computational approaches**. This PhD project has the potential to increase the understanding of HABs in their ecological environment and help mitigate their negative effects in profitable and locally relevant industries like aquaculture, fishing and tourism by better prevention and management, sustainable exploitation practices and policy decisions.

-  Supervisor/s: Dr Maria Garcia Altares ([link](#)) and Dr Mònica Campàs ([link](#))
-  Job location: La Ràpita (Tarragona) ([link](#))
-  Full-time position (h/week): 37.5
-  Terms of appointment: 4 years
-  Salary: The financial remuneration for the PhD Candidate contract will be €1,336.3/gross per month (18,708.20/gross per annum) and for the first and second years. For this third year, it will be €1,431.83/gross per month (€20,045.62/gross per annum) and for the fourth year it will be €1,789.79/gross per month (€25,057.06/gross per annum) which will be subject to the corresponding withholdings, pursuant to prevailing regulations, and to the collective employment agreement of IRTA. IRTA will also pay the fees of the doctoral school when receiving the enrolment. <sup>(1)</sup>
-  Employee Benefits: 22 vacation days, 3 days of family & work conciliation, 45h of personal days, Friday afternoon off, Compressed Summer schedule from 15/06 to 15/09, Conciliation schedule.

### Tasks and Responsibilities:

- Analysis of environmental samples (including marine animals) and microalgal cultures by liquid chromatography – mass spectrometry and mass spectrometry imaging, including sample treatment or extraction, analysis, and data analysis and interpretation.

- Sample preparation and analysis for different types of microscopy and related imaging techniques.
- Data analysis and computational analysis by commercial and open-source software, including software based on R programming and the development of own scripts in R for data analysis.
- Work with compound databases for identification of chemical entities.
- Development of cell-based cytotoxicity assays, immunoassays with antibodies and ecotoxicological assays, and applicability to the analysis of samples.
- Participation in communication and dissemination activities (e.g., attending conferences, workshops, and transfer activities) and preparation of communications for scientific conferences, as well as participation in project meetings and presentation of results.
- Minimum 3-month stage in a foreign laboratory.
- Manuscript and PhD thesis writing.

### **Required qualifications and experience:**

- Candidates must hold one of the following degrees:
  - a) A Master's in Analytical Chemistry or Biochemistry or Biotechnology or Chemical Ecology or similar; or
  - b) To be in a position to access a doctoral programme according to the requirements of Catalan universities, *i.e.* accrediting between 60 and 120 ECTS credits at the official university master's degree level or equivalent.
- Not to have a previous PhD degree.
- Car driving license.
- Candidates who have been chosen for an interview with the Selection Committee, should bring or send –for the interview- a certified copy of the degree and/or master, as well as the academic record showing the marks of all subjects studied.
- This position requires the PhD candidate to travel to Tarragona and Barcelona for at least 3 weeks per year for sample analysis in different research centres (costs will be covered by IRTA).

### **Desirable requirements:**

- Experience, knowledge or interest in aquatic environments and their ecology.
- Experience, knowledge or interest in marine toxins or marine natural products.
- Experience or interest in R programming.
- Experience with chromatography and/or mass spectrometry and interest in analytical chemistry.
- Experience with cell-based and/or immunoassays.
- Previous scientific publications and/or participation in research projects will be valued positively.
- Initiative and independence.

### **Languages:**

- Proficiency in English
- Spanish and/or Catalan is desirable

## Application process

If you wish to be considered for this position, please, apply via our [Recruitment Platform](#) to the job post with reference CPI1524 and upload your CV and motivation letter. All information will be treated in the strictest confidence.

**Deadline for application: 15/07**

Timings in the Recruitment Process of ref. CPI1424	PhD candidate for <i>research of marine toxins and harmful algae blooms</i>
<b>30 natural days</b>	Publication and diffusion of the job advertisement on IRTA's website, EURAXESS Jobs, social media and other specific recruitment places.
<b>5 following working days</b>	Distribution of the pre-selected CVs which matching eligibility criteria to the Recruitment Committee. Communication via e-mail with the not pre-selected candidates who will not be further included in the process.
<b>20 following working days</b>	Recruitment Committee: <ul style="list-style-type: none"> <li>- Communication via e-mail with the not-selected candidates by the Recruitment Committee.</li> <li>- Interview with selected candidates by the Recruitment Committee.</li> <li>- Accord of the Recruitment Committee stating the selected candidate and detailed reasoning for the decline of the rest of the candidates.</li> <li>- Communication via e-mail with the interviewed and not-selected candidates</li> </ul>
<b>10 following working days</b>	Provision by the selected candidate of requested legal and official documentation to the HR department to coordinate the start of the candidate.
<b>Third trimester 2024</b>	Start of employment

IRTA guarantees an open, transparent, and merit-based recruitment process (OTM-R) to all registered candidacies avoiding thus any bias on gender, origin, age, ideology, or other circumstances that could be discriminatory. Candidates in a situation of social exclusion will be considered in the first place.

*Please know that if you are the chosen candidate and you are from a country which does not belong to the UE, IRTA's Human Resources Department will support you to get the residence and working permits.*

<sup>(1)</sup> The financial remuneration of the PhD Candidate contract may not be less than 56% of the salary established for the category of Research Collaborator F of the Collective Agreement of the IRTA during the first two years, 60% in the third year and 75% in the fourth.