

# Position Offered: PREDOCTORAL RESEARCHER

## Project: *Digital Technologies Applied to Epidemiology and Risk Analysis in Health Emergencies*

**Technological and scientific fields:** Digital tools for agriculture, livestock, aquaculture, etc. Technologies for massive data and information processing. Artificial intelligence. Data analysis and integration. Cybersecurity. Cloud computing. Advanced data analysis/edge computing. Digital twins. Others: Development and deployment of web applications. Geographic Information Systems (GIS).

**Location:** Valdeolmos, Madrid. CISA-INIA, CSIC.  
<https://www.inia.es/unidades/Institutos%20y%20Centros/CISA/Pages/Home.aspx>

**Research Group/PI:** Epidemiology and Environmental Health/Irene Iglesias Martín/  
<https://www.inia.es/investigacion/animal/sanidad/Epidemiolog%C3%ADa%20y%20sanidad%20ambiental/Pages/Home.aspx>

### PROJECT SUMMARY

Emerging and re-emerging infectious diseases and antimicrobial resistances are an increasing threat to public health, animal health, and biodiversity, necessitating improved surveillance and prevention systems. The Epidemiology and Environmental Health group is a pioneer in developing advanced epidemiological systems and models. Using conventional and spatial epidemiology, risk assessment, viewers, and real-time alert systems to address significant diseases (HPAI and ASF among others) and AMR with a One Health approach. This project aims to leverage technological innovations in the digital realm, including advanced spatial analysis techniques, rapid risk assessment, artificial intelligence, and machine learning to develop predictive models for infectious diseases, improve existing ones, and advance digital competencies in outbreak research. It will also optimize control panels for disease control and early warning systems, transferring knowledge and technologies to health authorities and other organizations.

### PROFESSIONAL PROFILE

#### Minimum requirements:

Graduate in Geography, Physics, Computer Science, or related field.

#### Merits to be considered:

Experience in programming (Python, Java).

Proficiency in GIS tools (ArcGIS, QGIS).

Communication skills in Spanish and English.

### WHAT IS OFFERED

A cutting-edge project in the field of epidemiology and risk analysis of emerging diseases and zoonosis. The training plan includes a total of 256 ECTS and ranges from advanced digital competencies to training in programming and modeling tools, with planned stays at renowned national and international institutions such as the Complutense University of Madrid and the Royal Veterinary College in London.

#### Contract conditions:

Predoctoral Researcher contract of 4 years' duration. Gross annual salary of 23,871.33 €.

**Start of contract: before 31 December 2024**

### PRINCIPAL INVESTIGATOR CONTACT

Email: [iglesias@inia.csic.es](mailto:iglesias@inia.csic.es); [martinez.marta@inia.csic.es](mailto:martinez.marta@inia.csic.es)

Phone: 91 6202300 Ext 2126 Ext 2185

[momentum@csic.es](mailto:momentum@csic.es) | <https://momentum.csic.es/>



Financiado por  
la Unión Europea  
NextGenerationEU



MINISTERIO  
DE CIENCIA, INNOVACIÓN  
Y UNIVERSIDADES  
MINISTERIO  
PARA LA TRANSFORMACIÓN DIGITAL  
Y DE LA FUNCIÓN PÚBLICA



Plan de Recuperación,  
Transformación  
y Resiliencia

