

## TRAINING PROGRAMME

<b>Title</b>	Knowledge mobilisation by research teams: unravelling network dynamics in biomedicine through a behavioural lens
<b>Supervisors</b>	<b>Adrián A. Díaz-Faes</b> , Tenured Scientist from CSIC <b>Pablo D'Este</b> , Scientific Researcher from CSIC
<b>Centre</b>	Institute for Knowledge Management and Innovation (INGENIO) Edifici 8E, acc. J, 4 <sup>a</sup> planta - Ciutat Politècnica de la Innovació (CPI) Camí de Vera, s/n - 46022 VALÈNCIA

The PhD candidate will follow a **training programme** designed to **develop strong theoretical foundations, analytic and transferable skills, and critical thinking**. The aim is to set the foundations for a **future independent researcher** who would be able to pursue an international academic career at the crossroads of science studies, the economics of innovation and research policy and evaluation. Besides, the skills and know-how acquired will also be an interesting match for employment in research consultancy firms or international funding bodies.

**INGENIO (CSIC-UPV) offers an interdisciplinary and international research environment** from which the PhD candidate will benefit. It receives many international visitors and hosts research conferences (e.g. STI 2016, ITTC 2018, EU-SPRI 2026), including an early career event ([PhD days](#)) that has become a trademark conference for PhD students in the field. Likewise, it organises internal [seminars](#) and workshops, including a group to support early career researchers. The institute participates in two doctoral programmes within the UPV: [PhD in Local Development and International Cooperation](#) and [PhD in Design, Manufacture and Management of Industrial Projects](#). However, we are open to discuss other programmes that could offer a better fit and career prospects for the candidate.

By means of training through research, **the PhD candidate will gain in-depth knowledge** of social network theory as a frame of reference to deepen the complex social relationships underlying science and innovation in biomedicine. Besides, we expect the candidate to **develop expertise** in some of the following areas:

- ✓ *Big data*: Construction of large relational databases using SQL, Python and/or R.
- ✓ *Natural Language Processing* methods for social science research.
- ✓ *Scientometrics* and *data visualisation*.
- ✓ *Econometrics*.
- ✓ Design and implementation of *network survey tools*.

The training activities are conceived to provide comprehensive training and support for successful doctoral research. **The duration of the training activities is four years**. Below, we offer a tentative scheme. The final programme will be tailored based on the candidate's interest and focus.

### **Year 1. Proposal development, theoretical basis and training courses:**

- ✓ *Complete the mandatory transversal curricular activities* of the PhD programme in which the candidate will enrol. It includes training in research ethics, methodologies, information retrieval and research career opportunities.
- ✓ *Literature Review*: Conduct an extensive literature review on social networks, scientometrics and biomedical translational policies, identifying key theories, methodologies, and research gaps.
- ✓ *Preparation of a research plan*: Develop a research proposal outlining the research questions, hypotheses, and methods through which the doctoral research will contribute to science and innovation studies.

### **Year 2. Research and data collection:**

- ✓ *Data collection and curation*: collect and extract meaningful information to identify research teams through the metadata contained in a set of biomedical research publications, as well as their translational potential.
- ✓ *Training in scientometrics, social network analysis and NLP methods*. We plan for the candidate to attend some summer schools (e.g. Essex Summer School in Social Science Data Analysis [ESS](#),

European Summer School for Scientometrics' [ESSS](#), CWTS Scientometrics Summer School [CS<sup>3</sup>](#) or the [POLNET](#) Social Network Analysis School).

- ✓ *Design and implementation of a social network survey tool*: designed and implementation of a survey on network mobilisation strategies.

### **Year 3. Preliminary analyses, networking and findings' dissemination:**

- ✓ *Conference participation*: Present the preliminary research findings at early-career events and international conferences such as STI, DRUD, ISSI, EU-SPRI and R&D Management.
- ✓ *Conduct a 3-month visiting period* at the Centre for Science and Technology Studies (CWTS) in the Netherlands or Imperial College Business School in the UK.
- ✓ *Publishing*: Work on publishing the doctoral research in top peer-reviewed journals dedicated to science and innovation studies such as Research Policy, Quantitative Science Studies, JASIST, PLOS ONE, Social Networks or Industry & Innovation.

### **Year 4. Completion and graduation:**

- ✓ The PhD candidate will continue working on their research contributions through *conference participation* and *submitting research findings for publication*.
- ✓ *Thesis Writing*: Dedicate substantial time to writing the dissertation, incorporating a theoretical discussion on the scientific knowledge production system, the bearing of examining research team dynamics and taking a network behavioural approach to networks. The document will present the empirical findings and discuss their policy relevance.
- ✓ *Thesis defence*: prepare to successfully defend the doctoral research, demonstrating expertise in scientometrics, social networks and innovation management.