IdiPAZ
Instituto de Investigación
Hospital Universitario La Paz

Hospital Universitario La Paz
Fundación para la Investigación Biomédica
SaludMadrid
Comunidad de Madrid


# CAREER DEVELOPMENT OPTIONS FOR R1 AND R2 RESEARCHERS

HR EXCELLENCE IN RESEARCH

# Content

# 1 CARRER DEVELOPMENT OPTIONS FOR R1 AND R2 RESEARCHERS

## A. Objectives

The European Commission recognizes with the "Human Resources Excellence in Research Award" (HRS4R) institutions that make progress in aligning their human resources policies with the 40 principles of the European Charter for Researchers and Code of Conduct for the Recruitment of Researchers, on the basis of a customized human resources strategy or action plan.

The Foundation for Biomedical Research of Hospital Universitario de La Paz (FIBHULP) obtained accreditation on February 26, 2021 and, since then, has been developing an Action Plan aimed at improving and deepening the application of these principles, which is materialized, among other things, in documents such as the one presented here, focused on improving the job expectations of researchers.

The objective of the document is to show the employment possibilities that R1 and R2 researchers at FIBHULP/IdiPAZ can contemplate in the development of their professional career, providing information on career options both within and outside the organization, through data, links and tools that can be useful both in predoctoral and postdoctoral periods.

## B. Normative frame of reference

The professional career at FIBHULP is regulated by the Resolution of December 3, 2020, of the Directorate General of Labor of the Ministry of Economy, Employment and Competitiveness, on registration, deposit and publication of the Collective Agreement of the Group of Companies of the Biomedical Research Foundations of the Health Institutions attached to the Madrid Health Service (SERMAS).

This agreement includes, among other aspects, the classification of the personnel working in the center with a detailed description of each of the categories and their professional profiles. It also includes aspects related to remuneration and mobility, training, rights and duties and other issues that are also directly related and aligned with the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers (HRS4R).

This document establishes professional categories assigned to the following functional areas:

- **Area 1. Research.**
- **Area 2. Technical-scientific.**
- **Area 3. Administration and management.**

| FUNCTIONAL AREA | PROFESSIONAL GROUP | PROFESSIONAL CATEGORY |
|---|---|---|
| **Area 1** | Group I | Lead Researcher |
| **Area 1** | Group I | Associate Researcher |
| **Area 1** | Group I | Senior Assistant Researcher |
| **Area 1** | Group I | Assistant Researcher |
| **Area 1** | Group II | Predoctoral Researcher |
| **Areas 2 and 3** | Group II | Senior Graduate |
| **Areas 2 and 3** | Group II | Higher Level Graduate |
| **Areas 2 and 3** | Group III | Medium Level Graduate |
| **Areas 2 and 3** | Group IV | Senior technician/ Administrative |
| **Areas 2 and 3** | Group V | Middle-level technician/ Assistant Administrative |
| **Area 3** | Group VI | Auxiliary Services Personnel |

The **complete agreement** is available **here**.

The Collective Bargaining Agreement of the Biomedical Research Foundations of the Community of Madrid is currently under negotiation since its term has expired.

# 2 PROFESSIONAL DEVELOPMENT SCHEME FOR R1 AND R2 AT EURAXESS

The European Commission, within the framework of the actions of the Logo Human Resources Strategy for Researchers (HRS4R), proposes a general scheme that includes the different stages of a professional career in science and for this purpose establishes 4 different levels that correspond to the Spanish legislation, as shown in the following scheme:

| STUDENTS | | RESEARCHERS | | | |
|---|---|---|---|---|---|
| DEGREE | MASTER | R1 | R2 | R3 | R4 |
| | | Doctoral training | Postdoctoral Stay | Independent Researcher | Established researcher |
| | | Junior Researcher | Recognized/established researcher | Independent Researcher | Lead Researcher |
| | | Thesis | Postdoctoral | Tenure Track | Researcher |
| | | Art. 21 LCTI*. Predoctoral contract | Art. 22 and 22bis LCTI*: Access contract for research personnel | Art. 23 and 23bis LCTI*: Distinguished researcher contract | Art. 25 LCTI*: Professional career of research personnel |
| 4 years | 1-2 years | 4 years | 5 years | | |
| | | | | | **Teaching** |
| | | | | | **Management** |
| | | | | | **Industry** |
| | | | | | **Entrepreneur businessman** |

*Research career scheme. Source: Own elaboration based on Euraxess.*

*Law 17/2022, of September 5, amending Law 14/2011, of June 1, on Science, Technology and Innovation".

## A. Profiles

The **European Framework for Research Careers** describes four broad profiles in this pathway, which are independent of any particular sector (universities, research institutions, companies or NGOs):

**Researcher R1:** The research personnel of this profile are professionals who carry out their research work under supervision. Pre-doctoral candidates are included, both in competitive and non-competitive concurrence. This category also includes research personnel who are not linked to a doctoral program, but who are working in research and intend to enroll in one within a maximum period of one year. If this is not the case by the end of the year, he/she will be removed from the category of research personnel (R classification).

The maximum period in this researcher profile is six years, although it is estimated that the average period is four years.

This profile also includes (if the IIS deems it appropriate) clinical personnel who begin their research career. The maximum period in this clinical researcher profile is six years. If they are not promoted to R2, they would leave the R classification.

To be part of this profile it is required to have at least a bachelor's degree or university degree plus a master's degree (level 3, ≥300 ECTS), or any other degree that provides access to doctoral studies according to RD 99/2011, of January 28, which regulates official doctoral studies.

| R1- Trainee Researcher | | | | | | |
|---|---|---|---|---|---|---|
| **PERIOD** | | | **MINIMUM REQUIREMENTS** | | | |
| Basic -> Desirable : 4 years<br>Basic ->Maximum : 6 years<br>Clinical->Maximum : 4 years | | | Bachelor's or Bachelor's Degree + Master's Degree (Level 3 ≥ 300 ECTS) | | | |
| **EVALUATION (FOR ALL VARIABLES, DATA FROM THE LAST 3 YEARS ARE ANALYZED). IT IS NOT NECESSARY THAT VALUES EXIST FOR ALL VARIABLES** | | | | | | |
| Period | Doctoral thesis | Publications | Projects | Clinical studies | Innovation | Recognition, Training Capacity and Internationalization |
| | Obtaining PhD | | | | | |

**Researcher R2:** This profile includes research personnel who have obtained a PhD degree, and clinical research personnel who meet the requirements established for this profile even if they have not obtained a PhD degree. In both cases it is considered that they do not yet have a significant level of independence but that they have a systematic and demonstrated understanding of their field of study and research expertise in it. They participate as co-authors of articles or presentations in workshops and conferences.

The basic research personnel with R2 profile are subdivided into:

- R2A: Research personnel who, after completing their Doctoral Thesis, have worked as post- doctoral researcher for a maximum of three years.
- R2B: Research personnel who, after completing their Doctoral Thesis, have worked as post- doctoral researcher for at least three years but do not have the relevant independence necessary to move to R3 category. This profile is also contemplated for research personnel with extensive research experience but who do not have the interest and/or capacity to manage their own projects as Lead Researcher (LR), nor aspire to be Group Leader (R4). He/she would remain at this level on a permanent basis. It will be necessary to study and analyze each case with respect to the source of funding, endowment and fit of he/she in the IIS.

Clinical research personnel with R2 profile have no subdivisions.

| R2 - Junior Researcher | | | | | | |
|---|---|---|---|---|---|---|
| **PERIOD** | | | **MINIMUM REQUIREMENTS + COMPETENCIES (DOC)** | | | |
| R2A: Maximum 3 years<br>R2B: Minimum 3 years | | | PhD (except clinical research staff or Institute decision) | | | |
| **EVALUATION (FOR ALL VARIABLES, DATA FROM THE LAST 3 YEARS ARE ANALYZED). IT IS NOT NECESSARY THAT VALUES EXIST FOR ALL VARIABLES** | | | | | | |
| Period | Doctoral thesis | Publications | Projects | Clinical studies | Innovation | Recognition, Training Capacity and Internationalization |
| Competitive HR Contract (s/call).<br><br>Non-competitive contract (three-year). | | Published Articles (to be evaluated maximum 10) in indexed journals (articles as first author will be valued) | Participation in Projects.<br><br>Attraction of Human Resources Aid (own). | Participation | Innovation and technology transfer (Intellectual and Industrial Property).<br><br>Contracts with industry. | At least these criteria will be taken into account:<br><br>Supervised academic internships.<br><br>Training and Participation in relevant Conferences/Seminars. |

**Researcher R3:** Research personnel (with PHD in the case of research personnel and with or without PHD in the case of clinical personnel) who have achieved a level of independence and who have a reputation based on research excellence in their field, making positive contributions to the development of research.

In this phase, he/she publishes articles as lead author, organizes workshops or conference sessions.

Research personnel with an R3 profile are subdivided into:

- R3A: Research personnel who have been promoted to R3 profile. The maximum period of permanence in this category is five years.
- R3B: Research personnel working in the R3 profile with a seniority of between five and ten years.
- R3C: Research personnel who, having reached the R3 category and after at least ten years of experience at this level, do not have the interest and/or capacity to lead their own group. They would remain at this level on a permanent basis. It will be necessary to study and analyze each case with respect to the source of funding, endowment and fit of he/she in the IIS.

| R3 - Senior Researcher | | | | | | |
|---|---|---|---|---|---|---|
| **PERIOD** | | | **MINIMUM REQUIREMENTS + COMPETENCIES (DOC)** | | | |
| R3A: Maximum 5 years<br>R3B: 5-10 years<br>R3C: Maximum 10 years | | | PhD (except clinical research staff or Institute decision) | | | |
| **EVALUATION (FOR ALL VARIABLES, DATA FROM THE LAST 3 YEARS ARE ANALYZED). IT IS NOT NECESSARY THAT VALUES EXIST FOR ALL VARIABLES** | | | | | | |
| Period | Doctoral thesis | Publications | Projects | Clinical studies | Innovation | Recognition, Training Capacity and Internationalization |
| Competitive HR Contract (s/call). | Supervision of at least one doctoral dissertation | Published articles (maximum 10 to be evaluated) in indexed journals (articles as first author will be valued). | Participation in Projects.<br><br>Funding Obtained Projects of | Participation | Innovation and Technology Transfer (Intellectual and Industrial Property). | At least these criteria will be taken into account:<br><br>Directed masters. |

| | | | | | | |
|---|---|---|---|---|---|---|
| Non-Competitive Contract (five-year). | | The latest author's articles will be evaluated and only a maximum of 20% of the articles will be accepted for evaluation as co-corresponding author of the total. | Competitive and non-competitive Concurrence (as PI).<br><br>Attraction of HR support (own or for the research group). | | Contracts with industry. | Supervised academic internships.<br><br>Training and Participation in relevant Conferences/Seminars.<br><br>Internationalization: collaborations, publications, and stays oabroad. |

**Researcher R4:** This profile is the maximum level established by the European Commission and includes research personnel who lead their area or field of research. In relation to the PHD, the personnel included here may be required to have it (basic research personnel) or may not (clinical research personnel). In addition to fulfilling the necessary competencies indicated in the previous phases, they must have an international reputation based on excellence, critical judgment in the identification and execution of their research activities and develop a strategic vision on the future of research in their field, as well as contribute to institutional development and have a sense of belonging.

This R4 profile publishes and presents influential articles, books, participates in organizing committees of workshops and conferences and gives presentations as a guest speaker.

| **R4 - Lead Researcher** | | | | | | |
|---|---|---|---|---|---|---|
| **PERIOD** | | | **MINIMUM REQUIREMENTS + COMPETENCIES (DOC)** | | | |
| N/A | | | • PhD (except for clinicians at the discretion of the Institute).<br>• To be responsible/co-responsible for Group and/or Research Area Coordinator.<br>• Relevant international recognition and impact.<br>• High leadership capacity. | | | |
| **EVALUATION (FOR ALL VARIABLES, DATA FROM THE LAST 3 YEARS ARE ANALYZED). IT IS NOT NECESSARY THAT THERE ARE VALUES IN ALL VARIABLES** | | | | | | |
| Period | Doctoral thesis | Publications | Projects | Clinical studies | Innovation | Recognition, Training Capacity and Internationalization |
| Competitive HR Contract (s/call).<br><br>Non-Competitive Contract (five-year). | Supervision of at least two doctoral theses. | Published articles (maximum 10 to be evaluated) in indexed journals (X first author articles, Y last author articles will be required). | Participation in Projects.<br><br>Funding obtained for Competitive and Non-Competitive Concurrence Projects (as PI).<br><br>Attraction of HR support (own or for the research group) of national and international relevance. international. | Participation | Innovation and technology transfer (Intellectual and Industrial Property).<br><br>Contracts with industry. | At least these criteria will be taken into account:<br><br>Directed masters.<br><br>Supervised academic internships.<br><br>Training and Participation in relevant Conferences/Seminars.<br><br>Internationalization: collaborations, publications, and stays abroad . |

## B. Researchers in Spain

The Spanish Foundation for Science and Technology - FECYT- periodically updates a diagram of the different stages of the research career in which the different grants that can be applied for at any given time are identified. In addition, the document contains links to further information on each of the calls for applications. The one presented is the sixth edition in January 2023. **Researchers Career path**.

# Researcher Career path in Spain at a glance!

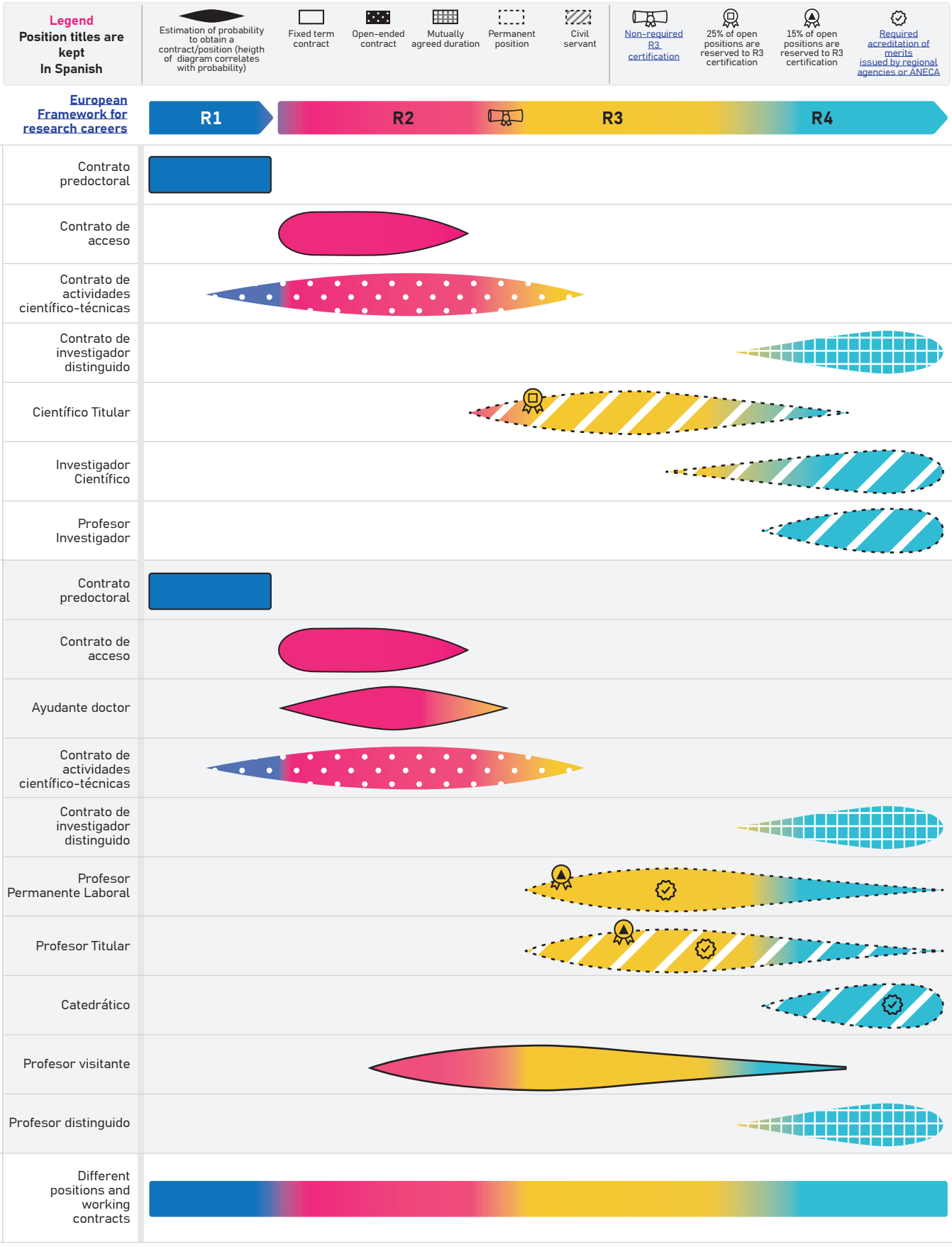
Explore available positions and funding opportunities at each stage of the researcher career in Spain

**January 2023, 6th edition**

GOBIERNO DE ESPAÑA | MINISTERIO DE CIENCIA E INNOVACIÓN | FECYT INNOVACIÓN | euraxess RESEARCHERS IN MOTION

## RESEARCH INTENSIVE AND RESEARCH & TEACHING POSITIONS AT THE SPANISH ACADEMIC SECTOR

Likelihood to obtain a contract/position at the Spanish academic sector in regards to the European Framework for Research Careers



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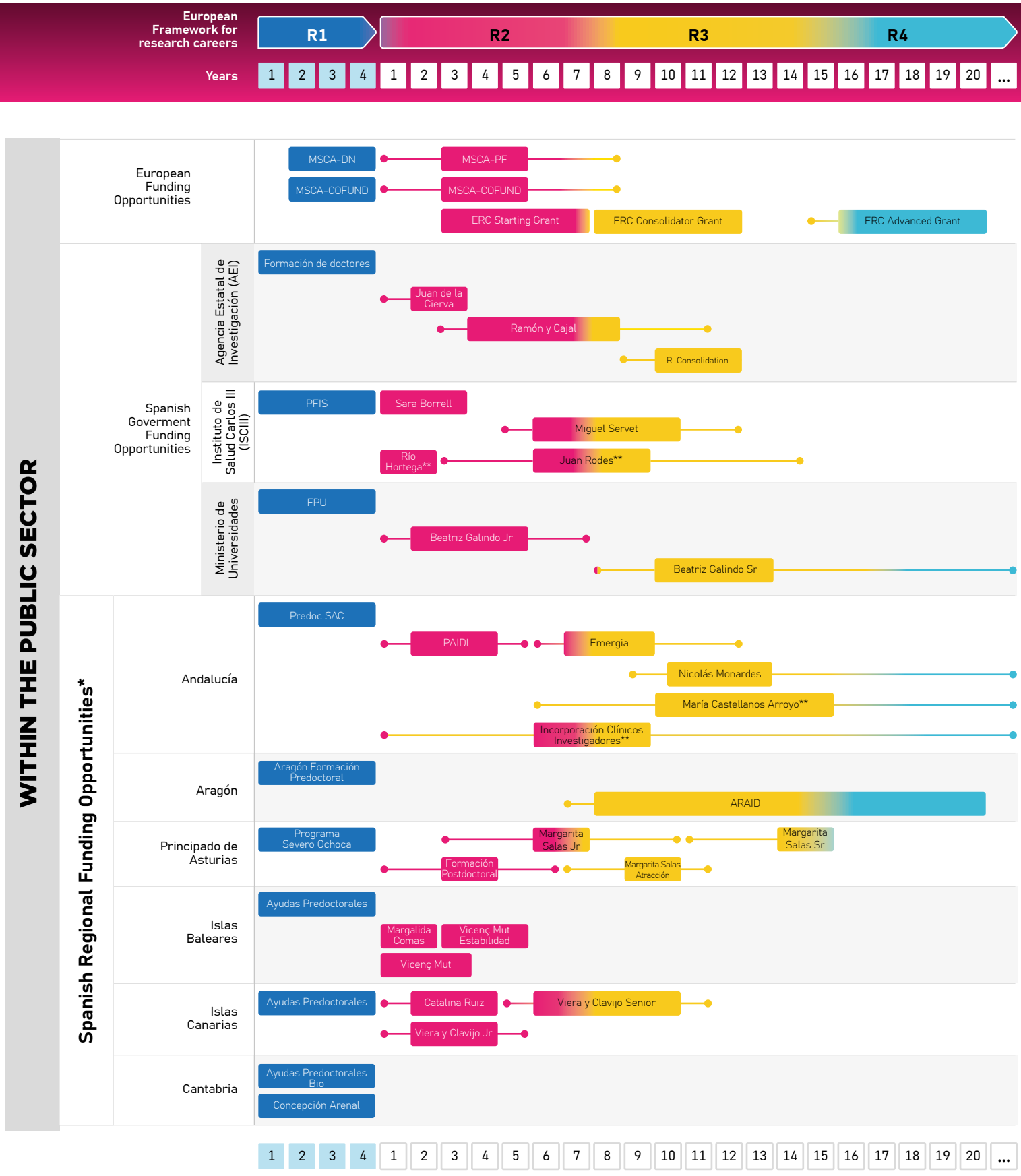
## FUNDING OPPORTUNITIES FOR SPANISH RESEARCH AND INNOVATION SECTOR




**Legend**

First possible year to apply

Last possible year to apply

Contract length

Calls are kept in the original language
Non-exhaustive funding opportunities from calls open during 2020-2022.
Please go to specific call documentation to check possible changes in eligitibity due to parental care and disability
(*) Only regions with open calls in the reported period are shown.
(**) Only available for health specialists (MIR, BIR, FIR).

More info at www.euraxess.es

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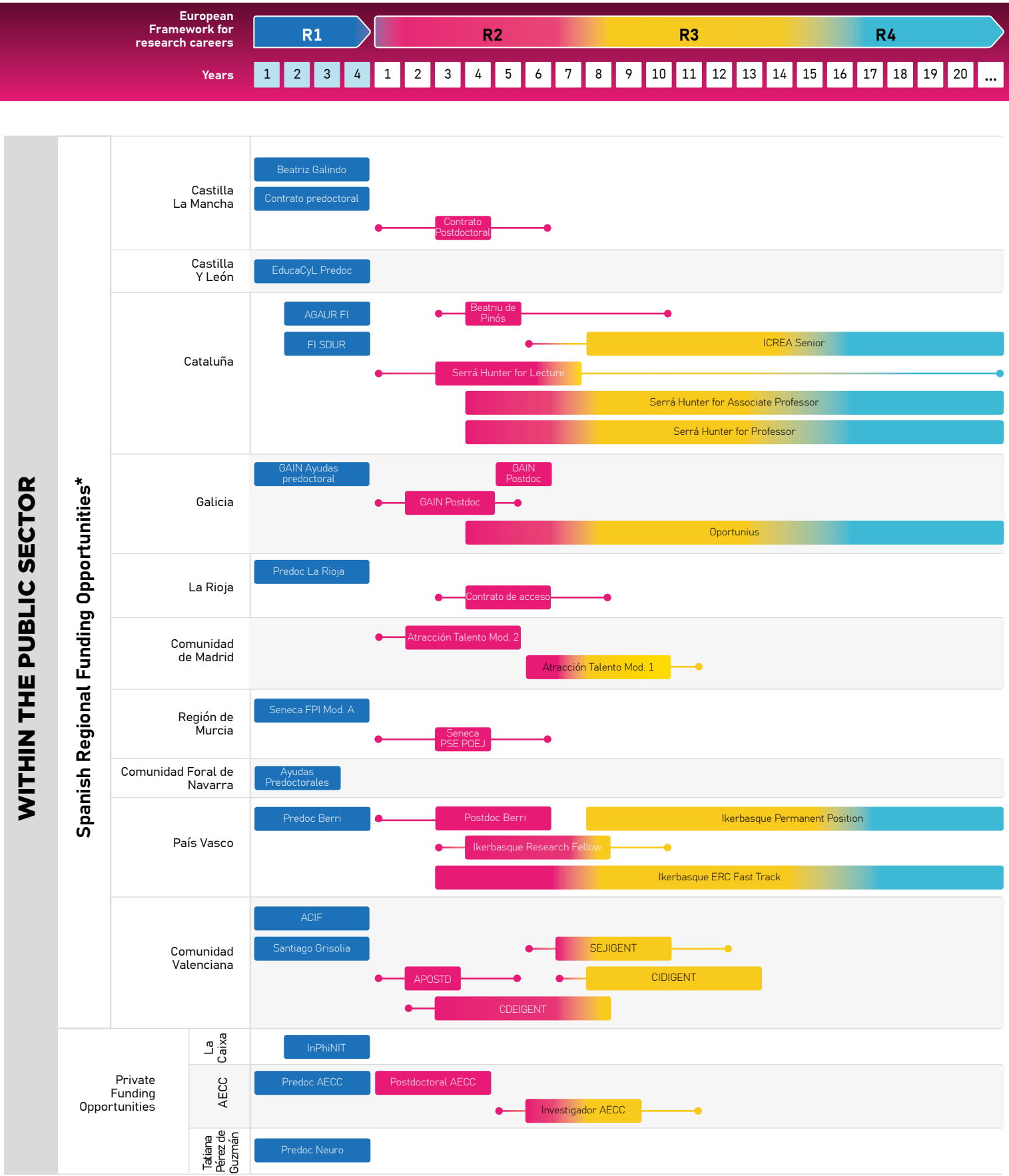


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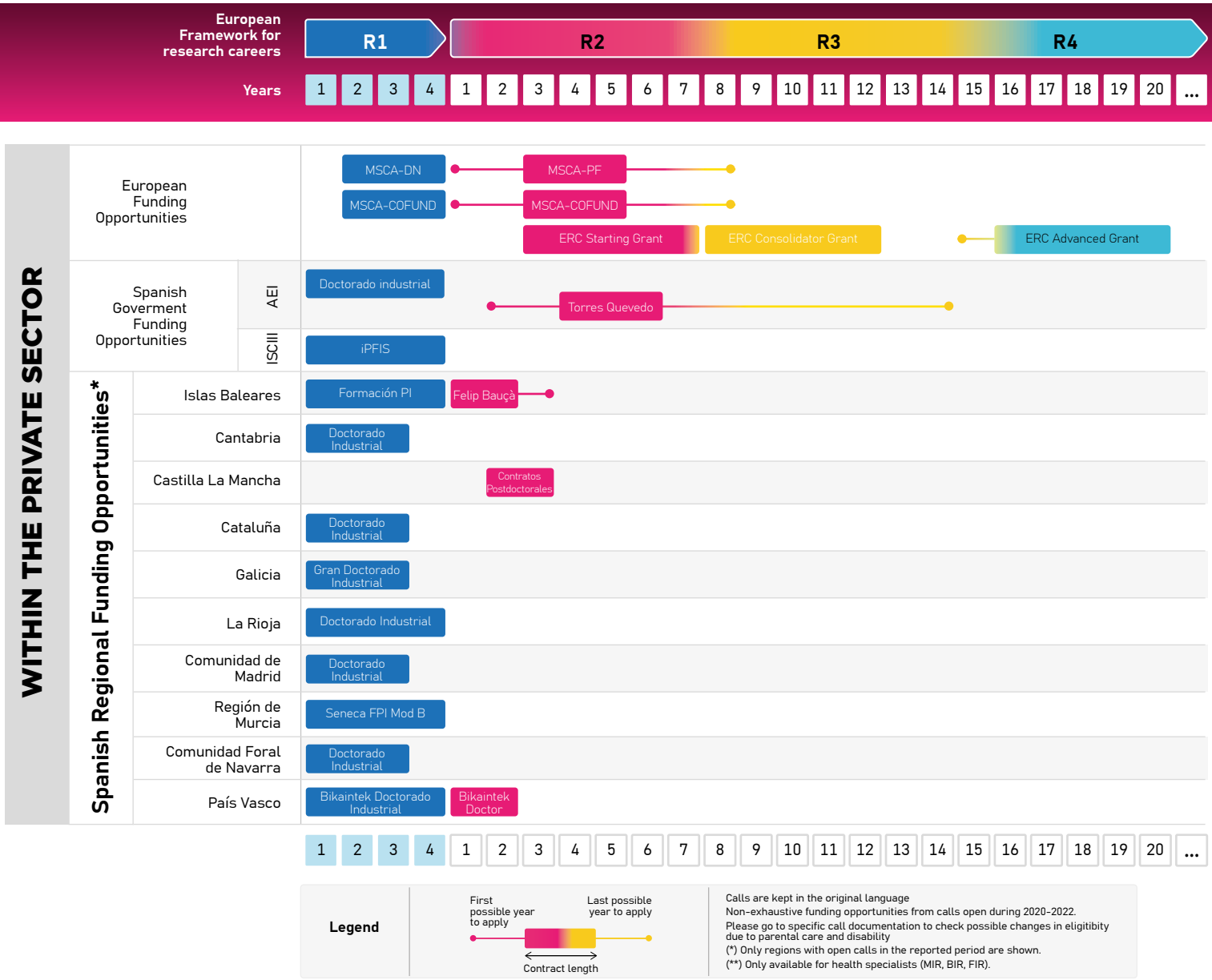


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# 3 PROFESSIONAL DEVELOPMENT PLAN FOR R1 AND R2 INVESTIGATORS

## A. What is a Professional Development Plan?

It is a proactive planning exercise whose objective is to know and assess the professional possibilities of each person, helping to establish realistic objectives and career paths adapted to each profile. These plans can be evaluable and modifiable throughout the development process, as the professional's priorities or interests change.

## B. Who should consider making a Professional Development Plan?

Human resources in research (R1 and R2) of the FIBHULP who want to review their situation and consider a more detailed planning of their professional career, although this measure is more effective when it is considered at the earliest stages of the researcher's career and is designed as an accompaniment that will be present throughout their working life.

In this case, and in accordance with Euraxess recommendations, it is advisable for early-stage research personnel (R1) who carry out research under supervision until they obtain their PHD, and recognized research personnel (R2) who have a PHD or equivalent and are not yet fully independent to do so.

The objective would be to learn basic principles to reflect on one's career to date and to have tools to begin to formulate a continuous career strategy.

## C. Tools

Euraxess offers researchers a space on its website that guides them in the development of a Professional Development Plan, providing tools to help them reflect on the state of their professional research career and the multiple alternatives that can be found in the labor market.

**https://euraxess.ec.europa.eu/career-development/researchers/discover-careers-beyond-academy**

### Research career skills

The **DocEnhance** project, also funded by the European Commission, aims to improve knowledge of transferable skills and their integration into existing doctoral programs by generating resources that it plans to incorporate into its website by the end of December 2022. The project has carried out a previous study that has already been published and that shows in a very graphic way how those skills of researchers correspond or do not correspond to what the industry demands.

This study is in line with Euraxess, pointing out that the development of a professional research career involves the training of multiple skills that are also highly valued outside academia, but of which researchers themselves are not always aware. In this sense, Euraxess has developed studies to know which are the most demanded in the industry. The **EURAXIND** project, in particular, aimed to develop resources to support researchers and institutions and to increase opportunities for research collaboration and points out that these most demanded skills are:

- Communication skills
- Trust
- Organizational skills
- Entrepreneurial skills
- Teamwork for problem solving
- Project management
- Flexibility
- Leadership skills

# 4 RESEARCH CAREER DEVELOPMENT OPTIONS

One of the main mistakes made when thinking about scientific careers is that they all involve being in a laboratory; however, sometimes there are other realities. Here are some examples of successful careers in science.

## A. Scientific careers associated with medical sales

**Medical sales representatives** pharmaceutical company representatives typically work for pharmaceutical companies and sell drugs or medical equipment to healthcare professionals such as general practitioners, hospital doctors, pharmacists, nurses and dentists.

The career is open to all graduates, but a degree in life sciences, medicine or pharmacy is especially useful. Another aspect that makes this career option attractive is that it maintains high salaries with a wide range of additional commissions.

## B. Scientific careers associated with Intellectual Property and Patent Law

In relation to legal matters, scientific knowledge may be well suited to a career **in patent or trademark examination**. These patent attorney and examiner roles are particularly suited to those with a degree in science.

This area evaluates whether inventions are new and innovative and therefore eligible for patenting. Generally, a degree in a science, engineering, technical or mathematics-based subject matter is required. Meanwhile, patent examiners use their technical and legal skills to evaluate patent applications. In this case, it is common to need a degree in science, engineering, mathematics or a computer science to practise.

## C. Scientific careers associated with manufacturing and production

The **engineering and manufacturing** industry offers many alternative careers for those with a science background. Some examples are:

- Health and safety inspector: science and engineering graduates have an advantage in opting for this highly competitive profession. The job is to protect people by ensuring that workplace hazards are properly controlled.
- Product/process development scientist: companies need scientists capable of developing, understanding and controlling the processes used to manufacture the final product. The variety of sectors is very wide, ranging from food, medicines, cosmetics and paints, among others.

- Quality manager: the objective will be to ensure that the product or service provided by an organization is fit for purpose, consistent and complies with external and internal requirements.

## D. Science careers associated with Science Policy

Science policy work requires the harnessing of scientific knowledge and understanding to inform and assist in policy formulation. Policy workers are employed in a variety of settings in the public, private, and voluntary sectors. Typical employers include:

- Charitable organizations
- Government
- Non-governmental organizations
- Public sector organizations
- Professional scientific bodies, e.g., scientific societies and medical societies
- Trade associations.

The work consists of identifying and analyzing policy issues, gathering information on scientific issues, drafting reports and writing briefing papers.

## E. Scientific careers associated with *Medical Writer*

Jobs in this field are very competitive, but it is also possible to use knowledge gained from a scientific degree to work for a specialized publisher.

Scientific publishing, both online and in print, tends to focus on the production of books, scientific journals, textbooks and review guides.

Jobs can be found in production, proofreading and editing. Some employers may accept an undergraduate degree in a scientific subject, but due to the competitive nature of the industry, a graduate degree in publishing is often highly prized.

## F. Scientific careers associated with teaching

Working in schools, colleges or universities is an alternative for those who want to contribute to the training of new generations.

- Higher education teacher
- High school teacher
- Elementary school teacher
- Certificate of pedagogical aptitude


Technical Support: Effectia Innovation Consulting