CarrerasPathfinders

CarrerasPathfinders Doctoral Program

Enabling the next generation in search of blood cancer cures

Guide for Applicants

Co-funded by the European Union

CERCA Centres de Recerca de Catalunya

Josep Carreras LEUKAEMIA Research Institute

Fundació JOSEP CARRERAS contra la leucèmia

CarrerasPathfinders

TABLE OF CONTENTS

1. The Program 2
2. Call for Applicants 4
3. What we offer 11
4. Processing of Data 12
5. Annex 13

Co-funded by
the European Union

1. The Program

CarrerasPathfinders program is a new world-wide unique doctoral program, co-funded by the Marie Skladowska-Curie (MSCA) program of the European Commission under Horizon Europe (HEU), designed and coordinated by the Josep Carreras Leukaemia Research Institute (IJC). The aim of the program is to fund 14 excellent Doctoral Candidates (DCs). The program aims to shape a new generation of researchers capable of addressing unmet needs and societal challenges in blood cancers. This current call aims to fill the vacant DC14 doctoral position for a period of 3 years.

The scope of the program covers the entire spectrum of research and innovation in blood cancers from understanding disease biology to the implementation of novel processes in the clinical practice. The 14 projects have been pre-selected based on excellence, impact, and their triple-I dimension in internationality, intersectorality, and interdisciplinarity and the experience of the proposing supervisors.

Over the 3-years contract period, the selected DC will conduct international secondment(s)[1] to academic and non-academic institutions that are defined and detailed in the description of the individual project (see Annex 1 and CarrerasPathfinders website). The doctoral researcher will be enrolled in PhD programs of the University of Barcelona (UB) or the Autonomous University of Barcelona (UAB).

CarrerasPathfinders program has the following overall objectives:

- To develop an excellent doctoral program in blood cancer research conceived as a pilot for a permanent international doctoral program.
- To equip DCs with a unique skill set boosting effectiveness and innovation capacity.
- To promote DCs' career development and increase their employability in different sectors.
- To establish the IJC as a European reference for research and training in blood cancers.
- To provide Europe with a new generation of researchers able to address unmet needs and societal challenges of blood cancers.
- To contribute to structuring the European research area by collaborating and synergizing with other European key opinion leaders.

1.1 Host Institution

IJC is an independent, non-profit biomedical research institute that is part of the Research Centres of excellence of the Government of Catalonia network (CERCA). The IJC was founded in

[1] Secondments refer to temporary placements of researchers or research stays in other institutions intended to enhance their multidisciplinary training and foster collaboration within the framework of the fellowship. In line with the vision of the CarrerasPathfinders program, these secondments should be at an international level and in a different sector.

Co-funded by the European Union

2010 as the first European institute devoted to cancer research with a particular focus on leukaemia and other malignant blood diseases. The IJC is a multi-site research institute consisting of a central headquarters embedded in the Biomedical Campus Can Ruti (Badalona) and 5 additional sites, all of them located in clinical environments of excellence including Hospital Germans Trias i Pujol (HGTP), Hospital Clinic (Barcelona), Hospital Sant Pau (Barcelona), Hospital Josep Trueta (Girona), Hospital del Mar (Barcelona) and Pediatric Hospital Sant Joan de Déu (Esplugues de Llobregat).

Additional Information about IJC can be found on the institute's website.

1.2 Associated Partners

Associated Partners (APs) to the CarrerasPathfinders program are entities that have agreed to host predoctoral fellows for secondments, including universities, hospitals, companies, research centres, biotech start-ups, pharma companies and any other non-academic institution. Details of the secondment plans are detailed in the individual project descriptions and have a duration from 3 to 11 months.

1.3 Structure of training program

Doctoral training is one of the key strategic initiatives of the IJC and the Spanish Carreras Foundation to reach our long-term goal: to make leukaemia a curable disease in all cases. The CarrerasPathfinders program will provide a tailored programme for the selected doctoral fellows at different levels:

1. Training-through-research: Each fellow will work full-time on their research project in their host group and carry out at least 1 short visit and 1 secondment to other international institutes and sectors.
2. Network-wide training will be delivered through in three main formats:
   a) Annual retreats
   b) In-house courses covering scientific and transferable skills
   c) IJC scientific seminar series
3. Individual advanced training: Recruited candidates will further develop their own Career Development Plan (CDP) with the guidance of their supervisor and a chosen mentor. Each fellow will choose at least two additional courses offered by the IJC, encompassing advanced technology courses and transferable skills.

Network-wide training is coordinated by the IJC´s Career and Training Committee (CTC) and is structured according to four knowledge domains: Scientific Knowledge (KNOW), Personal Effectiveness (PERSO), Research Organization and Governance (ORGA) and Influence and Impactful Engagement (IMPACT).

All the fellows will be contacted 3 years after their fellowship to trace the impact of the program in their professional life, and the conclusions will be published on the program website.

Co-funded by the European Union

2. Call for Applicants

2.1 Application process

The Application procedure will be facilitated through a user-friendly online platform (TeamTailor), the link to which can be found on the CarrerasPathfinders website.

Applicants will be required to complete an application form with personal and academic information and provide the required documentation.

Documents to be uploaded:

- CV (Curriculum Vitae/Resume). Please note that your CV should clearly indicate the start and end of your education, work, and research experiences, as well as your contact details (email address and telephone number). Also, **include the names and email addresses of at least two referees** (academic and non-academic, preferably).
- Motivation letter (project-related) in English. Describe your current scientific interest and why you are interested in the CarrerasPathfinders program and the chosen project. Summarize relevant skills, experience, knowledge, and personal qualifications you have that fit the project.
- Scanned copy of your official bachelor's and master's degree certificates and academic records. If you have not yet been awarded your Master´s degree certificate after its completion, please upload a provisional degree or other proof from your institution.
- Any other additional documents providing evidence of the mobility rule compliance (see Eligibility criteria).

Applicants will receive a confirmation e-mail upon their application's submission, together with a registration number, which will act as proof of their participation in the call. The PMO at Josep Carreras Institute will verify the admissibility and eligibility of each application and will contact candidates if any amendments or additional documents are required. From the date of notification, candidates will have a maximum of 10 working days to amend their application and send the missing documents. Before the signature of the contract, a final validation of the eligibility of the fellow will be undertaken. Failure to meet the eligibility criteria will result in the forfeiture of the fellowship.

Co-funded by the European Union

2.2 AVAILABLE RESEARCH PROJECTS

A detailed description of the DC14 project can be found at CarrerasPathfinders website and in Annex 1 of this Guide. The project has been selected through an internal competitive call that has been evaluated by the CarrerasPathfinders' Scientific Advisory Board Members (SAB), which is composed by:

- **Brigitte Schlegelberger:** Professor and Director of Hannover Medical School Genetics Institute
- **Francesco Cerisoli:** Head of Research and Mentoring at the European Hematology Associatiation (EHA)
- **Christoph Plass:** Professor and Division Head at Deutsches Krebsforschungzentrum (DKFZ), a member of the Helmholtz Association of German Research Centers
- **Wencke Walter:** Computational scientist at the diagnostic company MLL Münchner Leukämielabor GmbH (MLL)

2.3 APPLICATION DEADLINE AND TIMELINE OF THE SELECTION PROCESS.

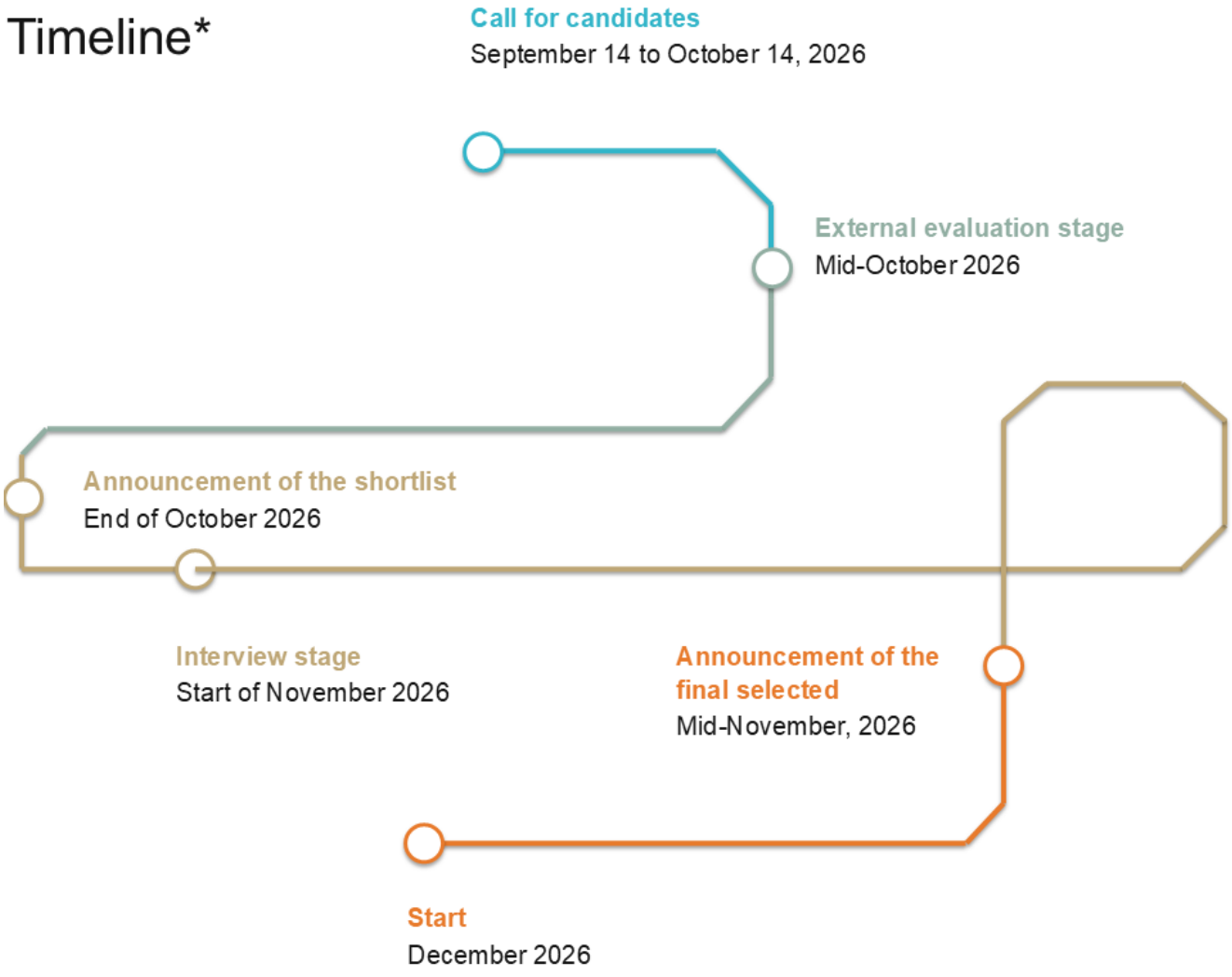
Publication of the call: September 14th, 2026, Monday

Submission deadline: October 14th, at 23:59, Wednesday Central European Time (CET).

Co-funded by the European Union

CarrerasPathfinders

Timeline*



* The timeline is tentative.
The IJC might modify it if any unforeseen issues arise.

Co-funded by the European Union

2.4 Selection Process

The selection process of the CarrerasPathfinders program is designed to uphold the principles of integrity, fairness, and transparency.

Tentative Timeline	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Months	October 2026	October 2026	November 2026	November 2026	December 2026
Action	Eligibility Administrative Check	External evaluation stage	Interview stage	Consensus funding decision	Offer and candidate acceptance

STAGE 1: Eligibility Check: upon the closing of the call, proposals will be registered in the database for evaluation, and the eligibility of the applicants will be checked. Applicants who have omitted mandatory documents required for the eligibility check will be contacted by a member of Project Management Office (PMO) and will be required to submit the missing documents within 10 calendar days from the date of notification. Proposals that do not meet the eligibility criteria may be declined without further review. All applicants will receive an email either confirming their eligibility and start of the external evaluation phase or informing them that of their ineligibility according to the eligibility criteria. Applicants have the right to request a redress if they consider there was a procedural flaw during the eligibility check. The provisional list of admitted and excluded candidates will be published on the program website.

STAGE 2: External evaluation (remote): the selection of the fellows will be merit-based, founded on peer review in an open and transparent selection procedure. It will be carried out externally by a specifically tailored External Evaluation Panel (EEP) for the DC14 project to ensure the independence and equity of the process. The EEC will be composed of 2 independent evaluators from academia, and 1 from non-academia, respecting the gender parity and internationality aspect. If there is a high discrepancy (>30%) between the evaluators, a third one will be assigned. At least the top three highest-scoring candidates will be invited for an interview. The threshold for this stage is 25 out of 40. All candidates, selected and rejected, will be informed by email about the evaluation result and receive a written report of their evaluation. Within 10 working days after receiving this notification, applicants will have the right to request a redress if they feel there was a procedural flaw during the evaluation.

STAGE 3: Interview and final evaluation: the candidates will be interviewed online by the EEP, featuring at least 2 external experts from the panel, and the chosen IJC supervisor (without voting rights). A representative of the Human Resources (HR) Unit will monitor the interview (also without voting rights). The CarrerasPathfinders Project Manager will assist in generating a comprehensive interview report. Candidates will be assessed on a scale of 1-60, being 45 the

Co-funded by the European Union

threshold for further consideration. A final ranking list will be elaborated based on the scores of the external evaluation (Stage 2) and the interviews (Stage 3).

STAGE 4: Consensus funding decision: the Recruitment Supervisory Committee (RSC) will decide the allocation of the fellowship based on the final evaluation scores. Applicants who are not selected but have scored above the threshold will be included in a reserve list. Applicants will be notified of the funding decision by email and receive an Evaluation Summary Report of their application. Following this notification, applicants will have a 10-working-day window to submit request redress if they believe that there has been a shortcoming in the evaluation procedure.

STAGE 5: The offer acceptance and start of the fellowship: successful applicants will have 10 days from the notification of the final funding decision to confirm their acceptance. In the event of an applicant rejecting the fellowship, it will be offered to the next applicant of the reserve list. The candidate accepting the offer will be required to sign an employment contract and, preferably, start the fellowships as soon as possible from the date of acceptance[2].

Note on candidates' assistance: Support will be provided via email, phone, and virtual meetings to assist applicants with any queries they may have about the call, forms and/or support documentation. For any assistance needed, please send an email at carreraspathfinders@carrerasresearch.org.

Appeal and redress request: All applicants have the right to initiate a redress procedure within 10 days after receiving the notification of the eligibility check, the remote evaluation, and the final decision if they believe there has been a shortcoming. A redress request can only be based on procedural grounds, with clear evidence of the reasons for complaint that must be provided in the request. The redress procedure is not meant to call into question the judgement made by the expert evaluators.
To submit the request, the Redress request form must be downloaded from the CarrerasPathfinders website. The request must be signed by the applicant (by hand and scanned or by digital signature) and be addressed to carreraspathfinders@carrerasresearch.org with the email subject "Redress Request-Name of the candidate". All requests for redress will be treated in confidence.

The Redress Committee (RC) will examine the redress requests focusing on procedural aspects, not questioning the scientific judgement of appropriately qualified experts. In cases where sufficient evidence of a procedural flaw is found, the RC will conduct an examination with the involvement of 2 external experts from the same database used for interviews, ensuring they

[2] In case of delays in getting the VISA or any other force majeure situation, this could be postponed.

Co-funded by the European Union

have not previously evaluated the candidate. A reasoned response will be provided to the candidate within a maximum of one month after receiving the redress request.

2.5 Eligibility Criteria

To ensure the excellence of the program and its participants, specific eligibility criteria have been established for applicants to the call that must be met at the time of the **call deadline**. If one or more of the following eligibility criteria are not fulfilled, the candidate will be declared ineligible.

The eligibility criteria are as follows:

- Candidates must comply with the Marie Sklodowska Curie (MSCA) mobility rule: they must **not** have resided or carried out their main activity in Spain for more than 12 months in the 3 years immediately prior to the call deadline.
- Candidates must **not** have a doctoral degree at the call deadline.
- Candidates should be entitled to enrol in a PhD program: as per the internal regulations of our collaborating universities, the University of Barcelona (UB) and the Autonomous University of Barcelona (UAB), candidates must hold a bachelor's degree and a master's degree or be in the process of obtaining it by the end of the selection process (on the date of the SAB consensus meeting at the latest). The total equivalent should be 300 ECTS in total, 60 of which should correspond to a master's degree (or equivalent credit system for degrees awarded by universities outside the EU).
- Candidates must have proficiency in written and spoken English, assessed through the motivation letter and the interview.

CarrerasPathfinders is open to researchers of any age, nationality, and gender without restrictions. The IJC is committed to promoting equal opportunities for all researchers and staff. The IJC adheres to the Human Resources Strategy for Researchers (HRS4R) and the European Charter and Code of Conduct for the Recruitment of Researchers in their recruiting, training and career development policies and practices. In 2019, the European Commission recognized the IJC with the "Human Resources Excellence in Research Award" [3].

2.6 Evaluation Criteria

To ensure the fairness of the selection and evaluation process, the experts will assess the applications according to the evaluation criteria defined in the chart below. Evaluators will assign a specific score to each criterion on the evaluation form, together with a coherent explanation to elaborate the evaluation summary.

[3] https://www.carrerasresearch.org/ca/hr-excellence_94734

Co-funded by the European Union

Dimension	Subcriteria	Scoring (max. points)	Threshold
Stage 2 External Evaluation by madri+d			
Academic background	Level and duration of academic training; Multidisciplinary nature of degrees, subjects and professional experience; Academic excellence; Professional training and qualifications; Other non-academic training; Experience in non-academic environments	30	20 out of 30
Personal ambition (motivation)	Candidate's interest and motives to begin a PhD at IJC and interest in interdisciplinary research; candidate's value to the group and professional expectations	10	5 out of 10
Total stage 2 score (max)		40	25 out of 40
Scoring guide: 0 - Unsatisfactory. The application fails in these criteria; 50% (15 or 5, respectively) - Good. The criterion is well addressed, but improvements are necessary; 100% (30 or 10, respectively) - Excellent. The application successfully addresses all aspects of the criterion.			

Stage 3 Interview			
Domain background	Knowledge of the disciplines involved in the chosen PhD projects.	15	45 out of 60
Communication	Clarity of presentation. Ability to articulate ideas during the interview. Capacity to engage in discussions on diverse topics. Creative thinking.	15	
Motivation	Potential and willingness to work in the CarrerasPathfinders context.	15	
Career prospects	Suitability of candidate's profile for the chosen research project.	15	
Total stage 3 score		60	
Scoring guide: 0- Unsatisfactory. The application fails in these criteria; 5- Poor. There are serious inherent weaknesses in relation to the criterion in question; 10 - Good. addresses the criterion well, although improvements are necessary; 15 - Excellent. The application successfully addresses all relevant aspects of the criterion.			
Total Stage 2 + Stage 3 (max.)		100	80 out of 100

Co-funded by the European Union

3. What we offer

The Josep Carreras Leukaemia Research Institute provides doctoral researchers with excellent facilities and positive challenging environment to conduct their research, fostering their development as future leaders in their research field[4]. As members of the IJC, fellows will receive support from all IJC administrative units and their supervisors, guaranteeing a swift completion of all paperwork and a smooth integration into the institute and the Barcelona Area (Spain).

3.1 Enrolment in universities doctoral programs

IJC actively collaborates with two leading universities in Spain, University of Barcelona (UB) and Autonomous University of Barcelona (UAB), providing doctoral candidates access to their doctoral training programs. Both universities Both universities are renowned for their high-quality supervision, encompassing progress monitoring, as well as comprehensive scientific and non-scientific training. Enrolment in UB and UAB doctoral programs offer the opportunity of obtaining international PhD degrees. Both universities have highly qualified researchers and professorial staff involved in teaching. Thesis supervisors from these universities will be appointed following the selection of the projects and candidates.

3.2 Remuneration and employment conditions

The fellowship consists of a 36-months contract, with 1623 annual working hours and 23 working days of vacations, along with additional personal days.

The fellow will receive a gross salary depending on their personal situation:

Gross Salary	Fellows	Fellows eligible for Family Allowance
	€	€
Living Allowance per year	26.500	26.500
Mobility Allowance per year	1.600	1.600
Familly Allowance* per year	0	900
Total per year	28.100	29.000
Relocation (one payment, first payroll)	844,72	844,72
Compensation (one payment, last payroll)	2.810,00	2.810,00
Total (36 months) with compensation and relocation	87.954,72	90.654,72

[4] Several IJC administrative units, such as HR and the International Grants Office, will collaborate to assist fellows with tasks such as contract signing, addressing visa-related concerns, managing research funds for their project, travel plans and accommodation arrangements.

Co-funded by the European Union

The gross salary is subject to the Spanish taxation (workers' social security contributions and personal income tax (IRPF)). The final gross salary mentioned above is provided for guidance and is subject to applicable regulations. The final salary conditions will be communicated by the HR unit at the time of hiring. The total cost of the fellowship is the combination of gross salary and employer' s social security contributions.

The fellow will receive a compensation payment upon the termination of the contract. Regarding relocation, each fellow will receive this supplement as one-time payment in their first payroll. The Family Allowance is applicable when the fellow has or acquires family obligations during the CarrerasPathfinders fellowship, i.e. persons linked to them by (i) marriage, or (ii) a relationship with equivalent status to a marriage recognised by the legislation of the country or region where this relationship was formalised; or (iii) dependent children who are actually being maintained by the researcher.

The project and associated research will be funded by the respective research group or leader at IJC, who is responsible for supervising the DC.

The secondment/s foreseen in the project will be funded by the CarrerasPathfinders program/research group (not the fellow).

Net salaries will be calculated upon recruitment phase by HR Unit, depending on the personal situation of the fellow and the national regulations on the date of the contract.

4. Processing of Data

The Josep Carreras Leukaemia Research Institute will process the personal data of the applicants to manage their application in accordance with our selection processes legitimized by the consent that applicants give when applying to the call. The institute will not transfer their data to third parties, except to the evaluating committees, and will keep them for a maximum period of one year, except in the case of legal obligation.

If you wish to exercise your rights of access, rectification, opposition, deletion, limitation of processing or portability, you can contact us at dpd@carrerasresearch.org. If you consider that your data protection rights have been violated, you can contact the Spanish Data Protection Agency (www.aepd.es).

More information on Privacy Policy.

Co-funded by the European Union

5. Annex

Doctoral Candidate 14:

Acronym + Title: DC14 TargetAML: A functional approach to identify novel combinatorial treatments for MPN and AML

Supervisor: Marcus Buschbeck

Co-Supervisor: Jeannine Diesch (Senior postdoc at Buschbeck lab)

Planned secondment(s): Rebekka Schneider-Kramann, RWTH, Aachen, Germany

Free keywords: myeloproliferative neoplasms, functional genomics, drug repurposing, chemotherapy resistance

Abstract

Combining functional genomics, drug screening and advanced disease models, this project will uncover therapeutic vulnerabilities in JAK2-driven MPN to develop novel effective and less toxic treatment combinations.

Project Description

Therapeutic resistance remains a major challenge in cancer treatment, driven in part by tumour heterogeneity and the emergence and selection of resistant clones. This project aims to identify novel therapeutic strategies to overcome treatment resistance in myeloproliferative neoplasms (MPN), a group of blood cancers that includes polycythaemia vera, essential thrombocythaemia and primary myelofibrosis that can progress to acute myeloid leukemia (AML).

Current treatment of MPN is largely centered on JAK inhibitors (JAKi), which can provide substantial symptom relief and improve disease-associated outcomes but rarely eliminate the underlying malignant clone or induce durable remissions. Moreover, long-term JAK inhibition can be associated with hematological and other treatment-related toxicities. These limitations highlight the need for new therapeutic approaches, particularly rational drug combinations that target complementary vulnerabilities and may provide deeper and more durable responses.

We will combine functional genomic screening, systematic drug screening and advanced disease models to identify and validate therapeutic vulnerabilities in JAK2-driven MPN. The project builds on an established international collaboration with the Schneider-Kramann laboratory at RWTH Aachen and brings together complementary expertise in functional genomics, pharmacological screening and MPN disease modelling. By integrating these approaches, we aim not only to identify candidate therapeutic targets but also to define the mechanisms underlying drug sensitivity and resistance and to establish biomarkers that could ultimately support patient stratification.

Co-funded by the European Union

The student will contribute to this translational research program, gaining experience across genetic screening, pharmacological validation and molecular disease modelling. The ultimate goal is to identify effective and less toxic treatment combinations with the potential to inform future preclinical and clinical development.

The project will pursue the following objectives:

- Perform and analyse CRISPR/Cas9 functional genomic screens to identify genes and pathways that represent therapeutic vulnerabilities in JAK2-driven MPN.
- Validate candidate targets pharmacologically using FDA-approved drugs and experimental compounds, including cell-based drug-response, combination and apoptosis assays to identify effective and potentially synergistic treatment strategies.
- Define the molecular mechanisms underlying drug response and resistance using complementary transcriptomic and epigenomic approaches.
- Evaluate candidate vulnerabilities in advanced disease models, such as MPN organoid and iPSC-derived HSPC models.

Co-funded by
the European Union