FOUR-STAGE RESEARCH CAREER AT IDIBAPS

Date: February 2014

Several studies aimed to define a European framework for research careers have converged in a four-stage research career framework which starts with the training of researchers through PhD programmes and continue with their subsequent development as independent researchers\textsuperscript{1,2,3}.

2. Research Careers in Europe: Landscape and Horizons. European Science Foundation (ESF), 2010.

Following this four-stage career framework, we propose four broad profiles for researchers into which all research positions at IDIBAPS can be attributed. We also show the different positions available in the institution and how they are funded at each stage.

R1 Pre-doctoral Researcher
R2 Post-doctoral Researcher
R3 Researcher
R4 Group Leader

The IDIBAPS career map is shown in Appendix 1. Each stage (R1 to R4) contains a special track for those researchers who combine research with clinical activity.

R1 – Pre-doctoral Researcher

Individual who is in the early stage (<5 years) of his/her research activity and has not yet been awarded a doctoral degree, always carrying research under the supervision of a mentor. He/she may have student status, and/or being employed by the institution, and have limited teaching or research activities beyond his/her predoctoral work.

- PhD – IDIBAPS. Competitive call from IDIBAPS. Duration: 3 years.
- PhD – FI, FPI, FPU, PFIS, MC, etc. Competitive calls from: FI-DGR (AGAUR, Agència de Gestió d’Ajuts Universitaris i de Recerca), FPI-MINECO (Ministerio de Economía y Competitividad), FPU-MED (Ministerio de Educación), PFIS-ISCIII (Instituto de Salud Carlos III), MC (Marie Curie ITN). Duration: 3-4 years.
- PhD – Other. Non-competitive positions, normally depending on a particular grant or funds obtained by a more senior researcher. Duration: 3-4 years.
- MD/PhD – RH (Río Hortega). Competitive call from ISCIII (Instituto de Salud Carlos III). Duration: 2 years.
- MD/PhD – JF (Josep Font). Competitive call from Hospital Clinic (HC). Duration: 2 years.
**R2 – Post-doctoral Researcher**

**R2A – Postdoc**
Individual who has received a doctoral degree and is engaged in a temporary and defined period of mentored advanced training to enhance the professional skills and research independence needed to pursue his or her open chosen career path. They still do not have their own grants as principal investigator (PI) and may have limited teaching activities beyond their research work.

- **Postdoc – BIOTRACK.** Competitive call from IDIBAPS. Co-funded by Marie Curie CO-FUND Action. Duration: 3 years.
- **Postdoc – BP (Beatriu de Pinós), JdC (Juan de la Cierva), SB (Sara Borrell), MC (Marie Curie IEF, IOF, IAPP), etc.** Competitive calls from: BP (AGAUR), JdC (MINECO), SB (ISCIII), MC (European Comission). Duration: 2-3 years.
- **Postdoc – Other.** Non-competitive positions, normally depending on a particular grant or funds obtained by a more senior researcher. Duration: Variable (3-5 years).
- **Clinical Researcher – JR (Juan Rodés).** Competitive call from ISCIII. Duration: 3 years.

**R2B – Junior Researcher**
Post-doctoral researchers who are generally still in a temporary position but may/should start being the PI of their own grants and sign papers as senior author. They may have limited teaching activities beyond their research work.

- **Postdoc – MC (Marie Curie IEF, IOF, IAPP), HFSP (Human Frontier Science Program), EMBO (long-term fellowships), etc.** Competitive calls from: MC (European Commission), HFSP (HFSP Organization), EMBO (EMBO). Duration: 2-3 years.
- **Researcher – RyC (Ramón y Cajal), MS (Miguel Servet).** Competitive calls from MINECO and ISCIII, respectively. Duration: 5 years.

**R3 - Researcher**

**R3A - Researcher**
Researchers who make valuable contributions in terms of scientific productivity, fundraising, mentoring of students, etc. within a research group led by another researcher. They may have their own grants as PI and sign papers as senior author. Some researchers may remain in this category for the rest of their careers, and thus, these positions may become effectively permanent. They may have limited teaching activities beyond their research work.
- **Associate Researcher – IDIBAPS.** Positively-evaluated researchers after RyC and MS period by MINECO or ISCIII (I3, I3SNS or MSII) who have not been promoted to group leaders, but proposed by the IDIBAPS Scientific Advisory Board to remain in the institution within a research group led by another researcher. Contract type: permanent (first evaluation after 3 years and then every 5 years).

- **Accredited Researcher – UB (University of Barcelona), CSIC (Consejo Superior de Investigaciones Científicas).** Staff scientists of UB or CSIC as members of the consortium who have obtained the accreditation as IDIBAPS researcher. Contract type: permanent.

- **Researcher – Other.** Non-competitive positions, normally depending on a particular grant or funds obtained by another researcher. Duration: Variable.

- **Accredited Researcher – HC (Hospital Clinic).** Medical staff specialist of HC as member of the consortium who have obtained the accreditation as IDIBAPS researcher. Contract type: permanent.

- **IDIBAPS 80/20 Program Researcher.** Competitive call from IDIBAPS. Full-time medical staff specialist of HC who has gotten a minimum of 80% dedication to research for a defined period of time. Duration: 3 years, extendable for additional 2 years after evaluation.

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**R3B – Junior Group Leader**

Outstanding young scientists with excellent track record and clear future research ambitions to become a leader on their research area or field. They may have limited teaching activities beyond their research work.

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- **Junior Group Leader – IDIBAPS.** Outstanding young scientists with excellent track record demonstrated through high-impact publications and clear future research ambitions. Duration: 5 years.

- **Junior Group Leader – IDIBAPS 50/50.** Competitive call from IDIBAPS and HC. Young medical staff specialist of HC (MD) with a strong research career (PhD) and a minimum 50% dedication to research. He/she must have clear future research ambitions of becoming a senior group leader. Contract type: permanent (evaluation every 5 years).

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**R4 – Group Leader**

Researchers leading their research area or field. They publish influential papers (breakthroughs) and have an international reputation based on research excellence in their field, strategic vision on the future and broader implications of their research, serves on workshop and conference organising committees and delivers invited talks. They may have limited teaching activities beyond their research work.
- **Group Leader – IDIBAPS.** Researchers who have been promoted to Group Leaders after evaluation. Contract type: permanent (evaluation every 5 years).

- **Group Leader – ISIS.** Group leader IDIBAPS eligible to participate and successful in this competitive call from ISCIII (defined period of time). Duration: 4 years.

- **Group Leader – ICREA.** Competitive call from Fundació ICREA (Direcció General de Recerca, Generalitat de Catalunya). Contract type: permanent (evaluation every 5 years).

- **Group Leader – UB (University of Barcelona), CSIC (Consejo Superior de Investigaciones Científicas).** Staff scientists of UB or CSIC as members of the IDIBAPS consortium who have been promoted to Group Leaders after evaluation. Contract type: permanent.

- **Group Leader – IDIBAPS 50/50.** Researchers from the IDIBAPS 50/50 program that have been promoted to senior Group Leaders after evaluation. Contract type: permanent (evaluation every 5 years).

- **Group Leader – HC (Hospital Clinic).** Medical staff specialists of HC as member of the IDIBAPS consortium who have been promoted to Group Leaders after evaluation. Contract type: permanent.

- **IDIBAPS 80/20 Program Group Leader.** Competitive call from IDIBAPS. Full-time medical staff specialist of HC and IDIBAPS group leader who has gotten a minimum of 80% dedication to research for a defined period of time. Duration: 3 years, extendable for additional 2 years after evaluation.
TRANSITION BETWEEN STAGES: PROMOTION

- **R1 to R2.** Thesis defense and change to a position that has as a requirement to be a PhD holder.

- **R2 to R3.** The low number of R3 positions compared to post-doctoral positions is often seen as a bottleneck in a research career path. Junior Group Leader positions are highly competitive and require international experience.

  - **Promotion to Junior Group Leader.** During the last year of the RyC or MS programs, R2B researchers will be evaluated for their potential as Group Leaders at IDIBAPS. As a result of this evaluation they can be promoted to Junior Group Leaders (R3B) or proposed to remain in the institution as IDIBAPS Associate Researchers (R3A). The evaluation will be conducted by an external agency (ANEP, AGAUR), analysed by an internal commission, and the decision finally taken by the IDIBAPS Scientific Advisory Board with the approval of the IDIBAPS Governing Board. The evaluation will rely on the scientific leadership capacity and the institutional integration of the candidate. The following parameters will be considered:
    - Publications, specially those as first and senior author.
    - Impact in the scientific field.
    - Capacity to get research funds (national, international, private, human resources).
    - Transfer of knowledge.
    - Invited international conferences.
    - Thesis supervision.
    - National and international collaborations.

  - **Incorporation as Junior Group Leader.** Outstanding young scientists will be considered as Junior Group Leaders after evaluation by an internal commission and the IDIBAPS Scientific Advisory Board. Evaluation will consider:
    - High impact publications.
    - Quality and feasibility of a five-year project proposal.
    - Potential impact in the scientific field.

- **R3 to R4.** Evaluation process that decides whether a researcher has to be promoted to Senior Group Leader or not.

  - **Promotion to Group Leader (Senior).** Junior Group Leaders (R3B) will be considered for promotion to Group Leader (Senior, R4) after a five-year period and evaluated by
an internal comission and the IDIBAPS Scientific Advisory Board. Evaluation will consider the same parameters described as for the promotion to Junior Group Leader.

- **Incorporation as Group Leader (Senior).** Outstanding researchers not coming from the RyC or MS tracks. They must lead a research area within the scientific interests of IDIBAPS. Same evaluation as those for the promotion to Junior Group Leader.

**FOLLOW-UP OF THE RESEARCH CAREER**

All the permanent positions at IDIBAPS will be subjected to regular evaluations as part of the follow-up process of their research careers. The evaluations will be conducted by an internal comission and the results presented to the IDIBAPS Scientific Advisory Board and the Governing Board.

- **R3A – Associate Researcher IDIBAPS.** First evaluation after 3 years and then every 5 years. Minimum requirements to ensure the renewal of the Associate Researcher position have been established:
  - **Publications.** Author of a minimum of 3 (3 year-period) or 5 publications (5 year-period) in Q1 journals.
  - **Participation.** In at least one competitive grant or industry private contract (either as PI or collaborator), or authorship of at least one clinical guideline published in a PubMed-listed journal, or inventor in a patent application.
  - **Supervision.** Supervision or co-direction of at least one PhD student, or supervisor of one official Master student.
  - **Fitting in the host research group:** positive group leader evaluation.

- **R4 – Group Leader IDIBAPS (Senior).** Evaluation every 5 years considering the same parameters as those described for the promotion to Junior Group Leader. A positive evaluation will allow the researcher to continue leading the research group. A negative evaluation may lead to changes in the composition and leadership of the research group.

- **R4 – Group Leader (Senior) from UB, CSIC, HC.** Same evaluation described for Group Leader IDIBAPS every 5 years.

- **R4 – Group Leader IDIBAPS 50/50 (Senior).** Same evaluation described for Group Leader IDIBAPS every 5 years.
FOUR-STAGE RESEARCH CAREER AT IDIBAPS – APPENDIX 1

R1 – PRE-DOCTORAL RESEARCHER
- PhD – FI, FPI, FPU, PFIS, MC
- PhD – Other
- MD/PhD – RH
- MD/PhD – JF

R2 – POST-DOCTORAL RESEARCHER
- R2A - Postdoc
  - Postdoc – BIOTRACK
  - Postdoc – BP, JDC, SB, MC
  - Postdoc – MC, HFS, EMBIO
  - Postdoc – Other
  - Junior Researcher – RyC, MS
- R2B – Junior Researcher

R3 – RESEARCHER
- R3A – Researcher
  - Associate Researcher – IDIBAPS
  - Accredited Researcher – UB, CSIC
  - Researcher – Other
  - Accredited Researcher – HC
  - IDIBAPS 80/20 Researcher

R3B – Junior Group Leader
- Junior Group Leader – IDIBAPS
- Junior Group Leader – IDIBAPS 50/50

R4 – GROUP LEADER
- Group Leader – IDIBAPS
- Group Leader – IDIBAPS 50/50
- Group Leader – HC
- Group Leader – UB, CSIC
- Group Leader – ISIS
- Group Leader – ICREA

Funded by:
- IDIBAPS
- Permanent position
- Evaluation
- Consortium member institution – UB, CSIC
- Non-competitive call
- Competitive call