



College Management Unit:	UCD College of Health and Agricultural Sciences
School Unit:	UCD School of Medicine (Systems Biology Ireland)
Post Title & Subject Area (if relevant)	UCD Post-doctoral Research Fellow Level 1
Project:	Digital Twins for Blood Cancers
Post Duration:	Temporary One year with possibility to extend
Line Manager	Prof. Jonathan Bond
Competition Ref. N^o	018913
HR Administrator	Qiong Zhang

Position Summary:

University College Dublin is seeking applications for a dedicated computational Postdoctoral Research Fellow to work at Systems Biology Ireland.

The successful applicant will play a key role in a multinational blood cancer research project funded by the Fight Kids Cancer charity. This project will generate multiomics data from pre-clinical models of high-risk acute leukaemias (specifically T-ALL) treated as part of the ALLTogether clinical trial involving 16 countries from across Europe. The post-doctoral researcher will integrate genomic, proteomic, drug screening and clinical data to develop Digital Twin models that predict novel treatment strategies for this disease.

The successful applicant will be part of the Childhood and Adolescent Leukaemia multidisciplinary research team at Systems Biology Ireland and will work closely with the Kholodenko/Rukhlenko research group using novel computational methods that have been developed by the team (e.g., Rukhlenko et al Nature 2022).

This is a research focused role, where you will conduct a specified programme of research supported by research training and development under the supervision and direction of a Principal Investigator.

The primary purpose of the role is to further develop your research skills and competences, including the processes of publication in peer-reviewed academic publications, the development of funding proposals, the mentorship of graduate students along with the opportunity to develop your skills in research led teaching.

Principal Duties and Responsibilities:

- Conduct a specified programme of research and scholarship under the supervision and direction of your Principal Investigator.
- Engage in appropriate training and professional development opportunities as required by your Principal Investigator, your School or Institute, or the University.
- Engage in the dissemination of the results of the research in which you are engaged as directed by and with the support of and under the supervision of your Principal Investigator.
- Engage in the wider research and scholarly activities of your research group, School and Institute.
- Mentor and assist, as appropriate and as directed, the research graduate students in your group, School and Institute.
- Carry out administrative work associated with your programme of research.

Salary Range: €46,305 - €51,478 Per Annum

Appointment on the above range will be dependent on qualifications and experience

Details on eligibility to compete and pension information is available at

<https://www.ucd.ie/hr/resourcing/eligibilitytocompete/>

UCD is committed to creating an inclusive environment where diversity is celebrated and everyone is afforded equality of opportunity. We welcome applications from everyone, including those who identify with any of the protected characteristics that are set out in our Equality, Diversity and Inclusion policy. Learn more about Diversity at

<https://www.ucd.ie/workatucd/diversity/>

Reasonable accommodations will be provided to any applicant during the interview process who discloses they have a disability or are neurodiverse.

Selection Criteria

Selection criteria outline the qualifications, skills, knowledge and/or experience that the successful candidate would need to demonstrate for successful discharge of the responsibilities of the post. Applications will be assessed on the basis of how well candidates satisfy these criteria.

Mandatory:

- PhD in Bioinformatics, Mathematical/Computational Modelling, Computer Science, or other relevant discipline.
- Solid knowledge and/or practical experience in at least one of the following areas: (1) bioinformatics, especially the analysis of genome sequencing, RNA sequencing, and/or proteomics data, pathway analysis and survival analysis; (2) AI/ML methods, such as regression analysis, unsupervised and supervised ML, and neural networks.
- A demonstrated commitment to research and publications
- An understanding of the operational requirements for a successful research project
- Evidence of research activity (publications, conference presentations, awards) and future scholarly output (working papers, research proposals, and ability to outline a research project).
- Excellent Communication Skills (Oral, Written, Presentation etc).
- Excellent Organisational and Administrative skills including a proven ability to work to deadlines.
- Candidates must demonstrate an awareness of equality, diversity and inclusion agenda.

The PD1 position is intended for early stage researchers, either just after completion of a PhD or for someone entering a new area for the first time. If you have already completed your PD1 stage in UCD or will soon complete a PD1, or you are an external applicant whose total Postdoctoral experience, inclusive of the duration of the advertised post, would exceed 4 years, you should not apply and should refer to PD2 posts instead.

Desirable:

- Experience in mechanistic ODE modelling.
- Experience in the analysis of multi-omics data.
- Experience in survival analysis.
- Understanding of how to work with experimentalists and/or clinicians.
- Previous experience in blood cancer or related oncology research.
- Expertise in application of ML/AI techniques to biological data.
- Experience in setting own research agenda

Supplementary information:

The University:	https://www.ucd.ie/
UCD Strategy 2030: Breaking Boundaries	https://strategy.ucd.ie/
The College/Management Unit:	https://www.ucd.ie/chas/
The School/Programme Office/Unit:	https://www.ucd.ie/medicine/
Equality Diversity and Inclusion at UCD	https://www.ucd.ie/workatucd/diversity/
Other (Please specify):	https://fightkidscancer.eu/ https://www.cclg.org.uk/magazine-articles/alltogether-1-trial-finding-more-effective-leukaemia-treatments-children

UCD offers a comprehensive **Research Careers Framework** in line with the Advisory Science Council Report '*Towards a Framework for Researcher Careers*'. This model provides a structured and supportive **Career and Skills Development** system designed to ensure that Post-docs in UCD are able to plan their careers and prepare for future opportunities in academia, industry or the public sector. For more information, please [click here](#)

Informal Enquiries ONLY to:

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