THE POST

Colleges:	**Interdisciplinary: College of Engineering, Mathematics and Physical Sciences (CEMPS); College of Life and Environmental Sciences (CLES) and College of Medicine and Health (CMH)**
Post:	**Postdoctoral Research Fellow**
Reference No:	**P70479**
Grade:	**F**
Reporting To:	**Professor Krasimira Tsaneva-Atanasova and Professor Ivana Gudelj**

The above full-time posts are available January 2019 – 31 December 2022 (or earlier by negotiation).

Interviews will be held on 10th December. All candidates must be available to attend in person for this date. Travel expenses will be covered.

Successful candidates will need to be available for a 2 day overnight research event on 20th and 21st January 2020.

Biomedical and Clinical Sciences

The University of Exeter has significant strengths across the biomedical and clinical sciences notably chronic disorders (such as dementia, diabetes and other endocrine disorders and auto immune disease) and infectious diseases (both fungal and bacterial). In addition to clinical populations, researchers use a range of model systems including zebrafish and human cell lines to study mechanisms of disease, utilising a variety of state of the art techniques including cryoEM, calcium imaging and single cell transcriptomics. Consequently, researchers will have significant opportunities to work with world-leading researchers across a wide range of expertise and be part of an exciting institution-wide interdisciplinary community of researchers spanning biology, biomedical and clinical research.

Job Description

Main purpose of the job:

These positions have two main components, with the Fellows expected to divide their time equally between the two: First, they will **direct their own programme of research** (which should be in an area closely aligned to existing strengths within the University). Second, they will **develop new areas of cross-disciplinary research**, leading to new collaborations. This will include pump priming, co-creating and consolidating both new and existing research partnerships; training and advising clinicians and biomedical researchers in areas aligned to their core expertise; and mentoring of students, thus enhancing the interdisciplinary research ethos within the University. We welcome applicants who would wish to pursue this role part-time, and we are able to support flexible working patterns.

Candidates are required to have a high level of analytical ability and to be able to apply these skills to areas outside of their own immediate research area, to be able to communicate complex and conceptual ideas to a range of groups, including members of the public, and to participate as part of an interdisciplinary team to develop new research ideas. Successful candidates will have an interest in applying their quantitative knowledge to a broad range of biomedical and clinical problems.

Those individuals with a strong quantitative background who **already hold an independent Fellowship** and would like to further their career at Exeter University, should contact Professor Krasimira Tsaneva-Atanasova (K.Tsaneva-Atanasova@exeter.ac.uk) or Professor Ivana Gudelj (i.gudelj@exeter.ac.uk) in the first instance for a confidential discussion.

The Translational Research Exchange @ Exeter (established through a 5 year Wellcome Trust Institutional Strategic Support Award) is directed by Neil Gow FRS (Professor of Microbiology and Deputy Vice Chancellor

for Research and Impact) alongside Co-Directors Krasimira Tsaneva-Atanasova (Professor of Biomedical Modelling), Ivana Gudelj (Professor of Evolutionary Systems Biology) and Willie Hamilton (Professor of Primary Care Diagnostics). These Professors, together with our Steering Group, will play an important role in mentoring the Fellows as well as utilising the TREE to establish new collaborations between research areas and clinical practice. The environment will allow the appointed Fellows to gain key data generating methodologies, ensuring their awareness of data control and assessment. This balance of research and training provides a unique environment for the appointed Fellows to establish their own independent research careers within the biomedical domain.

Main duties and accountabilities:

1. To undertake research as appropriate to the field of study including:

   - Leading individual or collaborative research projects;
   - Developing research objectives, projects and proposals;
   - Identifying sources of funding and contributing to the process of securing funds;
   - Extending, transforming and applying knowledge acquired from scholarship to research and appropriate external activities;
   - Writing or contributing to publications or disseminating research findings using media appropriate to the discipline;
   - Making presentations at conferences or exhibiting work in other appropriate events;
   - Assessing, interpreting and evaluating outcomes of research;
   - Developing new concepts and ideas to extend intellectual understanding;
   - Resolving problems of meeting research objectives and deadlines;
   - Developing ideas for generating income and promoting research area;
   - Contributing to the growth of the Centre through enabling new interdisciplinary research as well as building upon areas of existing strength
   - Developing ideas for application of research outcomes;
   - Deciding on research programmes and methodologies, often in collaboration with colleagues and sometimes subject to the approval of the head of the research programme on fundamental issues

2. To contribute to teaching and mentoring schemes across the group and to supervise research and clinical secondments where appropriate.

3. To act as research team leader including:

   - Mentoring colleagues with less experience and advising on their professional development;
   - Coaching and supporting colleagues in developing their research techniques;
   - Supervising the work of others, for example in research teams or projects;
   - Developing productive working relationships with other members of staff;
   - Co-ordinating the work of colleagues to ensure equitable access to resources and facilities;
   - Dealing with standard problems and help colleagues to resolve their concerns about progress in research

4. To routinely communicate complex and conceptual ideas to those with limited knowledge as well as to peers using high level skills and a range of media and to present the results of scientific research to sponsors and at conferences.

5. As determined by the nature of the project plan, co-ordinate and implement research programme activity including:

   - Managing the use of research resources and ensuring that effective use is made of them;
   - Monitoring and reporting on the use of research budgets;
   - Helping to plan and implement commercial and consultancy activities;
   - Where appropriate, to plan and manage own consultancy assignments.

This job description summarises the main duties and accountabilities of the post and is not comprehensive: the post-holder may be required to undertake other duties of similar level and responsibility. Please visit the Human Resources website to view the Research Fellow role profiles.

Person Specification

Competency	Essential	Desirable
Attainments/Qualifications	PhD or equivalent qualification in a quantitative discipline such as mathematics, physics, computer science, chemistry, informatics; systems biology or a related interdisciplinary field.	
Skills and Understanding	Possess sufficient specialist knowledge in one or more of the following areas: mathematical or statistical modelling; any aspect of spatio-temporal dynamics (from the molecular and cellular level, through to population and systems level modelling); high-throughput image analysis; (electro) microscopy; machine learning and advanced data analytics; and single-cell 'omics. A willingness to apply this knowledge to a range of biomedical questions, and develop research programmes and methodologies across disciplines.	Record of research output in internationally recognised peer-reviewed publications.
Prior Experience	Experience of research in a quantitative discipline	Experience of post-doctoral level research. Experience of working in an interdisciplinary research environment. Experience of undergraduate or postgraduate teaching and supervision. Success in obtaining grant funding (either internal or external).
Behavioural Characteristics	Excellent written and verbal communication skills. Able to communicate complex and conceptual ideas to a range of groups, including scientists from outside the immediate research area and participate as part of an interdisciplinary team to develop new research ideas. Evidence of the ability to collaborate actively within the Institution and externally to complete research projects and advance thinking. Able to participate in and develop internal and external research networks. An understanding of the importance of equality and diversity within an organisation and a commitment to helping create an inclusive culture.	Able to identify sources of funding, generate income and build relationships for future activities.

Informal Enquiries

Before submitting an application you may wish to discuss the post further by contacting Chrissie Walker, Research Project Manager for TREE. Email: c.j.walker@exeter.ac.uk Tel: 01392 725838

Terms & Conditions
Our Terms and Conditions of Employment can be viewed here.

Further Information
Please see our website for further information on working at the University of Exeter.