

## Research Role Profile

<b>Job Title:</b>	Research Fellow – Biomedical Data Sciences
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<b>Responsible to:</b>	Head of research group, or principal investigator
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<b>Responsible for:</b>	Not applicable
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<b>Job Summary and Purpose:</b>
To undertake research in accordance with the specified research project(s) under the supervision of the principal investigator.

<b>Main Responsibilities/Activities</b>
<p>To undertake a range of research activities within a specified research area, assuming responsibility for specific areas of projects and making use of new research techniques and methods, in consultation with the research award holder or supervisor. This may include fieldwork, interviews, laboratory experimentation, critical evaluation and interpretation, computer-based data analysis and evaluation or library research.</p> <p>Using initiative and creativity to identify areas for research develop new research methods and extend the research portfolio. Analysing and interpreting results of own research. Write up results and prepare papers for submission to appropriate journals and conferences, and other outputs as required and/or appropriate. Attend appropriate conferences for the purpose of disseminating research results of personal development. The post holder may also contribute to writing bids for research grants and will contribute to collaborative decision making with colleagues in areas of research.</p> <p>Continually to update knowledge and develop skills, and translate knowledge of advances in the area into research activity.</p> <p>To plan and manage own research activity in collaboration with others. To carry out administrative tasks associated with specified research funding, for example risk assessment of research activities, organisation of project meetings and documentation. Implementation of procedures required to ensure accurate and timely formal reporting and financial control.</p> <p>To contribute to teaching in the Faculty by carrying out student supervision and/or demonstrating within the post holder's area of expertise and under the direct guidance of a member of departmental academic staff, as appropriate.</p> <p>The post holder may occasionally be required to supervise more junior research staff.</p>

## Research Role Profile

### Person Specification

**The post holder must have:**

A doctoral degree in a relevant discipline (although individuals who have almost completed a doctoral degree may be appointed). Consideration may also be given to individuals who do not hold a doctoral degree but have required skills based on a number of years experience in specified / relevant fields.

The post holder will have authority over some aspects of project work and must be capable of providing academic judgement, offering original and creative thoughts and be able to interpret and analyse results.

### Relationships and Contacts

Direct responsibility to the principal investigator or academic supervisor. There may be additional reporting and liaison responsibilities to external funding bodies or sponsors. The post holder may work on original research tasks with colleagues in other institutions.

### Special Requirements

To be available to participate in fieldwork as required by the specified research project

**All staff are expected to:**

- Positively support equality of opportunity and equity of treatment to colleagues and students in accordance with the University of Surrey Equal Opportunities policy.
- Help maintain a safe working environment by:
  - Attending training in Health and Safety requirements as necessary, both on appointment and as changes in duties and techniques demand
  - Following local codes of safe working practices and the University of Surrey Health and Safety Policy
- Undertake such other duties within the scope of the post as may be requested by your Manager.

## Research Role Profile

**Job Title:**

Research Fellow - Biomedical Data Sciences

**Main Responsibilities/Activities**

**This information sheet should be read in conjunction with the accompanying generic Research Fellow (1A) Role Profile and will be used for shortlisting processes. More specifically the post holder will be expected to:**

**The Project**

This is a postdoctoral research fellowship aimed at delivering and supporting our health and biomedical data sciences research portfolio. You will be part of Surrey's Health and Biomedical Informatics Research Group and will have the opportunity to work on a varied range of novel projects aimed at high-impact and theoretically valuable research questions. Initial studies will involve analysis of proteomic and metabolomic biomarkers in Chronic Kidney Disease (CKD) in companion animals (cats and dogs), specifically in response to treatment. Analysis will include detailed health and clinical data from patient records and clinical trials. Work will involve applying, re-purposing and developing approaches taken from bioinformatics, advanced analytics, AI, and machine learning to fit the application to biomedical and health data. Later studies will be determined by the outcomes of the early work and may include analyses across different disease areas, as well as development of novel methodologies. The full details of these will fit the overall strategic direction led by Prof. Nophar Geifman, but will also take into account the interests and skills of the successful candidate. There is the potential for developing research to explore additional relevant topics.

**The Role and its Responsibilities**

You will take charge of the day-to-day running of the research activity. Using your strong quantitative research and analysis skills, you will be involved in every step of study design and execution, including planning study protocols and preparing analyses in line with modern open research practices. Where necessary, (1) you will be involved in study design and planning (2) you will lead data handling and cleaning; (3) you will lead on development of data mining and analysis approaches; (4) you will be responsible for developing a data analysis plan and the execution of this; (5) you will make a substantial contribution towards report writing, presentations, and publications (multiple first-author papers are envisaged) as well as dissemination to non-academic audiences.

## Research Role Profile

Person Specification	
<b>Qualifications and Professional Memberships</b>	<b>Essential/ Desirable</b>
A PhD (or near completion thereof) or equivalent qualification in a relevant quantitative discipline (including, but not limited to, bioinformatics, health informatics, data sciences, statistics, 'omics, epidemiology, computer science).	Essential
Experience in the analysis of 'omics data such as genomics, proteomics, metabolomics	Essential
Experience in statistical analysis, machine learning, or advanced analytics, with direct applications in health, medicine or biology	Essential
The ability to write clearly and concisely with a good publication record commensurate with the level of your career.	Essential
Evidence of strong programming skills (e.g. Python, BASH) or advanced statistical skills in at least one statistical software/programming language (e.g. R)	Essential
The ability to work independently, as well as proven ability to work collaboratively as part of a research team.	Essential
Excellent organisation and communication skills.	Essential
Hands-on experience in the handling, wrangling and analysing large scale health or clinical data, such as electronic health records, clinical trials, or patient cohort studies	Desirable
Demonstrated track-record in developing or deploying new and innovative data analysis methodology, algorithms or software.	Desirable
<u>Special Requirements</u>	Essential/ Desirable
None	
Key Responsibilities	

## Research Role Profile

You will be required to

1. Contribute to the day-to-day management of the project, in line with the agreed objectives of the project to ensure that goals are achieved; providing project management where necessary
2. Contribute to study design
3. Lead on methodology development and data analysis
4. Comply with ethical procedures and data protection requirements.
5. Develop code, manipulate and analyse data under supervision of the PI.
6. Make a substantial contribution to report writing, presentations, and publications.
7. Support open science activities including pre-registration of studies and preparation of data for archiving.
8. Undertake such other duties as may be reasonably requested and that are commensurate with the nature and grade of the post.

N.B. The above list is not exhaustive.

### Background Information

The post will be based in the School of Health Sciences, within the University's Faculty of Health and Medical Sciences.