

Research Role Profile

Job Title:	Research Fellow A
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Responsible to:	Head of research group, or principal investigator
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Responsible for:	Not applicable
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Job Summary and Purpose:
To undertake research in accordance with the specified research project(s) under the supervision of the principal investigator.

Main Responsibilities/Activities
<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. The post holder may be asked to serve on a relevant Faculty committee. 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 spend time in the partner institutions 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

Addendum

This document provides additional information relating to both specific aspects of the post/faculty and any post specific person specification criteria. The information contained within this document should always be read in conjunction with the accompanying generic Role Profile.

Job Title: Research Fellow in Metabolic Modelling

Background Information/Relationships

Applications are invited for a Post-Doctoral Research Associate positions to join an Engineering Biology Mission Award collaboration between Professor Claudio Avignone Rossa at the Department of Microbial Sciences (University of Surrey) and Professor Paul Hoskisson at the Institute of Pharmacy and Biomedical Sciences (University of Strathclyde), in collaboration with GSK to undertake an engineering biology study into the improvement of sustainability in industrial *Streptomyces* fermentations. The successful candidate will join the multidisciplinary Systems Microbiology group at the University of Surrey to develop a metabolic model to design strategies for metabolic engineering of *Streptomyces* species for the biosynthesis of antibiotics to be employed in the production of natural products from *Streptomyces*. The results of the modelling simulations obtained in Surrey will inform the experimental research plan carried out in Professor Hoskisson's lab.

Project Press release here: <https://tinyurl.com/3aeuc5m2>

The successful candidate will be expected to have experience in the construction and development of metabolic models and in the interpretation of the results of simulations using the results observed in dedicated experiments. They will also contribute to the write up of reports and articles, and will participate in the wider scientific environment within the School of Biosciences in Surrey. The successful candidate will also be responsible for liaising with the partner researchers at Strathclyde and GSK. It is expected that time will be spent at the University of Strathclyde and at the GSK site (Worthing, UK).

We are looking to appoint a highly motivated and exceptional candidate who possesses (post-)doctoral experience in Systems (Micro)Biology, Computational Biology, or related disciplines, with good understanding of bioinformatic tools, microbial metabolism and biochemistry, and of the analysis of -omics data.

Informal enquiries about the post can be directed to Professor Claudio Avignone Rossa (c.avignone-rossa@surrey.ac.uk).

Person Specification

This section describes the sum total of knowledge, experience & competence required by the post holder that is necessary for standard acceptable performance in carrying out this role. This is in addition to the criteria contained within the accompanying generic Role Profile.

	Essential/ Desirable
1. Experience in metabolic modelling using state-of-the-art software tools	E
2. Experience in metabolic simulations (e.g. Flux Balance Analysis or other dedicated protocols)	E
3. Experience in analysis of metabolism (preferably prokaryotes and/or natural products)	E
4. Experience of analysis of multiomics data	E

Research Role Profile

5. Ability to work and advise junior colleagues and students	D
6. Self-motivated with the ability to work effectively independently and as part of a multidisciplinary team	E
7. Experience in supervising junior researchers and UG students	D
8. Good record keeping, communication and organisation skills	E
9. A PhD degree in a relevant discipline (or equivalent)	E
10. Availability to join the project not later than July 2024	D

Key Responsibilities

This document is not designed to be a list of all tasks undertaken but an outline record of any faculty/post specific responsibilities. This should be read in conjunction with those contained within the accompanying generic Role Profile.

The appointed researcher will carry out the construction and development of metabolic models for *Streptomyces* and perform simulations to identify possible strategies for metabolic engineering directed to improve or optimize the production of antibiotics using by-products of the food industry as substrates. Together with the partner researchers, they will analyse the data obtained from experiments to inform and validate the model. Other responsibilities will be directed to the dissemination of the results in conferences, workshops and seminars, as well as in public activities directed to the general public and other stakeholders.

N.B. The above list is not exhaustive.