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| **Job Title:** | Research Fellow A in Molecular Allergology |

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| **Responsible to:** | Professor Clare Mills  |

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| **Responsible for:** | Not applicable |

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| Job Summary and Purpose: |
| To work with EuroFIR to identify clinically relevant food allergens, collate sequence and other molecular information, apply them to assessing the performance of a suite of online allergenicity prediction tools and identify complementary in vitro and in vivo methods for identifying potential allergens using a systematic review approach investigate the molecular basis of immunological, under the supervision of the principal investigator. |

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| Main Responsibilities/Activities |
| The post is based in the Food and Molecular Immunology research group led by Professor Clare Mills and forms part of her ongoing collaboration with EuroFIR, ASBL (Brussels, Belgium) and the University of Manchester. The work is part of a project led by EuroFIR funded by the European Food Safety Authority “Novel strategies for predicting allergenicity: development of a ranking method and screening tools to assess the allergy risk of innovative proteins” (OC/EFSA/GMO/2021/04) where the University of Surrey is acting as a subcontractor. The focus is 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.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.Continually to update knowledge and develop skills, and translate knowledge of advances in the area into research activity.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.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.The post holder may occasionally be required to supervise more junior research staff. |

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| **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.  |

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| **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. |

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| **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.

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| **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 A in Molecular Allergology |
| **Background Information/Relationships** The post is based in the Food and Molecular Immunology research group led by Professor Clare Mills and forms part of her ongoing collaboration with EuroFIR, ASBL (Brussels, Belgium) and the University of Manchester. The work is part of a project led by EuroFIR funded by the European Food Safety Authority “Novel strategies for predicting allergenicity: development of a ranking method and screening tools to assess the allergy risk of innovative proteins” (OC/EFSA/GMO/2021/04) where the University of Surrey is acting as a subcontractor.The overall aim of the project is to develop novel strategies for predicting allergenicity of innovative/novel proteins. This is being realised through 1. Developing a ranking method for proteins with different allergenic potential according to their clinical relevance and screen existing tools to assess allergenicity risk of innovative/ novel proteins for use in subsequent activities using a systematic reviewing approach.
2. Investigating potential in silico tools and follow up actions (in vitro and/or in vivo methods) needed for an improved allergenicity assessment.
3. Developing a novel approach for allergenicity assessment of innovative/novel proteins by integrating in silico, in vitro and in vivo methods through implementation of the final ranking strategy of known allergens.
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| **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. A PhD in biochemistry, immunology, biological or biomedical sciences or a related discipline, or equivalent professional experience.
 | Essential |
| 1. Experience of using immunochemical methods such as immunoassay, immunoblotting and cell based methods for assessing immune activation such as effectors cells, T-cell assay.
 | Essential |
| 1. Experience of other molecular analysis (e.g gel electrophoresis)
 | Essential |
| 1. The ability to work flexibly and co-operatively within a team of experimental scientists.
 | Essential |
| 1. A high level of numeracy and computer literacy; excellent verbal, written communication and presentation skills.
 | Essential |
| 1. Experience of routine management of laboratory work and staff/student supervision and training.
 | Essential |
| 1. Excellent organisation skills including record keeping and time management and the ability to manage competing priorities. A high standard of attention to detail.
 | Essential |
| 1. The ability to contribute to the development of new proposal ideas by undertaking background research and producing of preliminary/feasibility data.
 | Essential |
| 1. Able to produce high quality written material for reports, scientific papers and grant proposals.
 | Essential |
| 1. Proficient in core software for general data analysis, report writing and preparation of data in figures and posters, and presentations.
 | Essential |
| 1. Knowledge of and evidence of compliance with relevant Health and Safety regulations and the Data Protection Act.
 | Essential |
| 1. Evidence of the ability to undertake complex problem solving and interpretation of experimental results.
 | Essential |
| 1. Experience of drafting and working to Standard Operating Procedures and risk assessments including COSHH risk assessments and a good understanding of GDPR in relation to working with patient data.
 | Essential |
| 1. The willingness to undertake any necessary training.
 | Essential |
| **Special Requirements**  | **Essential/Desirable** |
| 1. Experience of working on allergic and associated respiratory disease (e.g. asthma).
 | Desirable |
| 1. Experience of bioinformatic analysis such as multiple sequence alignment methods.
 | Desirable |
| 1. Statistical analysis using, for example, R Studio
 | Desirable |
| **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 (5 to 8 maximum). This should be read in conjunction with those contained within the accompanying generic Role Profile. |
| The project is data-focused and specific activities for the research fellow based in Surrey include * Supporting EuroFIR in quality ranking activities in the systematic review and secondary data analysis.
* Assessing the effectiveness of selected *in silico* tools, used alone and in combination, for identifying potential allergenic risks and identifying shortcomings with the tools.
* Identify follow-up actions using, for example, *in vitro* and *in vivo* methods for allergenicity prediction, when an protein is flagged as being of potential allergenic importance by in silico analysis.
* Contribute to drafting reports for EFSA and drafting papers arising from the activities for publication in the peer-reviewed literature.
* Work with EuroFIR to organize and run stakeholder meetings associated with the project.
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