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| Last updated: | 13th December 2022 |

**JOB DESCRIPTION**

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| Post title: | **Research Fellow in Systems and Translational Medicine** | | |
| Academic Unit/Service: | Clinical and Experimental Sciences and Centre for Proteomic Research | | |
| Faculty: | Medicine / Environmental and Life Sciences | | |
| Career Pathway: | Education, Research and Enterprise (ERE) | Level: | 4 |
| \*ERE category: | Research pathway | | |
| Posts responsible to: | Professor Medicine and Professor of Proteomics | | |
| Posts responsible for: |  | | |
| Post base: | Office-based/ (see job hazard analysis) | | |

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| Job purpose |
| This is a joint appointment between the Faculties of Medicine and Environmental Life Sciences. Faculty of Medicine is the ‘host’ Faculty, however the post holder will be jointly managed.  The overall purpose of the position is to provide analysis across a range of ‘omic and clinical data using cutting edge high- and multi-dimensional data analysis approaches The position will require a person with expertise in performing and developing new approaches to data analysis that may include Topological Data Analysis, numerical prediction and classification and pathway analysis for disease stratification and targeted therapeutics. |

| Key accountabilities/primary responsibilities | | % Time |
| --- | --- | --- |
|  | Applying and using a range of data analysis tools including topological data analysis and numerical prediction and classification approaches to extract predictive molecular markers of clinical phenotypes. | 60% |
|  | Development of new approaches that advance the integrated analysis of big data (‘omics and clinical data) for stratified medicine. | 10%% |
|  | Regularly disseminate findings by taking the lead in preparing publication materials for referred journals, presenting results at conferences, or exhibiting work at other appropriate events. | 10% |
|  | Preparation of grant bids to obtain research fellowship funding. | 5 % |
|  | 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. | 5 |
|  | Keep abreast of latest developments in the field and communication of findings to the rest of the team. Contribution to the overall activity of the research group by attendance at, and presentations to, internal seminar programmes, collaborative meetings and workshops. | 5 % |
|  | Any other duties as allocated by the line manager following consultation with the post holder. | .5% |

| Internal and external relationships |
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| Will communicate both verbally with, and in writing to, all other members of the Novartis, Biomolecular Research Centre and IMPC team. Good communication and working relationships must be maintained as many tasks require teamwork. Reports on the status of tasks, episodic occurrences and new information obtained will be shared with all members of the team. Will also interact productively with other members of the research team, including PhD students and undergraduates for supervision, guidance and motivation. |

| Special Requirements |
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| To participate in meetings in UK and internationally with collaborators  To be available to attend national and international conferences for the purpose of disseminating research results, fostering collaborations, and for personal career development.  *Applications for Research Fellow positions will be considered from candidates who are working towards or nearing completion of a relevant PhD qualification. The title of* ***Research Fellow*** *will be applied upon successful completion of the PhD. Prior to the qualification being awarded the title of* ***Senior Research Assistant*** *will be given.* |

**PERSON SPECIFICATION**

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| Criteria | Essential | Desirable | How to be assessed |
| Qualifications, knowledge and experience | PhD or equivalent professional qualifications and experience in Life Science  Experience handling high- and -multi-dimensional data analysis of ‘omic data using a range of data analysis tools preferably including topological data analysis and machine learning  Ability to write with clarity and be able to communicate effectively with colleagues |  | Qualification verification  Interview  Interview |
| Planning and organising | Ability to collate information meticulously  Able to work under pressure  Able to organise own research activities to deadline and quality standards |  | Interview  Interview  Interview |
| Problem solving and initiative | Able to develop understanding of complex problems and apply in-depth knowledge to address them  Able to develop original techniques/methods |  | Interview  Interview |
| Management and teamwork | Articulate and able to build good working relationships with academic and professional staff  Able to supervise work of junior research staff, delegating effectively |  | Interview  Interview |
| Communicating and influencing | Communicate new and complex information effectively, both verbally and in writing, engaging the interest and enthusiasm of the target audience  Able to present research results at group meetings and conferences  Able to write up research results for publication in leading peer-viewed journals  Work proactively with colleagues in other work areas/institutions, contributing specialist knowledge to achieve outcomes |  | Interview  Interview  CV/Interview  Interview |
| Other skills and behaviours | Willing to supplement existing knowledge and undertake further professional training and development as agreed  Understanding of relevant Health & Safety issues |  | Interview  Interview |
| Special requirements | Able to attend national and international conferences to present research results |  | Interview |

**JOB HAZARD ANALYSIS**

**Is this an office-based post?**

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| Yes | If this post is an office-based job with routine office hazards (eg: use of VDU), no further information needs to be supplied. Do not complete the section below. |
| No | If this post is not office-based or has some hazards other than routine office (eg: more than use of VDU) please complete the analysis below.  Hiring managers are asked to complete this section as accurately as possible to ensure the safety of the post-holder. |

## - HR will send a full PEHQ to all applicants for this position. Please note, if full health clearance is required for a role, this will apply to all individuals, including existing members of staff.

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| **ENVIRONMENTAL EXPOSURES** | **Occasionally**  (<30% of time) | **Frequently**  (30-60% of time) | **Constantly**  (> 60% of time) |
| Outside work |  |  |  |
| Extremes of temperature (eg: fridge/ furnace) |  |  |  |
| ## Potential for exposure to body fluids |  |  |  |
| ## Noise (greater than 80 dba - 8 hrs twa) |  |  |  |
| ## Exposure to hazardous substances (eg: solvents, liquids, dust, fumes, biohazards). Specify below: |  |  |  |
| Frequent hand washing |  |  |  |
| Ionising radiation |  |  |  |
| **EQUIPMENT/TOOLS/MACHINES USED** | | | |
| ## Food handling |  |  |  |
| ## Driving university vehicles (eg: car/van/LGV/PCV) |  |  |  |
| ## Use of latex gloves (prohibited unless specific clinical necessity) |  |  |  |
| ## Vibrating tools (eg: strimmers, hammer drill, lawnmowers) |  |  |  |
| **PHYSICAL ABILITIES** | | | |
| Load manual handling |  |  |  |
| Repetitive crouching/kneeling/stooping |  |  |  |
| Repetitive pulling/pushing |  |  |  |
| Repetitive lifting |  |  |  |
| Standing for prolonged periods |  |  |  |
| Repetitive climbing (ie: steps, stools, ladders, stairs) |  |  |  |
| Fine motor grips (eg: pipetting) |  |  |  |
| Gross motor grips |  |  |  |
| Repetitive reaching below shoulder height |  |  |  |
| Repetitive reaching at shoulder height |  |  |  |
| Repetitive reaching above shoulder height |  |  |  |
| **PSYCHOSOCIAL ISSUES** | | | |
| Face to face contact with public |  |  |  |
| Lone working |  |  |  |
| ## Shift work/night work/on call duties |  |  |  |