



Candidate Information

Position:	Research Fellow
School/Department:	Centre for Public Health
Reference:	22/110084
Closing Date:	Monday 3 October 2022
Salary:	£35,333 - £38,592 per annum
Anticipated Interview Date:	Tuesday 25 October 2022
Duration:	Available until 29 February 2024

JOB PURPOSE:

This full-time post involves working with a multi-disciplinary team as part of a collaborative project entitled "SPACE: Supportive environments for Physical and social Activity, healthy ageing and CognitivE health". This ambitious project is funded by the Economic and Social Research Council (ukri.org).

The overall aim of this research project is to investigate the impacts, and possible mechanistic pathways, of urban environments on healthy ageing and cognitive health, and on diverse individuals and communities, through the novel integration of multi-omics, lifestyle behaviour and environmental exposures from urban environments, to ensure that we create healthy active places that are supportive, attractive and accessible to people as they age.

This postdoctoral researcher will use multi-omic approaches within our rich Northern Ireland Cohort for the Longitudinal study of Aging (NICOLA) resources to investigate biological responses to urban environments and related environmental exposures that influence measures of cognitive health. The postdoc will primarily focus on exploring biological markers with a focus on DNA methylation analysis. Genome-wide SNP-based data, epigenome-wide methylation data and transcriptome sequencing data is already available to support analyses. A customised next generation targeted sequencing panel will be developed in collaboration with an industrial partner.

The post may involve liaising with international collaborators, collating existing data, coordinating meetings and workshops, generating new molecular data, bioinformatic analysis of data, integrating datasets, preparing regular summary reports, and taking the lead writing academic outputs and research dissemination.

MAJOR DUTIES:

1. To assist in developing a detailed project plan to meet research objectives in accordance with best practice.
2. To conduct research under supervision within the research project.
3. To conduct statistical and bioinformatic analysis of multi-omic datasets with an emphasis on genetic and epigenetic analyses.
4. To collaboratively design a customised (multiomic) sequencing panel.
5. To ensure data is compliant with ethical and governance requirements.
6. To keep abreast of the research field and relevant developments.
7. To prepare regular summary reports for the project team and communication to stakeholders.
8. To prepare, in consultation with the project team, material for publication in national and international journals, and presentations at national and international conferences.
9. To assist with the submission of associated grant applications and the supervision of students.
10. To assist with preparation of relevant ethical and research governance documents.
11. To liaise with project partners supporting dissemination and impact activities for the SPACE team.
12. To carry out routine administrative tasks associated with this research project to ensure the project is completed on time and within budget.

ESSENTIAL CRITERIA:

1. Have or about to obtain PhD in relevant discipline.
2. At least 3 years' recent research experience and skills relevant to this project.
3. Experience working with genetic and / or epigenetic and / or transcriptomic data.
4. Experience conducting genome-wide association studies and other statistical analyses relevant to this post.
5. Experience of project management, delivering research outcomes, and proven ability to work in a multi-disciplinary environment as part of a research team.
6. Good presentation and publication track record commensurate with the stage of career.
7. Excellent IT skills e.g. Microsoft Office suite.
8. Excellent organisational and leadership skills.
9. Excellent inter-personal skills.
10. Excellent oral and written communication skills.
11. Evidence of ability to write reports and meet deadlines.
12. Evidence of ability to deal competently with administrative tasks and contribute to broader management tasks.
13. Clear and confident communicator.
14. Ability to give formal presentations.
15. Ability to work independently and on own initiative.
16. Ability to act decisively and confidently.
17. Access to transport and willingness to travel to meet the needs of the post.
18. Ability to work outside normal hours when necessary.

DESIRABLE CRITERIA:

1. First or Upper Second Class Honours Degree in a relevant discipline, a Master's degree and / or relevant professional qualification.
2. Experience working with relevant data protection guidelines and requirements.
3. Experience conducting epigenome-wide association studies, polyepigenetic scores or epigenetic clocks.
4. Experience conducting multi-omic analysis with a focus on SNP, methylation and transcriptomic datasets.
5. Experience with next generation sequencing data.
6. Experience conducting Mendelian randomisation.
7. Experience working within consortia.
8. Experience developing a funding proposal.
9. Proven ability to participate in or initiate collaborative research.
10. Evidence of having co-ordinated a research project to successful completion.
11. Strong commitment to a career in Research.