Candidate Information

Position: Research Fellow (2 posts)
School/Department: Patrick G Johnston Centre for Cancer Research
Reference: 24/112029
Closing Date: Monday 22 July 2024
Salary: £39,922 per annum
Anticipated Interview Date: Monday 12 August 2024
Duration: Post one: available for 18 months, Post 2: available for up to 7 months

JOB PURPOSE:

Applications are invited for two highly motivated research fellows to join the Prostate Cancer Research and Radiation Biology team led by Dr's Melissa LaBonte-Wilson Simon McDade and Prof Suneil Jain. The Research Fellows will play crucial role in advancing our understanding of the complex mechanisms underlying the potential therapeutic efficacies novel combinations targeting epigenetics (class-I HDAC inhibitors) and cell death inhibitors (IAP inhibitors) with radiation and androgen-signalling inhibitors (ASIs) in high-risk prostate cancers.

These positions involve the design, execution, and analysis of pre-clinical studies aimed at improving treatment outcomes through novel combination therapies.

The post-holders will focus on overcoming therapeutic resistance and enhancing the immune response within the immunosuppressive, macrophage-enriched microenvironment of metastatic prostate cancer. The studies will be coupled with combination of functional genomics analyses (e.g., ChIP-seq, RNA-seq, ATAC-seq) of 2D, 3D and in vivo modelling and validation.

The two posts are funded for 7 and 18 months respectively for by Prostate Cancer UK and will be directly supervised by Dr Simon McDade and Dr Melissa LaBonte-Wilson within the Patrick G Johnston Centre for Cancer Research.

MAJOR DUTIES:

1. To design, develop and refine experiments related to the project under the supervision of the line manager in order to obtain reliable data, then evaluate and interpret the results using methodologies and techniques appropriate to the area of the research.
2. Generate and maintain in vitro and in vivo prostate cancer models.
3. Carry out analyses, critical evaluations, and interpretations using methodologies and other techniques appropriate to area of research.
4. To regularly present results to the research group as part of routine peer review.
5. Initiate and maintain collaborative links with project partners.
6. To write up results in a timely manner and take a leadership role in writing research manuscripts, in consultation with the supervisor.
7. To present regular progress reports on research to members of the research group and to external audiences to disseminate and publicise research findings.
8. To formulate, write and submit grants for project and travel support.
9. To attend and present new experimental data at national and international meetings.
10. To assist in the supervision of post-graduate students or summer students in order to promote the development of supervisory skills.
11. Carry out routine administrative tasks associated with the research project/s to ensure that project/s are completed on time and within budget. These might include organisation of project meetings and documentation, financial control, risk assessment of research activities.

12. Read academic papers, journals and textbooks to keep abreast of developments in own specialism and related disciplines.
13. Any other reasonable duties within the general ambit of the post and competence of the post-holder.

ESSENTIAL CRITERIA:
1. Hold or be about to obtain (submitted) a PhD in Cancer Biology, cell/molecular biology or a closely related discipline.
2. Must hold a UK Personal Animal Licence (PIL).
3. Significant, relevant experience in a range of cell/radiation biology techniques which must include:
    - In vitro tissue culture
    - Protein biology (e.g. Western blotting, Flow cytometry, proteomics)
    - Whole cell assays (survival, proliferation, viability)
    - In vivo cancer modelling (hold a UK PIL)
    - Molecular biology techniques, which may include immunofluorescence, si/shRNA, real-time PCR, luciferase and/or other reporter-based assays.
4. Experience working with mouse and human ex vivo models.
5. Experience in working with subcutaneous xenograft tumour models and IP techniques.
6. Must demonstrate good team working and communication skills.
7. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes.
8. Competent in formulating and delivering oral and written presentations.
9. Ability to build contacts and participate in internal and external networks.
10. Evidence of having presented work at national and international conferences (poster and/or oral).
11. Demonstrable intellectual ability.
12. Ability to assess and organise resources.
13. Demonstrates attention to detail and works to exceptional levels of accuracy whilst under pressure.
14. Be capable of using own initiative.
15. Ability to work in a team and as an individual.
16. Ability to plan own work schedule responding to new pressures and adjusting priorities.
17. Must be willing to work irregular hours when necessary for the progress of the research project.
18. Must be willing to work with in vivo models of cancer following the guidelines of the Animals (Scientific Procedures) Act 1986.
19. Must be prepared to travel for technical training as appropriate to collaborators within the UK.
20. Must be willing and able to travel to national and international meetings.

DESIRABLE CRITERIA:
1. 1st Class undergraduate degree in science or a closely related area.
2. Cancer research experience.
3. Prostate cancer research experience.
4. In vivo surgery qualification.
5. Experience in multi-parametric assessment of drug and/or radiotherapy responses in preclinical models: phenotypic assays (e.g. proliferation, survival, adhesion, migration), and signalling (e.g. Western blot, phosphoproteome arrays).
6. Experience in working with modelling radiation response in animal models.
7. Experience working with mouse and human organoids in vitro models.
8. Experience in statistics and bioinformatics.
9. Experience in the design and testing of pre-clinical models and studies directly related to clinical trial development.
10. Computational biology experience – accession of raw sequencing data, processing and evaluation based on differential expression and functional annotation of dysregulated networks.
11. Evidence of involvement in successful programmes and grant applications.
12. Evidence of publications in peer-reviewed journals.

ADDITIONAL INFORMATION:
Informal Enquiries to Suneil Jain: sjain@qub.ac.uk