UNIVERSITY OF WARWICK

Job Description

Job title	Research Fellow in Biophysics of Morphogenesis
Department	Warwick Medical School
Grade	6

Job purpose (a brief summary of the role)	This role is funded by a BBSRC Strategic Longer and Larger Grant (sLoLa) to investigate quantitatively how cell fate and tissue form are interrelated during morphogenesis. It requires expertise in cell biophysics and quantitative imaging. The postholder will utilise an organoid system of neural-mesodermal progenitors to explore how complex form emerges during development. They will be part of a wider team involving the Briscoe, Charras, Lowell and Molodtsov labs. This offers an exciting opportunity to be part of a genuinely interdisciplinary collaboration, which has real potential to make fundamental breakthroughs in our understanding of morphogenesis.
Duties and responsibilities	**Key Responsibilities** • Maintain and perform experiments on human embryonic stem cell cultures • Perform quantitative imaging and biophysical measurements of the organoid system • Utilise computational approaches to process, quantify and interpret large imaging datasets. • Manage research data in accordance with funder, University and departmental requirements, ensuring that records are accurate, secure and reproducible. • Coordinate with the wider team and ability to be organised and clear in communication. • Lead the analysis and interpretation of findings and coordinate the preparation, reporting and submission of high-quality manuscripts and other research outputs, bringing together contributions from collaborators as required. • Train and support students and research colleagues in relevant laboratory, imaging and data-analysis techniques, including the supervision of student research projects and development of practical and research skills. • Ensure that project activities comply with relevant health and safety requirements, University policies and laboratory procedures, including reviewing and updating risk assessments, standard operating procedures and other safety documentation. **Research and Scholarship** • Contribute to a strong research base within the department by developing objectives and proposals for individual and collaborative research. • Plan and deliver individual and collaborative research projects to agreed objectives, milestones and standards. • Apply current developments in developmental biology, biophysics, quantitative imaging and related methods to the design and delivery of the research. • Contribute, where appropriate, to proposals and applications to external bodies for research funding and contractual support. • Communicate research progress, findings and outcomes clearly and accurately to academic, technical and non-specialist audiences, including project teams, funders and relevant oversight groups, both orally and in writing. • Maintain and develop up-to-date knowledge and expertise in the relevant field and associated methodologies.

	Teaching and Learning Support • Contribute appropriately to teaching and learning activities, supporting the development of relevant academic and professional skills. **Administration and Other Activities** • Use project resources responsibly and undertake activities within agreed budgetary constraints.

Person Specification

The Person Specification focuses on the essential and desirable knowledge, skills, experience and qualifications required to undertake the role effectively. This is measured by (a) Application Form, (b) Test/Exercise, (c) Interview, (d) Presentation.

Essential Criterion No.	Essential Criterion Description	Measured by
E1	PhD, or equivalent research experience, in biophysics, developmental biology or a closely related discipline.	A
E2	Experience of either: cell biology, particularly as applied to organoids; or early embryonic development in relevant model organisms, particularly neuromesodermal progenitors.	A & C
E3	Substantial experience of quantitative imaging or biophysical approaches, such as spinning-disc microscopy, laser dissection, and AFM.	A & C
E4	Demonstrable experience of using computational approaches to process, analyse and interpret large quantitative imaging datasets.	A, B & C
E5	Experience of training and supporting students and research colleagues in laboratory or analytical techniques.	A & C
E6	Practical experience of relevant laboratory techniques, including biochemical assays and immunostaining.	A & C
E7	Ability to communicate complex research findings clearly and effectively to specialist and non-specialist audiences, both orally and in writing.	A, C & D
E8	Demonstrable ability to lead a research project, coordinate contributions from collaborators and deliver high-quality research outputs.	A & C
E9	Ability to build effective working relationships and engage collaboratively with academic, technical and professional services colleagues.	C

Desirable Criterion No.	Desirable Criterion Description	Measured by
D1	Experience of working effectively with shared research facilities and collaborators across institutional boundaries.	A & C