1. Job Details

Job title: Microscopy Research Manager

School/Support Department: School of Biological Sciences

Unit (if applicable): Wellcome Trust Centre for Cell Biology

Line manager: The Director of the Wellcome Centre. The post-holder also reports, for services provided, to the Convenor of the Centre Microscopy Optical Instrumental Laboratory.

2. Job Purpose

To oversee the management of the centre’s optical microscopy facilities. To facilitate and promote the development of state-of-the-art light microscopy facilities, primarily for use by 80 researchers in the Centre. To interact with academic research staff, advising on how to make best use and develop communal and individual microscopy resources as well as developing new techniques.

3. Main Responsibilities

To provide expert scientific advice and guidance to academic staff and postgraduate students to assist them in making full use of the Centre’s microscopy facilities (both advising on how to present materials for analysis and also how to use the equipment to achieve the best results), and developing new microscopy techniques and image analysis methods in collaboration with users.

Approx. % of time

To manage the light microscopy service for the Centre, ensuring the appropriate facilities are available to users as and when they are required. To plan proactively the Centre’s future light microscopy equipment needs to achieve the most effective and efficient service.

Implement charging system for the use of the more expensive pieces of equipment, in order to recoup part of the service contract costs.

To develop and maintain computer-based systems for the analysis, capturing, archival and retrieval of images, to ensure the wider academic community has ready access to the visual image data library and associated records.

In collaboration with academic staff to contribute to grant applications
designed to create funding sources to develop and upgrade the service.

Inform current and potential users about the services, including the research potential of the facilities, and to design and deliver an academic lecture series on microscopy as it relates to biological sciences.

Organise and promote the Wellcome Trust centre microscopy course which is open to both Wellcome Trust centre staff/students and Edinburgh University staff/students. Including where possible outside speakers.

4. Planning and Organising
- The Centre Director sets the overall Direction of the work of the Centre, in line with the core grant requirements and in association with the group leaders in the Centre. The post-holder is required to determine a work schedule within this framework.
- The post-holder is required to undertake strategic planning in order to meet both the short-term needs of users and the longer-term requirement for remaining abreast of future developments in the rapidly evolving field of light microscopy in order to maintain the imaging resources at internationally competitive standards.
- The post-holder has to maintain a balance between competing needs of the facility.
- Attending various international workshops and conferences on advanced microscopy techniques and representing the Centre by presenting new methods developed within the centre.
- Liaising and meeting with members of other centres of excellence in light microscopy (worldwide) to identify trends in development, and be involved in technological developments (possibly in relationship with other centres, commercial companies and other academic users).

5. Problem Solving
- How to negotiate and maintain productive working relationships with commercial companies in order to acquire or upgrade hardware and software at minimal cost, including undertaking joint development projects with one or more partners.
- Identification of future research trends from discussions with researchers and determining how to meet the future research needs.

6. Decision Making
Examples are:
- Day to day decisions on the usage of the facility, e.g. who is competent to use the facilities independently, and who requires training, what training should be offered, and how it should be delivered.
- Determining expenditure on consumables and repairs/maintenance of facilities – budget of circa £30k pa.
- Deciding how to set up and implement data management systems required to support the facility, what should be recorded, and how to archive and retrieve data.
- Prioritising for utilisation of the facilities from competing users, including: space, equipment, post-holder's time.
- What advice to give to an academic user of the facility, based on the research activity they are undertaking, to ensure they make the best use of the facilities, and obtain accurate results, for example having an academic discussion about the quality or quantity of material required to achieve satisfactory results, advising on how to interpret results.
- How and when to commission, and decommission equipment.
7. Key Contacts/Relationships
Internal: Centre researchers (80). Other researchers in the School.
External to the Centre: other institutions worldwide where similar facilities are provided; commercial companies.

8. Knowledge, Skills and Experience Needed for the Job
A PhD or equivalent in a biological subject, or a PhD in a non-biological subject together with a recent and good working knowledge of molecular and cellular biology.
A publications record in a relevant research field related to biology.
A minimum of 6 years in a research environment utilising light microscopy.
More than 3 years experience of advanced digital light microscopy, image analysis software, image manipulation, and use of computer infrastructure.
Ability to interact with academic colleagues. Good communication and inter-personal skills.

9. Dimensions
- Management of equipment valued at c £3m. Equipment includes: 4 state-of-the-art light microscopes, 2 real-time PCR machines, a FACS machine, and a phosphorimager in a communal imaging facility, as well as other imaging systems located in individual labs throughout the building (8 state-of-the-art microscopes).
- Budget for all repairs and general consumables required – c £30k pa, with single-item expenditure limit of 2,000k.
- Service provided for 80 academic research staff, and 20 post-graduate research students.

10. Job Context and any other relevant information