THE UNIVERSITY OF MANCHESTER

PARTICULARS OF APPOINTMENT

FACULTY OF SCIENCE AND ENGINEERING

MANCHESTER INSTITUTE OF BIOTECHNOLOGY

[SENIOR] RESEARCH DATA MANAGER
SYNBIOCHEM Centre for Synthetic Biology

Vacancy ref: S&E-09421

Salary:	Grade 6/7 (£31,076 – £48,327 p.a.) depending on appointment
Hours:	Full-time
Start/duration:	1 March 2017 / 24 months
Location:	Manchester Institute of Biotechnology
Reports to:	SYNBIOCHEM directors: Professors Nigel Scrutton, Eriko Takano and Nick Turner
Informal enquiries:	Email: nigel.scrutton@manchester.ac.uk *or* r.a.le-feuvre@manchester.ac.uk

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THE PROJECT

Wanted: Ambitious senior research data manager to drive and maintain a world-leading integrative data management platform.

BACKGROUND

This position is a central part of Manchester's £12M investment into synthetic biology approaches for next generation biotechnology. The University of Manchester was awarded BBSRC/EPSRC Synthetic Biology Research Centre funding (>£10M) to establish the SYNBIOCHEM Centre, a UK/European Centre of Excellence for the Synthetic Biology for fine and speciality chemicals production. The Centre is located in the Manchester Institute of Biotechnology (MIB), a unique cross-disciplinary research institute at the University of Manchester, which brings together more than 450 researchers with expertise in the foundational sciences supporting Synthetic Biology, including molecular biology, chemistry, engineering, materials science, computer science and medicine and as such is at the forefront of international developments in the emerging science of Synthetic Biology.

SYNBIOCHEM has recruited a team of dedicated senior technology specialists to develop and implement the Centre's Design/Build/Test (D/B/T) technology platforms, and set up the data management infrastructure essential for the delivery of the multidisciplinary discovery and implementation pipeline.

We are now seeking to recruit a skilled dedicated [Senior] Research Data Manager (SRDM) with the expertise and experience to guide and support the further development and standardised adoption of our leading-edge data management systems that support the Centre's integrated interdisciplinary platforms and multiple science programmes. We require someone with the necessary expertise and experience to capture requirements and liaise with users and specialists in the Centre to develop, support, guide and standardise the adoption and development of the Centre's Data Catalogues, Laboratory Information Management Systems, Electronic Lab Notebooks and Sample Formation Tracking systems. A strong ethos for team-based working and the ability to communicate comfortably with both computational specialists and non-computational research scientists will be essential for the success in this critical role.

JOB DESCRIPTION

Overall purpose of the position

As a member of the SYNBIOCHEM technology team, you will work across the SYNBIOCHEM Design/Build/Test/Data technology platforms and support the multiple SYNBIOCHEM projects, working closely with members of the SYNBIOCHEM leadership cabinet and scientific team. You will work closely with the other SYNBIOCHEM technology leads to provide data management expertise and support to ensure full integration and traceability of data workflows. You will support the science vision of the Centre though your work at all times.

Key responsibilities, accountabilities or duties

It is essential that you are highly skilled with proven experience in the domain of data management of scientific data, related applications and interfaces. Appointments will be made either at the senior grade 7 (SRDM) or at grade 6 (RDM). Senior grade (SDRM) appointments will be expected to have broad strategic vision and considerable experience (normally >6yrs PDRA experience or equivalent in industry) required to drive, manage and deliver the complex data management platform, capture the varied data arising from multiple science projects and to ensure full data integration across the technology platforms. Appointment at Grade 6 will be considered for candidates who are able to support the Centre's data management requirements with the clear potential to reach the SRDM level but without the body of experience required. A strong collaborative team-based ethos is essential.

As the (Senior) Research Data Manager (Grade 7) for SYNBIOCHEM, you will be expected to have the strategic knowledge and experience to:

- Work closely with the SYNBIOCHEM Co-Directors (Professors. Nigel Scrutton, Eriko Takano, Nick Turner), SYNBIOCHEM Director of Operations (Dr Rosalind Le Feuvre) and the Data platform lead (Professors Carole Goble and Rainer Breitling), to ensure timely and successful data management.

- Strategically develop, manage and deliver the data streams that arise from the integrated technology platforms and multiple science projects in SYNBIOCHEM.

- Have a clearly demonstrated track-record in establishing and managing the infrastructure for complex biological data (e.g. in a leadership position in a genomics, metabolomics or transcriptomics facility).

- Have leading responsibility for the further installation, development, testing, adaptation and training with regards to the data management platforms of the Centre, including both the hardware and software side.

- Have strategic responsibility for capturing and prioritising requirements with regards to the data management platform and liaising with the available software engineering staff to ensure timely delivery of changes and updates to the data management platforms.

- Have overall responsibility for the training and support of the data generator and data user community within the Centre and anticipate and prioritise key data management requirements of the Centre.

- Work closely with the SYNBIOCHEM team to ensure wider community access to data (raw and processed), standards and protocols that arise; this includes providing an open access data repository for SYNBIOCHEM data, as well as managing the submission of SYNBIOCHEM data to appropriate public repositories.

- Ensure full documentation of the integrated data management systems, including the data generating infrastructure (mass spectrometers, robotics platforms etc.), the data analysis platforms (for metabolomics and other omics data), and the electronic lab notebook system of the experimental team. This includes assisting the development of standard operating procedures (SOPs) by the relevant experimental officers.

- The SYNBIOCHEM (Senior) Research Data Manager will be expected to deliver research publications, and strategically support the development and planning of further grant applications, to develop SYNBIOCHEM collaborations for the sustainable future of the Centre, and build internal and external contacts to share and establish best practice in this area.

For appointment at a Grade 6 level: You will be expected to be able to contribute to and support the above activities.

PERSON SPECIFICATION

Essential knowledge, skills and experience

*Core essential skills (for appointment at **Grade 6 or 7**)*

- A relevant PhD and postdoctoral experience (or equivalent) in computing science, computational biology, or bio-informatics (or related field) with extensive experience in handling biological data in a genomics, metabolomics, proteomics or transcriptomics facility, a large synthetic biology laboratory or equivalent facility

- Experience in establishing, maintaining and continually improving data management infrastructures that meet the rapidly evolving needs of a diverse user community in a biology research setting (data generators, data analysts and experimental biologists)

- Specialist knowledge and direct experience of applying state-of-the-art data management, visualization and retrieval tools working with a variety of biological data sources, in an interdisciplinary environment

- Demonstrable experience in the technical aspects of biological data management (including intense familiarity with relevant formats, standards and software / hardware platforms)

- Effective experience of requirement capture and prioritisation of changes working closely with technical data delivery teams

- A strong collaborative ethos for team-based working, and a highly pro-active approach to increasing adoption of data management infrastructure to ensure data information is available to our experimentalists, computational biologists and academic leaders

- Ability to use initiative and creativity to support development of new research methods that extend the SYNBIOCHEM research portfolio, in close collaboration with the interdisciplinary team of scientists

- The ability and interest in evaluating and communicating complex data to an interdisciplinary collection of data users

- Knowledge of technical architecture of relevant biological data management systems and related software (eg, Electronic Lab Notebooks)

- Track record of using and adapting software developed elsewhere for use by an open source project

- Experience of using and adapting software developed elsewhere for use by an open source project, Java programming skills and fluency in scripting languages (eg, Ruby, Perl and Python) would also be beneficial

General skills/qualities

- Excellent communication (both written and oral) and interpersonal skills

- Excellent time management and organisational skills

- Excellent ability to liaise confidently and effectively with a range of individuals

- Flexible approach to dealing with research data problems as they arise

- A self-motivated individual with the ability to work independently and as part of a team, and to contribute to collaborative decision making with colleagues

- Ability to work with multiple research groups and to organise your workload accordingly to meet deadlines

- Skilled communication of complex information and material of a specialist or highly technical nature, orally, in writing, and electronically

- Ability to effectively plan and manage your activities in collaboration with academic / industrial colleagues
- Ability to contribute to relevant meetings, including: planning, conducting and acting on outcomes of technical meetings

*For appointment at **Grade 7** you will require:*

- Substantial and demonstrable experience in biological data management in academia or industry at a level equivalent to a postdoctoral researcher

- A demonstrated broad strategic vision and scientific leadership in the integration of biological data across technology platforms such that you are able to drive the delivery of this platform

- Knowledge and experience of people / project management to coordinate the data management development with a range of personnel and supporting multiple large projects

- The ability to lead and deliver the strategic development of the data management requirements of the Centre in partnership with the Centres academic leadership