

THE UNIVERSITY OF MANCHESTER
PARTICULARS OF APPOINTMENT
FACULTY OF ENGINEERING AND PHYSICAL SCIENCES
SCHOOL OF CHEMISTRY
RESEARCH ASSOCIATE
IN INFORMATICS AND SYSTEMS ANALYSIS

- 1 The University invites applications for the above post available from 01 October 2014 to 30 September 2016.
- 2 Salary will be £30,434 to £37,394 per annum according to relevant experience.
- 3 Informal enquiries may be made to Roy Goodacre,
Email: roy.goodacre@manchester.ac.uk
- 4 Applications should be made online. If you are unable to apply on line please request an application form by emailing quoting the reference number or by calling 0161 275 4499.
- 5 The University of Manchester values a diverse workforce and welcomes applications from all sections of the community.

Job title: Research Associate
Salary: Grade 6
Start/duration: From 1 October 2014 for 24 months
Probation period: 9 months
Based at: The University of Manchester
Responsible to: Prof. Roy Goodacre
Professor of Biological Chemistry

BACKGROUND

A Research Associate position is available for an outstanding and ambitious computational informatician to undertake research in the field of food supply network analysis. This project is an ESRC-FSA-funded position and is a highly interdisciplinary collaboration with scientists at Manchester Institute of Biotechnology (MIB) and colleagues in the Centre for Criminology and Criminal Justice and the Manchester Business School. The project aims to develop and establish a predictive, transposable dynamic computational model that will outline nodes in a food supply network vulnerable to criminal acts of adulteration.

Overall Purpose of the Job

We are seeking to establish an interdisciplinary collaboration encompassing three different disciplines that will address the important topical issue of food fraud. The job remit is to develop a predictive computational approach to modeling the food supply network so that the points where food adulteration can occur are identified. By identifying these points of vulnerability to adulteration within the supply chain will allow regulators and retailers to take appropriate action to avoid food adulteration.

Key Responsibilities, Accountabilities or Duties

- To oversee the smooth running of informatic analysis of food supply networks, to employ and develop bioinformatic tools in the pursuit of the laboratory's objectives, which include construction of food, supply network(s) using stoichiometric modeling as well as predictive kinetic modeling.
- Production and implementation of software, using appropriate languages or tools.
- Maintain a record of all research undertaken in an agreed and appropriate format for laboratory research. This should also include documentation for developed software, enabling users and subsequent developers to work with it productively.
- Contribute to prestige publications with other members of the group.
- Attend national and international workshops and conferences.
- Understand and ensure compliance with data standards.
- Collaboration with all the team via regular meetings, discussing food supply network construction and analysis and to establish best practice.
- Liaison with colleagues involved in database management, experimental design and quality control procedures to ensure optimal data capture and analysis.

PERSON SPECIFICATION

Essential

- Candidates should hold a PhD (or equivalent) in Systems Biology, Network Analysis, Chemometrics, EE, Computer Science, Mathematics or other relevant disciplines.
- Experience in one (or more) of the following fields:
 - Stoichiometric modeling and predictive kinetic modeling.
 - Signal processing within R, Matlab, Copasi, and/or Knime.
 - Chemometrics including pattern recognition and machine learning.
- The ability to work independently and as part of a team.
- Evidence of independent contribution to research in database construction and management.
- High level of communication skills.
- Excellent time management and organisational skills.
- Flexible approach to dealing with research problems as they arise.
- Willingness to learn and develop.
- Ability to present in both written and oral publications.
- Ability to meet deadlines.
- Good journal publication record.
- The ability to evaluate complex data.
- Ability to contribute to broader management and administrative processes.

The position would be particularly suited to candidates who are interested in both fundamental and applied aspects of science.

You will be based in the Manchester Institute of Biotechnology and will attend regular meetings with colleagues in the Centre for Criminology and Criminal Justice and the Manchester Business School