POSITION DESCRIPTION

Position Title: Research Assistant in Bioinformatics
Location: Adelaide
Reports To: EMBL Group Leader in Biomedical Informatics
Department: Infection and Immunity

Purpose of the Position
A three-year Research Assistant in Bioinformatics and Network Biology is currently available at the South Australian Health and Medical Research Institute (www.sahmri.com), Adelaide, South Australia. Working alongside a large European-wide FP7 funded project called PRIMES, the successful candidate will develop novel algorithms that computationally identify network nodes that control signal flow in dynamic protein-protein interaction networks. These algorithms will be optimized and validated on PRIMES networks, on which extensive data will be available (modeling, 3D structures, proteomics etc). These optimized algorithms will then be implemented to investigate network re-wiring in cancer and immunity.

Key Performance Indicators
1. Implementation of current network biology tools to understand information flow in large PPI networks in cancer and immunity.
2. Successful development of novel information flow algorithms that improve upon the state of the art.
3. Implementation of these algorithms in a user-friendly, web-accessible platform.

Scope of the Position
Reporting to the EMBL Group Leader in Biomedical Informatics, the position will also work closely with a senior postdoctoral researcher and other members of the PRIMES project at SAHMRI. The role will also interact with a range of external stakeholders including PRIMES partner laboratories across Europe.

There are no direct reports for this role.

Key Responsibilities
• Lead the Implementation of current network biology tools to understand information flow in large PPI networks in cancer and immunity.
• Develop novel information flow algorithms that improve upon the state of the art.
• Implement these algorithms in a user-friendly, web-accessible platform.
• Assist in the development of other aspects of PRIMESDB.
• Help with the development other related network biology tools including network analysis and visualisation tools.
• Assist in the smooth running of the project (e.g. help to prepare project reports).
• Assist with drafting publications relating to the project.
• Play a role in interacting and collaborating with the other PRIMES partner labs.
• Participate in special projects to continuously improve processes, tools, systems and organisation.
• Take reasonable care to protect his / her own health, safety and welfare at work and avoid affecting the health and safety of any other person at work.
• Ensure that duties are performed in keeping with the principles outlined in SAHMRI’s Vision, Mission and Values and the Standards of Professional Behaviour Policy.

Special Requirements
• National and international travel may be required for this position.
• It may be required that the person works beyond regular hours on occasion to meet deadlines etc.
PERSON SPECIFICATION

Qualifications
• M.Sc. in bioinformatics with a focus on network biology.

Experience, Knowledge and Skills
• Demonstrated experience in bioinformatics, network and systems biology.
• Experience in the analysis, interpretation and visualisation of protein-protein interaction networks.
• Experience with information flow algorithms.
• Advanced programming skills (especially in Java, JavaScript and Perl).
• Experience programming in a collaborative environment.
• Database management and development skills (e.g. MySQL).
• Be familiar with working in a Linux and HPC environment.
• Experience with biology information exchange formats (PSI-MI TAB 2.7, PSI-MI XML 2.5) and services (PSICQUIC).
• Excellent verbal and written communication skills.
• Knowledge of confidentiality and privacy laws and guidelines relevant to health and medical research.
• Able to work collaboratively and constructively within a team environment
• Able to accept accountability and responsibility for own practice.
• Ability to prioritise work to ensure efficient and effective performance.
• Ability to use initiative to resolve problems.
• Ability to work under pressure and to imposed deadlines.
• Proficient with the use of computers and data handling applications/software.
• Able to demonstrate the following SAHMRI Values:
  o Excellence
  o Imagination
  o Courage
  o Integrity
  o Teamwork

Licences
• None applicable