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SA Health Job Pack

Job Title	Senior Genome Informatician
Job Number	568275
Applications Closing Date	17 November 2015
Region / Division	SA Health - Central Adelaide Local Health Network
Health Service	SA Pathology - Genetics and Molecular Pathology
Location	Adelaide
Classification	PO4
Job Status	Full time, Ongoing
Indicative Total Remuneration*	\$106,563 - \$116,401

Criminal History Assessment

Applicants will be required to complete and submit a Department of Communities and Social Inclusion (DCSI) Criminal History Check. The following checks will be required for this role:

- ☒ Child Related Employment Screening
- ☒ Vulnerable Person-Related Employment Screening
- ☐ Aged Care Sector Employment Screening
- ☐ General Employment Probity Check

Please ensure that the appropriate forms are completed and taken with you to the interview stage of the recruitment process. Further information is available on the SA Health careers website at www.sahealth.sa.gov.au/careers - see Career Information, or by referring to the nominated contact person below.

Contact Details

Full name	Karin Kassahn
Phone number	8161 7107
Email address	karin.kassahn@health.sa.gov.au

Guide to submitting an application

Thank you for considering applying for a position within SA Health. Recruitment and Selection processes across SA Health are based on best practice and a commitment to a selection based on merit. This means treating all applications in a fair and equitable manner that aims to choose the best person for the position.

A well presented, easy to read application will allow the panel to assess the information they need from your application. To give yourself the best opportunity to reach interview, the application should clearly and concisely demonstrate to the selection panel that you are suitably equipped to perform the role, and that you possess all of the stated minimum essential skills, abilities, knowledge, experience and educational qualifications (where required).

The online application form to apply for this position will ask for employment history, education, qualifications and referees however to understand the position and requirements we suggest you become familiar with the attached Job and Person Specification.

We request that you attach the following to your application -

- ✍ **A covering letter** of up to 2 pages introducing yourself to the selection panel and describing your skills, abilities, knowledge, qualifications and experience in relation to the position;
- ✍ **A current Curriculum vitae/Resume** that includes your personal details, relevant employment history, education, training courses, qualifications and professional memberships.

* Refer to <http://www.sahealthcareers.com.au/information/> for further information regarding

- The Indicative Total Remuneration which is inclusive of Award salary, superannuation and other monetary benefits.
- Information for Applicants
- Criminal History Assessment requirements



ROLE DESCRIPTION

Role Title:	Senior Genome Informatician
Classification Code:	PO4
LHN/ HN/ SAAS/ DHA:	State-wide Clinical Support Services
Hospital/ Service/ Cluster	SA Pathology
Division:	Genetics & Molecular Pathology
Department/Section / Unit/ Ward:	
Role reports to:	Head Technology Advancement Centre
Role Created/ Reviewed Date:	23 June 2015

ROLE CONTEXT

Primary Objective(s) of role:

The Senior Genome Informatician oversees the delivery of bioinformatics analysis and software solutions for high-throughput genetic testing by applying high level technical expertise to implement and maintain genome analysis pipelines for diagnostic application. Working collaboratively with Unit Heads and service development scientists, the Senior Genome Informatician will determine the most efficient way to deliver bioinformatics and genome analysis pipelines to meet service requirements for genetic diagnoses.

The Senior Genome Informatician contributes to defining best-practise standards for bioinformatics and genomic analysis in the Directorate and contributes to national and international genomic initiatives to advance clinical genomics. The incumbent will participate in research activities, including research publications and applications for funding, as appropriate.

Direct Reports:

Reports to the Head - Technology Advancement Unit, Department Head - Molecular Pathology and Business Manager - Genetic and Molecular Pathology.

Key Relationships/ Interactions:

Internal

Works closely with genome informatician, service development scientists and section heads within the Genetic and Molecular Pathology directorate as well as with staff in the Centre of Cancer Biology ACRF Cancer Genomics Facility

External

Works with ICTS and other directorates within SA Pathology to develop ongoing infrastructure to support Next Generation Sequencing (NGS)

Challenges associated with Role:

Major challenges currently associated with the role include:

- Working in a dynamic and rapidly changing genetic pathology service for clinical genomics
- Working with enthusiastic team of staff from different background (clinical, scientific, technical)
- Drive to solution complex genomic analysis problems
- Working with large collaborative groups nationally and internationally

Delegations:

All HR and financial matters will be facilitated through the Head of Technology Advancement Unit.

Resilience:

SA Health employees persevere to achieve goals, stay calm under pressure and are open to feedback.

Performance Development

The incumbent will be required to participate in the organisation's Performance Review & Development Program which will include a regular review of the incumbent's performance against the responsibilities and key result areas associated with their position and a requirement to demonstrate appropriate behaviours which reflect a commitment to SA Health values and strategic directions.

General Requirements:

Managers and staff are required to work in accordance with the Code of Ethics for South Australian Public Sector, Policies and Procedures and legislative requirements including but not limited to:

- > Work Health and Safety (WHS).
- > Equal Employment Opportunities (including prevention of bullying, harassment and intimidation).
- > Keeping Them Safe Legislation (inclusive of Mandatory Notifier).
- > Disability Discrimination.
- > Code of Fair Information Practice.
- > Relevant Awards, Enterprise Agreements, Public Sector Act 2009, Health Care Act 2008, and the SA Health (Health Care Act) Human Resources Manual.
- > Relevant Australian Standards.
- > Duty to maintain confidentiality.
- > Smoke Free Workplace.
- > To value and respect the needs and contributions of SA Health Aboriginal staff and clients, and commit to the development of Aboriginal cultural competence across all SA Health practice and service delivery.
- > Applying the principles of the South Australian Government's Risk Management Policy to work as appropriate.

Special Conditions:

Appointment is subject to a satisfactory Background Screening and National Criminal History Check obtained through the Screening and Licensing Unit, Department for Communities and Social Inclusion to be renewed every 3 years thereafter from date of issue.

Depending on work requirements the incumbent may be transferred to other locations across SA Health to perform work appropriate to classification, skills and capabilities either on a permanent or temporary basis subject to relevant provisions of the *Public Sector Act 2009* for Public Sector employees or the *SA Health (Health Care Act) Human Resources Manual* for Health Care Act employees.

The incumbent may be required to participate in Counter Disaster activities including attendance, as required, at training programs and exercises to develop the necessary skills required to participate in responses in the event of a disaster and/or major incident.

Key Result Area and Responsibilities

Key Result Areas	Major Responsibilities
Strategic management and professional leadership	- Establish the scientific and operational structures to sustain a high standard of delivery of bioinformatics analysis pipelines for diagnostic initiatives. - Strategically drive the scientific and technical direction and priorities for sustaining a successful genome analysis pipeline through the exercise of professional independence, specialist skills, knowledge and experience. - Identifying and building productive working relationships within the organisation and externally that encourage best practice and achievement of quality outcomes. - Provide expert input into the formulation and development of general policy directions in the Directorate and the Organisation.
Drive the analysis of NGS testing data	- Manage very complex and highly innovative projects to identify, evaluate and implement complex software solutions for data analysis, automation, LIMS system integration, variant analysis, and the management of sequence variants. - Participate in bioinformatics research and apply specialist knowledge to implement complex analysis solutions - Apply specialist knowledge of genome analysis to perform analysis of next-generation sequencing data relevant to genetic disease including cancer. - Identify, research and evaluate specialist bioinformatics analysis solutions for complex tests including somatic tumor analysis and whole-exome/whole-genome analysis. - Undertake demanding technical evaluations of current and future bioinformatics and genome analysis developments and assessing their value to Agency and State Pathology requirements. - Establish and/or modify best practise analysis guidelines and methods for data analysis. - Develop and apply a range of bioinformatic principles and new technology to establish solutions for the management of variant data and integration with internal and external data sources.
Drive continued development and validation of cutting-edge bioinformatics pipelines	- Establish complex and highly innovative pipelines for the quality control of sequencing data. - Evaluate performance of bioinformatics pipelines and contribute to and lead internal and external validation studies. - Provide bioinformatics support to GMP staff during the platform validation process. - Oversee and implement bioinformatics solutions compliant with regulatory requirements, in particular NATA/NPAAC. - Participate in internal and external quality assurance programs.

Contribute to policy formulation and research activities in bioinformatics	• Identify, evaluate and provide specialised genome-scale analysis solutions and authoritative specialist advice to senior management regarding current relevant developments in bioinformatics and genome analysis pipelines and their potential implications. • Contribute to the formulation of policy and the implementation of policy directives. • Collaborate with staff in the Centre of Cancer Biology ACRF Cancer Genomics Facility to translate research discoveries to diagnostic application. • Contribute to research studies into the molecular basis of complex disorders including research publications and applications for funding, as appropriate.
Contribute to bioinformatics skill development and continuous improvement in the Directorate	• Foster positive linkages and work relationships that encourage best practice and skill development within the organisation. • Teach genome analysis skills via seminars and internal training workshops. • Document analysis methods and share documentation across the GMP directorate.

Knowledge, Skills and Experience

*It is recommended that a **Maximum of 15 criteria only** (in total) be included in this section (ie the number of Essential and Desirable criteria combined should not exceed 15).*

ESSENTIAL MINIMUM REQUIREMENTS

Educational/Vocational Qualifications

- Doctor of Philosophy in Computer Science, Science, Applied Science or equivalent work experience

Personal Abilities/Aptitudes/Skills:

- Demonstrated ability to manage very complex projects, determine, effectively prioritize and manage conflicting tasks, work efficiently, under limited supervision and broad policy direction and produce work of a high standard within a limited time frame.
- Proven ability to communicate, negotiate and influence effectively in writing and verbally with a diverse range of people including prepare sound advice and written reports.
- Proven ability to exercise high levels of initiative and judgement, think strategically, innovate and resolve problems, make sound decisions and work in a team environment to achieve objectives in accordance with corporate goals and government policy.
- Recognition of the need for, and implement change in work practices, to facilitate productivity.
- Proficiency in computer and database applications for genomic analyses.

Experience

- Significant successful experience in in genomics research, bioinformatics and genome analysis in human genetics including identifying future trends in genetics, genomics and bioinformatics and implementing quality assurance techniques and bioinformatics benchmarking.
- Advanced programming skills relevant to bioinformatics in Unix, Perl, Python, and/or JAVA and demonstrated experience working on Linux/Unix compute architecture and networked environments for genomics.
- Demonstrated experience in working with high-dimensional genomics data sources and undertaking specialised and complex genome annotation, database management and data integration.
- Experience in the supervision and mentoring of junior and postdoctoral scientists

Knowledge

- Comprehensive knowledge of genome analysis algorithms.
- Knowledge of human genome biology, next-generation sequencing platforms and germline and somatic genetics.

DESIRABLE CHARACTERISTICS

Personal Abilities/Aptitudes/Skills:

- Fellowship recognising professional Certification in a relevant discipline
- Recognised qualifications in Management

Experience

- Demonstrated experience working in a multi-team environment and managing teams and projects across sites.
- Proven track record of working effectively within large consortia genome annotation efforts, contributing data of internationally recognised standard.
- Experience introducing a new analysis pipeline into an organisation and making it operational for the purpose intended
- Experience in biostatistics

- Experience in ontologies, text mining and natural language processing.

Knowledge

- Extensive knowledge of the molecular genetic diagnosis of human genetic diseases and the associated technologies
- Knowledge of NATA/NPAAC guidelines for accreditation of diagnostic laboratories

Organisational Context

Organisational Overview:

Our mission at SA Health is to lead and deliver a comprehensive and sustainable health system that aims to ensure healthier, longer and better lives for all South Australians. We will achieve our objectives by strengthening primary health care, enhancing hospital care, reforming mental health care and improving the health of Aboriginal people.

SA Health is committed to a health system that produces positive health outcomes by focusing on health promotion, illness prevention and early intervention. We will work with other government agencies and the community to address the environmental, socioeconomic, biological and behavioural determinants of health, and to achieve equitable health outcomes for all South Australians

Our Legal Entities:

SA Health is the brand name for the health portfolio of services and agencies responsible to the Minister for Health and Ageing and the Minister for Mental Health and Substance Abuse.

The legal entities include but are not limited to Department for Health and Ageing, Central Adelaide Local Health Network, Northern Adelaide Local Health Network, Southern Adelaide Local Health Network, Women's and Children's Health Network, Country Health SA Local Health Network and SA Ambulance Service.

SA Health Challenges:

The health system is facing the challenges of an ageing population, increased incidence of chronic disease, workforce shortages, and ageing infrastructure. The SA Health Care Plan has been developed to meet these challenges and ensure South Australian's have access to the best available health care in hospitals, health care centres and through GPs and other providers.

Health Network/ Division/ Department:

The incumbent will be a valued member of the Technology Advance Team, Technology Advancement Unit , Genetics & Molecular Pathology, SA Pathology, Statewide Clinical Services.

Values

SA Health Values

The values of SA Health are used to indicate the type of conduct required by our employees and the conduct that our customers can expect from our health service:

- > We are committed to the values of integrity, respect and accountability.
- > We value care, excellence, innovation, creativity, leadership and equity in health care provision and health outcomes.
- > We demonstrate our values in our interactions with others in SA Health, the community, and those for whom we care.

Code of Ethics

The *Code of Ethics for the South Australian Public Sector* provides an ethical framework for the public sector and applies to all public service employees:

- > Democratic Values - Helping the government, under the law to serve the people of South Australia.
- > Service, Respect and Courtesy - Serving the people of South Australia.
- > Honesty and Integrity- Acting at all times in such a way as to uphold the public trust.
- > Accountability- Holding ourselves accountable for everything we do.
- > Professional Conduct Standards- Exhibiting the highest standards of professional conduct.

The Code recognises that some public sector employees are also bound by codes of conduct relevant to their profession.

Approvals

Role Description Approval

I acknowledge that the role I currently occupy has the delegated authority to authorise this document.

Name:

Role Title:

Signature:

Date:

Role Acceptance

Incumbent Acceptance

I have read and understand the responsibilities associated with role, the role and organisational context and the values of SA Health as described within this document.

Name:

Signature:

Date: