Royal Devon University Healthcare NHS Foundation Trust

JOB DESCRIPTION

JOB DETAILS	
Job Title	**Associate Genetic Technologist**
Reports to	**Genetic Technologist – Associate Genetic Technologist Lead**
Band	**4 – subject to formal matching**
Department/Directorate	**Genomic Laboratory/Specialist Services**

JOB PURPOSE

Through the reconfiguration of Genomic Laboratory service provision in England, the NHS will provide Genomic testing through a single national testing network, consolidating and enhancing the existing laboratory provision. This will create a world-class resource for the NHS, underpin the future Genomic Medicine Service and support delivery of the Government's Life Sciences Strategy and broader research and innovation agenda, building upon the NHS contribution to the 100,000 Genomes Project. The South West Genomic Laboratory Hub (SWGLH) is a partnership arrangement between the Royal Devon University Healthcare NHS Foundation Trust and the North Bristol NHS Trust. The Exeter laboratory is the national provider of the Rapid Exome sequencing service and one of three NHS England designated specialist providers for endocrine tests. The team works closely with an internationally acclaimed research team with expertise in the genetics of diabetes and hyperinsulinism, providing a range of specialist tests to users throughout the world.

The post-holder is responsible for performing technical duties to ensure the provision of an effective and high quality Genetics Service to patients and support the research activities within the department. In addition to undertaking routine molecular genetic testing, they will be expected to design and implement new assays to develop the diagnostic service and support research activities as required, under the direction and supervision of appropriate members of staff.

KEY RESULT AREAS/PRINCIPAL DUTIES AND RESPONSIBILITIES

Processing of all types of biological specimens, including high risk samples, to extract high quality DNA and RNA using manual and automated methods in an accurate and timely manner.

Genomic testing of DNA and RNA samples to predict or diagnose genetic disorders with the highest level of accuracy to minimise clinical risk.

Drafting a subset of clinical patient reports for genomic test results in an accurate and timely manner.

Communication with service users and laboratory staff to ensure accurate and timely reporting of results, maintaining the highest level of patient confidentiality.

Participation in, and active contribution to, relevant departmental meetings and training.

Responsible for stock control and ordering of reagents and to ensure service continuity.

Maintaining, testing and troubleshooting of standard, sophisticated and robotic liquid handling equipment to manipulate small volumes of samples and reagents with a high degree of accuracy.

Taking an active role in maintaining high quality standards to ensure patient care and safety.

Working in accordance with laboratory and operational policies and standard operating procedures (SOPs).

Responsibility for time management of multiple tasks by planning, managing and organising own workload, to meet priorities and ensure timely delivery of molecular genetic reports.

KEY WORKING RELATIONSHIPS

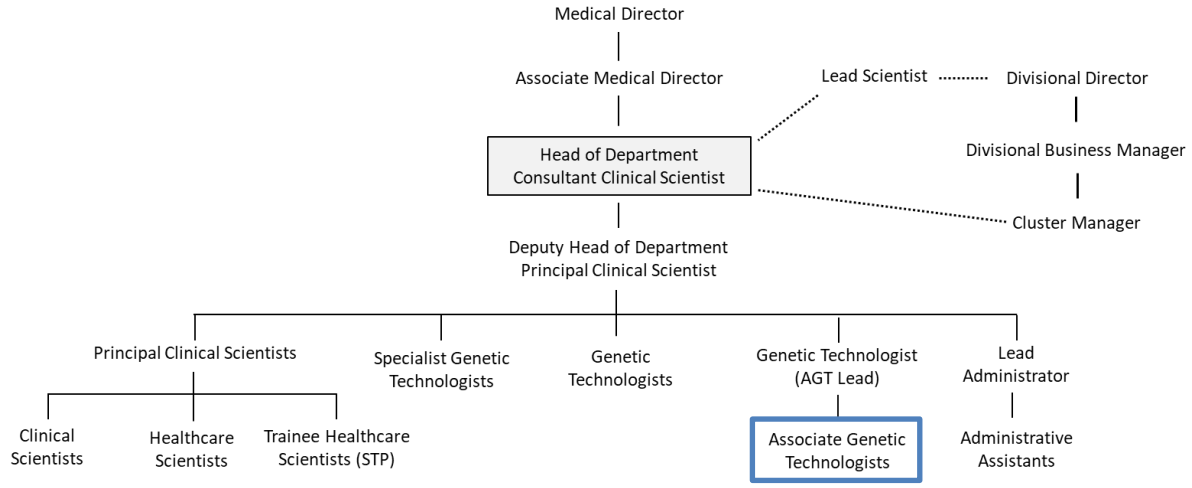
Areas of Responsibility: Post holder will liaise with colleagues within the Department and users of the service both within and outside of the Trust.

The post holder is required to deal effectively with staff of all levels throughout the Trust as and when they encounter on a day to day basis. In addition, the post holder will deal with the wider healthcare community, including external organisations. This will include verbal, written and electronic media.

Of particular importance are working relationships with:

Internal to the Trust	External to the Trust
• Clinical Scientists • (Trainee) Healthcare Scientists • Bioinformaticians • Genetic Technologists • Associate Genetic Technologists • Administrative Assistants • Medical Staff • Clerical staff • Other Healthcare professionals • Clinical research team members, Fellows and nurses	• Healthcare Professionals • Visitors and work experience students • Postdoctoral research fellows, PhD students and other trainees or students • Academic staff • Suppliers • Engineers

ORGANISATIONAL CHART



The Exeter Genomics Laboratory employs >50 members of staff and receives >10,000 samples per annum. The laboratory is part of the South West Genomic Laboratory Hub which is a partnership between RDUH and North Bristol NHS Trust.

FREEDOM TO ACT

, with advice available from manager if required.

Work within laboratory and organisational Policies, Procedures and Standard Operating procedures (SOPs).

May be required to take decisions alone and then escalate to line manager, Genetic Technologists, Healthcare Scientists or Clinical Scientists.

COMMUNICATION/RELATIONSHIP SKILLS

Communicate with service users using tact and empathy to request and receive complex, and occasionally sensitive, information necessary for accurate and timely reporting of results and responding effectively to e-mail and telephone enquiries in a timely manner.

Maintain the highest level of patient confidentiality, considering the sensitive and emotional nature of clinical referrals and comply with section 60 of the Health and Social Care Act.

To recognise the importance of harmonious relationships and maintain an atmosphere conducive to this.

Constructively manage barriers to effective communication and works cooperatively with team members.

To work within the team and in close liaison with the Specialist Genetic Technologist (Quality) and Quality Manager to participate in preparation of the department for regular UKAS inspections, and ensure achievement of and adherence to the nationally-accepted UKAS standards to ensure maintenance of the laboratory accreditation status.

Participate in and actively contribute to Genetic Technologist and laboratory staff team meetings.

Respond effectively to e-mail and telephone enquiries in a confidential and timely manner.

ANALYTICAL/JUDGEMENTAL SKILLS

Unpack pathological specimens and check that the patient details on the referral form correctly match those provided on the sample container received.

Label pathological specimens and referral forms accurately to ensure correct sample identity.

Processing of all types of biological specimens (blood, bone marrow, fresh tissue, paraffin-embedded tissue, urine, plasma, buccal and cultured cells), including high risk samples, in containment level 2 safety cabinets to extract high quality DNA and RNA using manual and automated methods in an accurate and timely manner.

Assessment of post-extraction DNA and RNA quality parameters using Nanodrop spectrophotometer, Qubit and quality control (QC) PCR (when deemed necessary) to ensure high quality genetic test results can be obtained, whenever possible.

Genomic testing of DNA and RNA samples to predict or diagnose genetic disorders. The highest level of accuracy is required to minimise clinical risk (e.g. an incorrect result due to a sample mix-up that results in unnecessary surgery, a missed diagnosis or incorrect prediction of carrier status).

Normalisation of DNA samples, PCR amplification, real-time PCR genotyping, MLPA, Sanger sequencing using robotic platforms and sample preparation for next-generation sequencing (NGS) applications, completing documentation and barcode checks to record the complete audit trail and meet the requirements for laboratory accreditation.

Agarose gel electrophoresis of genomic DNA and PCR products.

Use, maintenance, testing and troubleshooting of standard (e.g. pipettes), sophisticated (e.g. DNA Sequencer) and robotic liquid handling equipment to manipulate small volumes of samples and reagents with a high degree of accuracy.

Organisation and maintenance of freezer storage facility.

Ensuring all technical processes include the appropriate barcode checks and documentation to record the complete audit trail and meet the requirements for UKAS (ISO15189) accreditation.

Strive to maintain and improve accuracy, robustness and quality of methodology, automation, lab processes, data analysis and data management pipelines at all times.

Draft a subset of clinical patient reports for genomic test results.

PLANNING/ORGANISATIONAL SKILLS

Monitor own performance and undertake an appropriate proportion of the workload.

Able to motivate self and encourage other team members to obtain optimal results.

To be responsible for time management of multiple tasks by planning, managing and organising own workload, to meet priorities and ensure timely delivery of molecular genetic reports.

Take an active role in maintaining high quality standards to ensure patient care and safety.

To participate in accurate, thorough and effective incident reporting and investigation, and contribute to improvement measures identified in action plans using DATIX web.

PATIENT/CLIENT CARE

To always work within clearly defined accountability framework.

Provides clinical technical competence developed through continual professional development, reflective practice and maintain a skills portfolio relevant to the service specification.

To undertake training to develop a range of knowledge and skills in order to deliver high quality technical interventions.

To report any untoward incidents or complaints to the appropriate Technical or Scientific Lead within the appropriate timescales.

To prevent adverse effects on health and wellbeing.

POLICY/SERVICE DEVELOPMENT

Active involvement in writing, implementing, reviewing and updating Standard Operating Procedures with input to developing new protocols.

Active participation in both internal and external Quality Assurance schemes to ensure the highest standards of molecular genetic testing.

To work to Trust Policies, Procedures and Standard Operating Procedures (SOP).

To contribute to and work within a safe working environment by adhering to statutory requirements, codes of practice, Health and Safety and COSHH regulations, protocols and policies of the laboratory.

FINANCIAL/PHYSICAL RESOURCES

Support the efficient use of resources.

Assist with maintaining stocks and supplies.

Order equipment and resources as agreed or directed.

Ensure safe and efficient use of stock and equipment.

Ensure equipment is checked appropriately.

Report any equipment defects.

Demonstrate and instruct the use of equipment to ensure safety.

Responsible for stock control and ordering of reagents for the PCR, NGS, Real-Time and Sequencing laboratories to ensure service continuity.

HUMAN RESOURCES

Training of other technical staff, placement and work experience students, and visitors in molecular genetic testing methodologies and any other relevant subject area.

Demonstrate technical work and data analysis to students and visitors.

Participate in supervision and appraisal process, identifying own areas of development, & undertaking relevant activities to meet objectives set in Personal Development Plan.

Keep a record of own training and development, maintain a portfolio, working to sustain acquired competencies for the post.

Undertake any training required in order to maintain competency including mandatory training, (i.e. Fire, Manual Handling).

Presentations to genomic laboratory diagnostic and research staff at bi-monthly training sessions Demonstrate a professional and responsible manner at all times.

Take a flexible approach in supporting colleagues during times of caseload pressures.

INFORMATION RESOURCES

Use of Pathology and Genomics Laboratory Computer Systems (StarLIMS, Access databases, and Microsoft Excel, PowerPoint and Word) for management of workload, data entry and reporting results in order to provide an efficient and accurate service to users. The highest level of accuracy is required to minimise clinical risk (e.g. an incorrect result due to a sample mix-up that results in unnecessary surgery or a missed diagnosis).

Scan referral forms and paperwork containing clinical information to ensure availability and maintain the electronic records system.

Use and maintenance of specialist molecular genetic software programmes (SoftGenetics Mutation Surveyor and GeneMarker, and Sequence Analysis) for analysing data, and use of bioinformatic tools (Alamut and internet resources) to collate information to aid interpretation of results.

Draft a subset of clinical patient reports for genomic test results.

RESEARCH AND DEVELOPMENT

Participate in internal audit programme to ensure continuous quality improvement of services.

Undertake sample processing tasks for research studies when required.

Undertake timely examination audits to establish, and periodically assess, the competence of self and colleagues to perform relevant tasks, as necessary.

PHYSICAL SKILLS

A range of highly-developed physical skills, including dexterity and accuracy for use of laboratory equipment.

Ability to work in an efficient manner to enable timely completion of tasks.

PHYSICAL EFFORT

Daily work involves frequent sitting/standing, walking, moving equipment and manual handling.

Use of IT equipment.

MENTAL EFFORT

Required to concentrate for long periods at technically demanding procedures.

Frequent interruptions to work patterns, with requirement to shift focus quickly in response to frequent urgent incoming requests from internal and external colleagues.

Frequent need to complete work to tight timescales.

EMOTIONAL EFFORT

Ability to cope with distressing clinical information provided with patient referrals occasionally.

Ability to cope and deal with areas of conflict, rarely.

WORKING CONDITIONS

Frequent daily contact with:

- Laboratory specimens e.g. blood, saliva, urine and tissue
- Visual Display Unit (VDU)

OTHER RESPONSIBILITIES

Take part in regular performance appraisal.

Undertake any training required in order to maintain competency including mandatory training, e.g. Manual Handling

Contribute to and work within a safe working environment

You are expected to comply with Trust Infection Control Policies and conduct yourself at all times in such a manner as to minimise the risk of healthcare associated infection

As an employee of the Trust, it is a contractual duty that you abide by any relevant code of professional conduct and/or practice applicable to you. A breach of this requirement may result in action being taken against you (in accordance with the Trust's disciplinary policy) up to and including dismissal.

You must also take responsibility for your workplace health and wellbeing:

- When required, gain support from Occupational Health, Human Resources or other sources.
- Familiarise yourself with the health and wellbeing support available from policies and/or Occupational Health.
- Follow the Trust's health and wellbeing vision of healthy body, healthy mind, healthy you.
- Undertake a Display Screen Equipment assessment (DES) if appropriate to role.

GENERAL

This is a description of the job as it is now. We periodically examine employees' job descriptions and update them to ensure that they reflect the job as it is then being performed, or to incorporate any changes being proposed. This procedure is conducted by the manager in consultation with the jobholder. You will, therefore, be expected to participate fully in such discussions. We aim to reach agreement on reasonable changes, but if agreement is not possible, we reserve the right to insist on changes to your job description after consultation with you.

Everyone within the Trust has a responsibility for, and is committed to, safeguarding and promoting the welfare of vulnerable adults, children and young people and for ensuring that they are protected from harm, ensuring that the Trusts Child Protection and Safeguarding Adult policies and procedures are promoted and adhered to by all members of staff.

At the Royal Devon, we are committed to reducing our carbon emissions and minimising the impact of healthcare on the environment, as outlined in our Green Plan available on our website. We actively promote sustainable practices and encourage colleagues to explore and implement greener ways of working within their roles.

PERSON SPECIFICATION

Job Title	Associate Genetic Technologist

Requirements	Essential	Desirable
QUALIFICATION/ SPECIAL TRAINING		
Minimum GCSE (or equivalent) grades A to C in English, Mathematics and Biology or Chemistry.	✓	
2 A2 levels to include Biology or Chemistry (or equivalent qualification).	✓	
Level 4 qualification or equivalent	✓	
BSc (Hons) in Genetics or a Biological discipline with a significant genetics component (first or second class), or equivalent.		✓
KNOWLEDGE/SKILLS		
Knowledge of theoretical and practical aspects of human clinical molecular genetic diagnostic tests for rare disorders including Next Generation Sequencing (NGS).	✓	
Practical molecular genetics skills including PCR, real-time PCR, dosage assays and Sanger sequencing, and analysis of results obtained by these methods.		✓
Knowledge of relevant health and safety issues.	✓	
Comprehensive PC skills (Microsoft Access, Excel, Outlook, PowerPoint and Word).	✓	
Experience with laboratory information management systems.		✓
Ability to plan and organise own workload by multi-tasking of complex procedures and ensuring prioritisation of urgent samples.	✓	
Understanding of patient confidentiality issues.	✓	
Able to present data effectively at departmental meetings.		✓
EXPERIENCE		
Proven experience of working in a diagnostic genomics laboratory.		✓
PERSONAL ATTRIBUTES		
Friendly, trustworthy and ability to work as a team member	✓	
Meticulous attention to detail	✓	
Able to concentrate for long periods of time and work under pressure	✓	
Excellent planning, time management and organisational skills	✓	
Able to communicate effectively both verbally, by e-mail and by appropriate documentation.	✓	
Excellent interpersonal and communication skills	✓	
Ability to promote and good communication and working liaisons with staff at all levels	✓	
Ability to work on own initiative and as part of a wider team.	✓	
A proactive approach to change	✓	
PERSONAL ATTRIBUTES		
Positive commitment to uphold diversity and equality policies approved by the Trust.	✓	
Flexibility in approach towards working hours.	✓	
Ability to travel to other locations as required.	✓	

WORKING CONDITIONS/HAZARDS		FREQUENCY (Rare/ Occasional/ Moderate/ Frequent) R	O	M	F
Hazards/ Risks requiring Immunisation Screening					
Laboratory specimens	Y				X
Contact with patients	N				
Exposure Prone Procedures	N				
Blood/body fluids	Y				X
Hazard/Risks requiring Respiratory Health Surveillance					
Solvents (e.g. toluene, xylene, white spirit, acetone, formaldehyde and ethyl acetate)	Y			X	
Respiratory sensitisers (e.g. isocyanates)	N				
Chlorine based cleaning solutions (e.g. Chlorclean, Actichlor, Tristel)	N				
Animals	N				
Cytotoxic drugs	N				
Risks requiring Other Health Surveillance					
Radiation (>6mSv)	N				
Laser (Class 3R, 3B, 4)	N				
Dusty environment (>4mg/m3)	N				
Noise (over 80dBA)	N				
Hand held vibration tools (=>2.5 m/s2)	N				
Other General Hazards/ Risks					
VDU use (> 1 hour daily)	Y				X
Heavy manual handling (>10kg)	N				
Driving	Y	X			
Food handling	N				
Night working	N				
Electrical work	N				
Physical Effort	N				
Mental Effort	Y				X
Emotional Effort	Y	X			
Working in isolation	N				
Challenging behaviour	Y	X			