

***“Our vision is to provide safe, high quality seamless service delivered with courtesy and respect. To achieve our vision we expect all our staff to uphold our Trust Values”***

JOB DETAILS	
Job Title	Genetic Technologist
Reports to	Head of Department
Band	5
Department/Directorate	Genomic Laboratory/Specialist Services

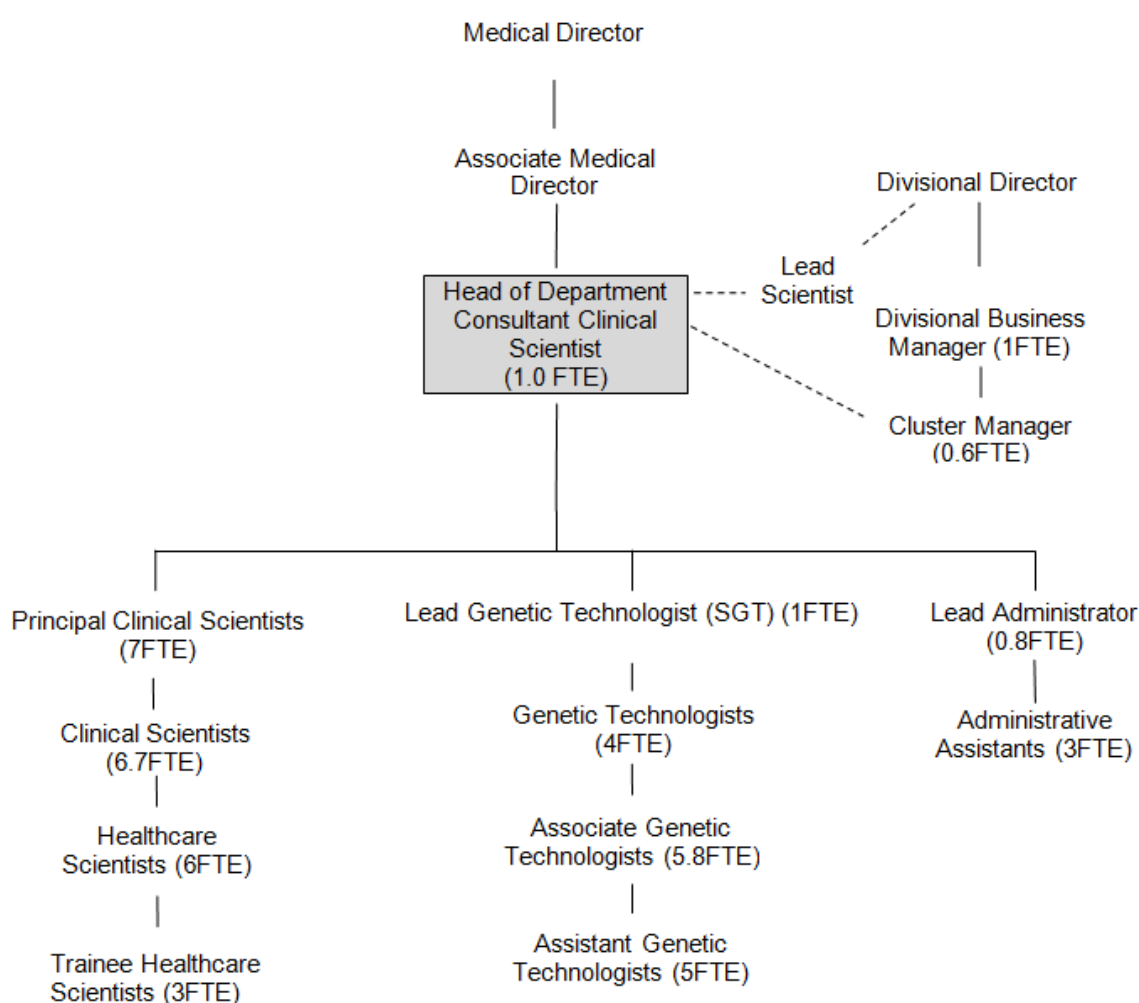
JOB PURPOSE
Through the reconfiguration of Genomic Laboratory service provision in England, the NHS will provide Genomic testing through a single national testing network, consolidating and enhancing the existing laboratory provision. This will create a world-class resource for the NHS, underpin the 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 Foundation Trust and the North Bristol NHS Trust.
The post-holder will be expected to undertake complex technical duties required to support provision of a high quality molecular genetic service to ensure accurate and timely results to users and introduce new developments according to professional standards.

KEY WORKING RELATIONSHIPS
Post holder will liaise with colleagues within the Department and users of the service both within and outside of the Trust. Communications will be with the following grades of staff:
<ul style="list-style-type: none"><li>• Clinical Scientists</li><li>• Bioinformaticians</li><li>• Genetic Technologists</li><li>• Associate Genetic Technologists</li><li>• Assistant Genetic Technologists</li><li>• Medical Staff</li><li>• Clerical Staff</li><li>• Clinical research fellows and nurses</li><li>• Postdoctoral research fellows and PhD Students</li><li>• Visitors and work experience students</li><li>• Academic staff</li><li>• Other Healthcare professionals</li><li>• Suppliers</li><li>• Engineers</li></ul>

## ORGANISATIONAL CHART / DIMENSIONS

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.

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.



## KEY RESULT AREAS/PRINCIPAL DUTIES AND RESPONSIBILITIES

### COMMUNICATION / RELATIONSHIP SKILLS

- Communicate with service users 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.
- 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.

### KNOWLEDGE AND TRAINING AND EXPERIENCE

- 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).
- Responsible for training and supervision of scientific, technical and administrative staff, students and visitors, in molecular genetic testing methodologies for inherited and acquired genetic disorders and any other relevant subject area.
- Demonstrate technical work and data analysis to students and visitors.
- Undertake timely examination audits to establish, and periodically assess, the competence of self and colleagues to perform relevant tasks, as necessary.
- Presentations to molecular genetics diagnostic and research staff at bi-monthly training sessions.
- Participate in regular performance appraisal.
- Undertake any training required in order to maintain competency including mandatory training, (i.e. Fire, Manual Handling).
- Demonstrate a professional and responsible manner at all times.
- Use of Pathology and Molecular Genetics 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.
- Use, maintenance, testing and troubleshooting of standard (eg pipettes), sophisticated (eg DNA Sequencer) and robotic liquid handling equipment (eg Biomek Span 8 robot) to manipulate small volumes of samples and reagents with a high degree of accuracy.
- Authorisation of non-interpretative patient genotype reports.
- Responsible for the preparation, review and updating of technical Standard Operating Procedures (SOPs).

### ANALYTICAL / JUDGEMENTAL SKILLS

- Responsible for checking complex data analyses generated by Associate Genetic Technologists (AGTs, band 4).
- Use and maintenance of specialist molecular genetic software programmes (SoftGenetics Mutation Surveyor and GeneMarker, and Sequence Analysis) for analyzing data, and use of bioinformatic tools (Alamut and internet resources) to collate information to aid interpretation of results.

- Drafting clinical patient reports for targeted Next Generation Sequencing (tNGS) and variant scanning test results.
- Responsible for development, validation and implementation of new tests and techniques under supervision of scientific staff (ie Real-Time, dosage, droplet digital PCR and Sanger sequencing-based tests) including design and ordering of primers, evaluation and optimization of PCR amplification, assessment of sequence quality, setting up sequence reference files and troubleshooting.
- 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.
- Troubleshooting routine high-throughput PCR-based assays and sequencing.
- Participate in internal audit programme to ensure continuous quality improvement of services.
- Strive to maintain and improve accuracy, robustness and quality of methodology, automation, lab processes, data analysis and data management pipelines at all times.

#### **PLANNING AND 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.
- Apply for registration with the relevant professional body when eligible
- 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.
- Responsible for stock control and ordering of reagents for the PCR, Real-Time and Sequencing laboratories to ensure service continuity.
- Active participation in both internal and external Quality Assurance schemes to ensure the highest standards of molecular genetic testing.
- Take an active role in maintaining high quality standards to ensure patient care and safety.
- 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.
- To participate in accurate, thorough and effective incident reporting and investigation, and contribute to improvement measures identified in action plans using DATIX web.

#### **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.

#### **OTHER RESPONSIBILITIES**

- To take part in regular performance appraisal.
- To undertake any training required in order to maintain competency including mandatory training, e.g. Manual Handling
- To contribute to and work within a safe working environment
- The post holder is expected to comply with Trust Infection Control Policies and conduct him/herself 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.

## THE TRUST- VISION AND VALUES

Our vision is to provide safe, high quality seamless services delivered with courtesy and respect. To achieve our vision we expect all our staff to uphold our Trust values. Our Trust values are:

Honesty, Openness & Integrity  
Fairness,  
Inclusion & Collaboration  
Respect & Dignity

We recruit competent staff that we support in maintaining and extending their skills in accordance with the needs of the people we serve. We will pay staff fairly and recognise the whole staff's commitment to meeting the needs of our patients.

We are committed to equal opportunity for all and encourage flexible working arrangements including job sharing.

We are committed to recruiting and supporting a diverse workforce and welcome applications from all sections of the community, regardless of age, disability, gender, race, religion, sexual orientation, maternity/pregnancy, marriage/civil partnership or transgender status. We expect all staff to behave in a way which recognises and respects this diversity, in line with the appropriate standards.

## 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.

The RD&E is a totally smoke-free Trust. Smoking is not permitted anywhere on Trust property, including all buildings, grounds and car parks. For help to quit call: 01392 207462.

**POST: Genetic Technologist**  
**BAND: 5**

Requirements	Essential	Desirable
<b>QUALIFICATION/ SPECIAL TRAINING</b>		
BSc (Hons) in Genetics or a Biological Discipline with a significant genetics component (first or second class), or equivalent	E	
Registration in Modernising Scientific Careers (MSC) Healthcare Science Practitioner Training programme, or equivalent.	D	
Higher degree (MSc, MPhil or PhD) in Molecular Genetics	D	
Registration with relevant professional body	D	
<b>KNOWLEDGE/SKILLS</b>		
Knowledge of theoretical and practical aspects of human clinical molecular genetic diagnostic tests for rare disorders including Next Generation Sequencing (NGS).	E	
Advanced practical molecular genetics skills as applied to diagnosing human molecular genetic disorders, including proven experience of the design, optimization and troubleshooting of PCR, real-time PCR, dosage assays and Sanger sequencing.	E	
Quality assessment, analysis and interpretation of results obtained using these methods.	E	
Computer literate (Microsoft Access, Excel, Outlook, Powerpoint and Word)	E	
Experience with laboratory information management systems	E	
Knowledge of relevant health and safety issues	E	
Ability to plan and organise own workload by multi-tasking of complex procedures and ensuring prioritisation of urgent samples.	E	
Understanding of patient confidentiality issues	E	
Able to present data effectively at departmental meetings	E	
<b>EXPERIENCE</b>		
Proven experience of working in a diagnostic genomics laboratory.	D	
<b>PERSONAL ATTRIBUTES</b>		
Friendly, trustworthy and ability to work as a team member	E	
Meticulous attention to detail	E	
Able to concentrate at all times and work under pressure	E	
Able to communicate effectively both verbally, by e-mail and by appropriate documentation.	E	
A proactive approach to change	E	
<b>OTHER REQUIRMENTS</b>		
Positive commitment to uphold diversity and equality policies approved by the Trust	E	
Flexibility in approach towards working hours	E	
Ability to travel to other locations as required.	E	



WORKING CONDITIONS/HAZARDS		FREQUENCY (Rare/ Occasional/ Moderate/ Frequent)			
		R	O	M	F
<b>Hazards/ Risks requiring Immunisation Screening</b>					
Laboratory specimens	Y				X
Contact with patients	N				
Exposure Prone Procedures	N				
Blood/body fluids	N				
Laboratory specimens	Y				X
<b>Hazard/Risks requiring Respiratory Health Surveillance</b>					
Solvents (e.g. toluene, xylene, white spirit, acetone, formaldehyde and ethyl acetate)	N				
Respiratory sensitisers (e.g isocyanates)	N				
Chlorine based cleaning solutions (e.g. Chlorclean, Actichlor, Tristel)	N				
Animals	N				
Cytotoxic drugs	N				
<b>Risks requiring Other Health Surveillance</b>					
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				
<b>Other General Hazards/ Risks</b>					
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			

## COMPETENCY REQUIREMENTS

To be completed for all new positions

Please tick which of these essential learning s is applicable to this role

(**NB** those that are mandatory for all staff with no variation on frequency are pre-populated with a tick)

Safeguarding Children	Group 1	<input type="checkbox"/>	Blood Transfusion	BDS18 collection	<input type="checkbox"/>	Consent Training	<input type="checkbox"/>
	Group 2	<input type="checkbox"/>		BDS 19 & 20 Preparing & Administering	<input type="checkbox"/>	VTE Training	<input type="checkbox"/>
	Group 3	<input type="checkbox"/>		BDS 17 Receipting	<input type="checkbox"/>	Record management and the nhs code of practice	<input type="checkbox"/>
	Group 4	<input type="checkbox"/>		Obtaining a blood sample for transfusion	<input type="checkbox"/>	The importance of good clinical record keeping	<input type="checkbox"/>
	Group 5	<input type="checkbox"/>		Annual Update	<input type="checkbox"/>	Antimicrobial Prudent Prescribing	<input type="checkbox"/>
	Group 6	<input type="checkbox"/>				Control & Restraint Annual	<input type="checkbox"/>
Not mapped this one		<input type="checkbox"/>	Safeguarding Adults Awareness	Clinical Staff	<input type="checkbox"/>	Mental Capacity/DOL's	<input type="checkbox"/>
	Group 8	<input type="checkbox"/>		Non Clinical Staff	<input type="checkbox"/>		
Manual Handling – Two Year		<input checked="" type="checkbox"/>	Falls, slips, trips & falls	Patients	<input type="checkbox"/>		
Equality & Diversity – One-Off requirement		<input checked="" type="checkbox"/>		Staff/Others	<input type="checkbox"/>		
Fire	Annual	<input type="checkbox"/>	Investigations of incidents, complaints and claims		<input type="checkbox"/>		
	Two Yearly	<input checked="" type="checkbox"/>	Conflict Resolution – 3 yearly		<input checked="" type="checkbox"/>		
Infection Control/Hand Hygiene	Annual requirement	<input type="checkbox"/>	Waterlow		<input type="checkbox"/>		
	One-Off requirement	<input checked="" type="checkbox"/>	PUCLAS		<input type="checkbox"/>		
Information Governance		<input checked="" type="checkbox"/>	Clinical Waste Management	Application principles for clinical staff	<input type="checkbox"/>		





**Royal Devon and Exeter**  
NHS Foundation Trust

Harassment & Bullying (Self Declaration – One off requirement)	<input checked="" type="checkbox"/>		Application principles for housekeeping	<input type="checkbox"/>		
			Application principles for portering and waste	<input type="checkbox"/>		

