***“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”***

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| **JOB DETAILS**  |
| **Job Title**  | **Bioinformatician**  |
| **Reports to**  | **Principal Clinical Scientist, Bioinformatics Lead** |
| **Band**  | **7** |
| **Department/Directorate**  | **Genomic Laboratory/Specialist Services** |

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| **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. To assist in the provision of Molecular Genetic services for bioinformatics, data analysis, process management and management of departmental IT systems (including StarLIMS) to facilitate smooth running of the Genomics department.  |
| **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:* Clinical Scientists
* Genetic Technologists
* Associate Genetic Technologists
* Assistant Genetic Technologists
* Clerical Staff
* Trust IT staff
* Abbott Informatics (StarLIMS)
* Postdoctoral research fellows and PhD Students
* Academic staff
* Genomics England
* Bioinformaticians from regional Genomic Hubs
* Other Healthcare professionals
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| **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 Royal Devon and North Bristol NHS Trusts. 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.  |

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| **KEY RESULT AREAS/PRINCIPAL DUTIES AND RESPONSIBILITIES**  |
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| **COMMUNICATION / RELATIONSHIP SKILLS**  |
| * Communicate complex data and information clearly and concisely to staff from multiple disciplines.
* Communicate with colleagues to understand the variation that can be found in the human genome.
* Develop and maintain working relationships with StarLIMS staff and StarLIMS leads in other regional genetics laboratories to enable complex troubleshooting and to further develop the system.
* Represent the Genomics department at regional and national meetings (as necessary).
* Ability to communicate the results of their analyses to their clinical colleagues and ensure that what they have done is understood.
* Communication with users and other laboratories (as appropriate) to request and receive sensitive and complex information necessary for accurate and timely reporting of results.
* Maintain the highest level of patient confidentiality and comply with section 60 of the Health and Social Care Act.
* Recognise the importance of harmonious relationships and maintain an atmosphere conducive to this.
* Responsible for the communication of developments in bioinformatics and StarLIMS issues to diagnostic and research staff working in the laboratory
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| **KNOWLEDGE AND TRAINING AND EXPERIENCE** |
| Assist with the provision of basic and specialised training in bioinformatics to various staff groups or students (as required).Maintain specialist knowledge of StarLIMS through experience and training.Training of all staff to use StarLIMS. * Contribute to the training of trainees undertaking the Scientist Training Programme (STP) in Clinical Bioinformatics – Genomics.
* Contribute to training courses for other healthcare professionals.
* Participation in internal meetings and other learning activities (e.g. weekly lab meetings, Molecular Genetics weekly seminar series, departmental training sessions and inter-departmental meetings) and keep up to date with current knowledge in bioinformatics and clinical molecular genetics.
* Participate in professional activities, including trainee assessments.
* Present findings at appropriate internal meetings.
* Undertake any training required in order to maintain competency, including Trust mandatory training.
* Take part in regular performance appraisal both as appraise and appraiser.
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| **ANALYTICAL / JUDGEMENTAL SKILLS** |
| * Assist with the formulation, testing, problem solving, validation, organisation and implementation of innovative approaches that enable the efficient processing, analysis, storage, management and refinement of large amounts of complex data generated by Next Generation Sequencing (NGS) pipelines, and data within StarLIMS.
* Make adjustments to ensure the outcomes meet the requirements of the users (e.g. to enable a clinician or clinical scientist to view and interpret relevant data at patient level).
* Assist with the design, troubleshooting and documentation of procedures for analysing various sources of IT issues when an NGS pipeline (for example) is not working as it should.
* Assist with identifying how to use data innovatively but ethically to derive the most benefit for the patient (for example, to make new genetic diagnoses).
* Responsible for using initiative and specialist knowledge of StarLIMS, bioinformatics, statistical analysis, data mining and programming, to make decisions on how to obtain required results within defined criteria and ensure timely delivery of high-quality information.
* Excellent skills in programming, mathematical modelling, database construction and an in-depth understanding of how to apply these skills to clinical genomics.
* Employ good practice in utilising project management and scientific software development methodologies to create robust, fast and efficient IT systems and processes that meet the needs of the service.
* Contribute to the development, implementation, population, maintenance and utilisation of NGS analysis software and databases.
* Assist with reviewing, validation and assessment of bioinformatic tools, and internet resources applicable to medical genetics, to annotate genomic data and aid in the interpretation of novel sequence variants.
* Responsible for writing and maintaining accurate records of service improvements and their validation to comply with ISO15189 (UKAS) accreditation.
* Abide by relevant codes of professional conduct (HCPC Standards of Proficiency).
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| **PLANNING AND ORGANISATIONAL SKILLS** |
| * Responsible for writing, updating and communicating Standard Operating Procedures relating to relating to StarLIMS, any other IT procedures and processes involving the use of bioinformatics for diagnostic purposes.
* Responsible for detailed and rigorous record-keeping, including accurate recording of programming, pipelines, metadata associated with sequencing runs, and strict adherence to quality standards and guidelines.
* Ensure compliance with all requirements of the Data Protection Act and any other relevant regulations for data protection.
* Responsible for investigating methods for improved data storage and audit trail analysis for all processes.
* Support Quality Co-Ordinator on quality management on NGS data analysis, storage, root-cause analysis, trouble-shooting, audit and managing incidents.
* Take a proactive role in maintaining high quality standards to ensure maintenance of the laboratory UKAS accreditation status.
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| **RESPONSIBILITIES FOR INFORMATION RESOURCES**  |
| * Responsible for providing day-to-day running and maintenance of StarLIMS and bioinformatics support for all activities relevant to the diagnostic molecular genetic testing process within the laboratory.
* Initiate, develop, maintain and support interfaces for external IT systems and databases (such as MS Access databases) with StarLIMS (wherever possible).
* Liaise with Trust IT staff to maintain up-to-date software on all departmental PCs and Molecular Genetics servers.
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| **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.
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| **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.
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| **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 & IntegrityFairness,Inclusion & CollaborationRespect & DignityWe 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: Registered Clinical Scientist (Bioinformatics)**

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**BAND: 7**

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| **Requirements** | **Essential** | **Desirable** |
| **QUALIFICATION/ SPECIAL TRAINING** |
| BSc Hons or equivalent qualification in a Bioinformatics, Computer Science or Health Informatics discipline, or a relevant biological discipline with demonstrated abilities in informatics and computing (first or second class) | ✓ | - |
| MSc, PhD degree or equivalent in a relevant subject | ✓ | - |
| HCPC registration as a Clinical Scientist | ✓ | - |
| **KNOWLEDGE/SKILLS** |
| Knowledge of Next Generation Sequencing approaches and statistical techniques used in manipulation of large data analysis | ✓ | - |
| Knowledge of bioinformatic tools, resources and techniques applied to medical genetics | ✓ | - |
| Proven experience of working in UNIX/LINUX and BASH scripting | ✓ | - |
| Good programming skills in a modern object orientated scripting language (such as Python, Ruby, Scala, PERL etc) suitable for pipeline development and *ad hoc* scripting | ✓ | - |
| Experience in LINUX administration  | ✓ | - |
| Programming skills in a language suitable for statistical analysis (for example R) | D | ✓ |
| Extensive knowledge of SQL database design, development and administration | ✓ | - |
| Knowledge and experience of developing and maintaining Laboratory Information Management (LIM) Systems (for example StarLIMS) | D | ✓ |
| Excellent IT skills | ✓ | - |
| **EXPERIENCE**  |
| Experience of developing and implementing bioinformatic tools and resources | D | ✓ |
| Experience in IT, applications, developments, processes and organisation | D | ✓ |
| Experience of molecular genetics, diagnostic genomics services or similar | D | ✓ |
| Proven experience of successful project management | D | ✓ |
| **PERSONAL ATTRIBUTES**  |
| Friendly, trustworthy and ability to work as a team member | ✓ | - |
| Self-motivated with a proactive approach to work | ✓ | - |
| Excellent communication skills (ability to write clear and concise e-mails, presentations and phone conversations) | ✓ | - |
| **OTHER REQUIRMENTS**  |
| 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. | ✓ | - |

**POST: Healthcare Scientist (Bioinformatics)**

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**BAND: 7 (Annex 21)**

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| **Requirements** | **Essential** | **Desirable** |
| **QUALIFICATION/ SPECIAL TRAINING** |
| BSc Hons or equivalent qualification in a Bioinformatics, Computer Science or Health Informatics discipline, or a relevant biological discipline with demonstrated abilities in informatics and computing (first or second class) | ✓ | - |
| MSc, PhD degree or equivalent in a relevant subject | ✓ | - |
| HCPC registration as a Clinical Scientist | - | ✓ |
| **KNOWLEDGE/SKILLS** |
| Knowledge of Next Generation Sequencing approaches and statistical techniques used in manipulation of large data analysis | ✓ | - |
| Knowledge of bioinformatic tools, resources and techniques applied to medical genetics | ✓ | - |
| Proven experience of working in UNIX/LINUX and BASH scripting | ✓ | - |
| Good programming skills in a modern object orientated scripting language (such as Python, Ruby, Scala, PERL etc) suitable for pipeline development and *ad hoc* scripting | ✓ | - |
| Experience in LINUX administration  | ✓ | - |
| Programming skills in a language suitable for statistical analysis (for example R) | - | ✓ |
| Extensive knowledge of SQL database design, development and administration | ✓ | - |
| Knowledge and experience of developing and maintaining Laboratory Information Management (LIM) Systems (for example StarLIMS) | - | ✓ |
| Excellent IT skills | ✓ | - |
| **EXPERIENCE**  |
| Experience of developing and implementing bioinformatic tools and resources | - | ✓ |
| Experience in IT, applications, developments, processes and organisation | - | ✓ |
| Experience of molecular genetics, diagnostic genomics services or similar | - | ✓ |
| Proven experience of successful project management | - | ✓ |
| **PERSONAL ATTRIBUTES**  |
| Friendly, trustworthy and ability to work as a team member | ✓ | - |
| Self-motivated with a proactive approach to work | ✓ | - |
| Excellent communication skills (ability to write clear and concise e-mails, presentations and phone conversations) | ✓ | - |
| **OTHER REQUIRMENTS**  |
| 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. | ✓ | - |

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|  | **FREQUENCY****(Rare/ Occasional/ Moderate/ Frequent)** |
| **WORKING CONDITIONS/HAZARDS** | **R** | **O** | **M** | **F** |
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| **Hazards/ Risks requiring Immunisation Screening** |  |  |  |  |
| Laboratory specimens | N |  |  |  |  |
| Contact with patients | N |  |  |  |  |
| Exposure Prone Procedures | N |  |  |  |  |
| Blood/body fluids | N |  |  |  |  |
| Laboratory specimens | N |  |  |  |  |
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| **Hazard/Risks requiring Respiratory Health Surveillance** |  |  |  |  |  |
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| 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 |  |  |  |  |
|  |  |  |  |  |
| **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 |  |  |  |

**COMPETENCY REQUIREMENTS –** To be completed for all new positions. Please tick which of these essential learnings is applicable to this role. (**NB** those that are mandatory for all staff with no variation on frequency are pre-populated with a tick)

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