**NHS GREATER GLASGOW & CLYDE**

# JOB DESCRIPTION

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| 1. **JOB IDENTIFICATION**
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| **Job Title:** | **Healthcare Scientist Practitioner Specialist (Analyst), Band 6** |
| **Responsible to:** | **Head of Laboratory Genetics Service** |
| **Department:** | **Laboratory Genetics** |
| **Directorate:** | **Acute Diagnostics** |
| 1. **JOB PURPOSE**
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| * Perform specialist genetic data analysis, interpreting results and compiling reports for authorisation.
* Provides specialist advice to colleagues, clinicians and other healthcare professionals on the appropriateness and timescale for testing.
* Responsible for the management of patients testing pathways working closely within their specialist area of the laboratory, and with technical and scientific colleagues when doing so.
* Responsible for own work and will use training within specialist areas to troubleshoot and solve problems, and perform service development when required to do so.
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| 1. **ROLE OF DEPARTMENT**
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| The Laboratory Genetics department, which forms part of the West of Scotland Centre for Genomic Medicine provides a comprehensive diagnostic genetic service for the patients of the West of Scotland (population >2.7 million) and as part of the Scottish Strategic Network for Genomic Medicine provides specialised testing for particular disorders to the whole of Scotland, the UK and overseas. Based at the state of the art Laboratory Medicine building at the Queen Elizabeth University Hospital in Glasgow, the Laboratory Genetics department is responsible for the specialist diagnosis and/ or monitoring of patients with constitutional (prenatal and postnatal) and acquired (malignancy) genetic abnormalities in hereditary genetic disease, solid tumours as well as adult and childhood leukaemia. The service is funded by National Services Division, NHS Scotland.The laboratories are the largest of their type in Scotland and they process in excess of 35,000 specimens a year. They collaborate closely with other laboratories in the new Laboratory Medicine building including pathology, and with various research groups at the University of Glasgow. The genetic laboratories provide a specialist education and training programme for our healthcare scientists and other healthcare professionals, including continuous professional development, ensuring our workforce is appropriately trained and developed to deliver a high quality diagnostic genetics service. In addition, the genetic laboratories deliver a component of the MSc in Medical Genetics in collaboration with the University of Glasgow. |

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| 1. **ORGANISATIONAL POSITION**
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| 1. **SCOPE and RANGE**
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| The post holder is a healthcare scientist practitioner specialist who will work autonomously and as part of a team with other laboratory and scientific staff to analyse and interpret genetic data, and to compile genetic reports prior to authorisation. There are >115 members of staff in the Laboratory Genetics department which receives specimens from hospitals, health centres and general practitioners from the west coast of Scotland and offers a comprehensive genetic service to these users. The laboratory works cooperatively with the genetics, molecular pathology and molecular haematology laboratories in Aberdeen, Dundee and Edinburgh as part of the Scottish Strategic Network for Genomic Medicine provides and delivers specialised testing for particular disorders to the rest of the UK and overseas. The post holder will work as part of a team to deliver a diagnostic genetic service. |

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| 1. **MAIN TASKS, DUTIES AND RESPONSIBILITIES**
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| **Clinical, scientific and technical*** Adhere strictly to the departmental policies and Standard Operating Procedures.
* Perform and organise their own work in the laboratory.
* Responsible for the time management of multiple tasks and to respond to the changing requirements of the laboratory as required.
* Maintain an accurate record of all work undertaken using the Laboratory Information Management System and disease specific databases, to document tests and results.
* Undertake a variety of specialised and complex techniques, as required to deliver a diagnostic genetics service.
* Demonstrate and apply a thorough understanding of the scientific principles involved in the delivery of a genetic diagnostics service, including trouble shooting of existing assays, offering advice to other colleagues and junior staff.
* Monitor quality control performance using the laboratory’s quality indicators, and take corrective action when required to do so.
* Analyse genetic tests using highly specialised software packages, and to use specialist scientific and clinical skills to interpret the results of these tests.
* Compile specialist genetic reports for specialist results from the Laboratory Information Management System, according to laboratory protocols.
* Provide specialist advice to colleagues, clinicians and other healthcare professionals on the appropriateness and timescale for testing.
* To take part in the duty scientist rota, ensuring appropriate triaging and testing is carried out in relation to patient referral information and that urgent samples are prioritised appropriately.

**Managerial*** Train staff in their specialist laboratory area.
* Manage patient testing pathways and analysis priorities using the laboratory LIMS, and to triage samples appropriately depending their level of urgency.
* Participate in the weekly laboratory meeting, lectures, seminars and courses to facilitate personal training and development.
* Prepare and update documentation and work as directed by the quality manager to ensure that the department maintains its United Kingdom Accreditation Service (UKAS) status.
* Participate in the laboratory audit programme as directed by the quality manager.
* To be aware of and follow the current regional and national policies and legislation, along with UK best practice guidelines for genetics diagnostics, and promote these to others.
* To communicate non-compliances to the head of service and quality manager.
* To assist in any other aspects of the laboratory management, including administration, and policy and procedure updating, as directed by the head of service.

**Research and development*** Develop and validate service initiatives designed to improve the efficiency of existing services.
* Validate and verify new analysis software and pipelines, updating standard operating procedures where required prior to implementation into routine service.
* Take part in research initiatives and investigations.
* Present the results of service development to colleagues at internal meetings.

**Teaching and training*** Train clinical/ healthcare scientists and other laboratory staff.
* Assist with training of undergraduates, medical staff, MSc and PhD students, and other visiting healthcare professionals when required to do so.
* Report any training issues with junior staff to the head of laboratory or the training officer.
* Take part in Continuing Professional Development activities to acquire new knowledge and skills for service and personal development.
* Participate in annual formal appraisal and personal development planning.

**Enabling the employer to meet statutory requirements*** Comply at all times with the departmental and NHS GG&C Health and Safety policies, security policies, departmental operating procedures and disciplinary codes.
* Report/ensure that any defect or occurrence which may affect safety at work is brought to the attention of the Safety Officer.
* Maintain an awareness of the Data protection act, preserving confidential patient information.
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| **7a. EQUIPMENT AND MACHINERY** |
| The post holder will:* Use basic laboratory equipment including pipettes, balances, a spectrophotometer, centrifuges and micro-centrifuges.
* Use of biological safety cabinets and fume hoods for the safe handling of human specimens and chemicals.
* Operate automated laboratory equipment and instrumentation.
* Operate complex and extremely expensive analytical equipment.
* Use a personal computer and other appropriate IT equipment.
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| **7b. SYSTEMS** |
| The post holder will use a personal computer:* To recordand extract patient information, to produce worksheets and to generate patient reports using the Laboratory Information Management System.
* To access the laboratories document control system (INVU).
* To access the laboratory’s quality management system (Q-Pulse).
* To analyse results using specialised software packages.
* To participate in departmental audits.
* To search for patient test information and simple/complex audit to produce standard and non-standard reports as required by the head of laboratory.
* To produce electronic data e.g. Word, Access, Excel, PowerPoint.
* To access the intranet and internet including the e-library, for pertinent scientific literature relating to methodology and processes.
* To access the electronic Reagent Management System (RMS) for stock control purposes.
* For Datix incident reporting.

The post holder will use: * Photocopier for duplicating documentation.
* Scanners for document archiving.
* Telephone for communication both internally and externally.
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| **8. DECISIONS AND JUDGEMENTS** |
| The post holder must take responsibility for their work, prioritising workload when necessary. Decisions often need to be made which require an understanding of the laboratories policies, procedures and methodologies. These include:* Assessing whether the clinical information sent by healthcare professionals with specimens is compliant with agreed standards, and whether these specimens can accepted by the laboratory.
* As part of the duty scientist rota, making decisions on which appropriate tests should be performed based on clinical information provided by clinicians, prioritising testing of the most critical and urgent specimens.
* Deciding what specimens need to be sent to other laboratories in the UK or abroad, for specialist genetic tests which are not available in-house and what paperwork must accompany the specimen when send to another laboratory.
* Deciding on and prioritising own workload and the workload of others, depending on which type of specimens have been referred for testing e.g. prenatal diagnosis.
* Deciding whether genetic test data meets internal quality control parameters, and where it does not, ensuring tests are repeated before reports are issued.
* Decide whether supplementary tests are required for those cases which produce equivocal or unexpected results, in consultation with senior colleagues when necessary.
* Making decisions regarding problem assays and technical issues, troubleshooting and offering advice and guidance to junior staff when necessary.
* Compiling non-routine and some complex clinical reports to ensure the information is clear concise and unambiguous.
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| 1. **COMMUNICATIONS AND RELATIONSHIPS**
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| The post-holder will: * Communicate as an effective team member within the Laboratory Genetics department, to ensure optimal use of resources and the delivery of an efficient, high quality service.
* Establish and maintain good communication with colleagues within the West of Scotland Genetic Services (Biochemical Genetics, Clinical Genetics) and in the other laboratory disciplines within NHS Greater Glasgow and Clyde, to provide an integrated high quality service.
* Communicate effectively with other healthcare professionals, responding to all enquiries as appropriate (telephone, email or written). These are often specialist and complex in nature.
* Provide advice on the appropriate genetic diagnostic tests available to service users.
* Notify colleagues of important sample or testing information.
* Attend weekly laboratory meetings and discuss laboratory issues with colleagues.
* Present data and reports when required to do so.
* Explain procedures and standard reports accurately and concisely and also to demonstrate techniques to other staff for training purposes.
* Liaise with the training officer when training other members of staff.
* Liaise with the quality manager for issues relating to UKAS accreditation.
* Liaise with senior management and the head of laboratory, on other issues relating to laboratory management.
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| 1. **PHYSICAL, MENTAL, EMOTIONAL AND ENVIROMENTAL DEMANDS OF THE JOB**
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| **Physical Skills*** Use of laboratory equipment and techniques which require manual dexterity and a high degree of hand to eye co-ordination, including the use of micropipettes and handling small sample volumes.
* Need to carry out detailed work with a high degree of precision, expertise, speed, accuracy and concentration such as dealing with small volumes of liquid and processing patient samples**.**
* Requires highly developed physical skills in the use of specialist genetic diagnostic equipment of high monetary value.
* Keyboard skills are required.

**Physical demands*** Prolonged periods of time spent seated or standing at the work bench during the working day.
* Prolonged periods analysing genetic tests, with little opportunity for exercise.

**Mental demands*** Work pattern can be unpredictable due to demands of the service, especially when an urgent specimen from a high risk pregnancy or new born baby must be processed immediately.
* Organisational skills, especially time management, and the ability to multi-task are very important for specimen processing.
* There is a requirement to prioritise workload to meet deadlines.
* Long periods of concentration with attention to detail, when processing, analysing and interpreting non-routine and some complex genetic test results.
* Ensuring accurate diagnosis of genetic conditions for which there is generally limited therapy and the unambiguous interpretation of results for the referring clinician.
* A laboratory is a busy environment, which makes demands on the concentration.
* Regular use of extremely expensive and very fragile equipment.

**Emotional demands*** The handling of patient records and maintaining patient confidentiality whilst processing specimens which will undergo genetic testing.
* Processing urgent specimens for example from a baby on a ventilator, can be emotionally distressing.
* The specimens can be from various sources some of which can be distressing (for example recognisable fetal parts).
* Performing non-routine and some complex genetic tests and analysing results from patients with inherited genetic conditions, can be distressing.
* The laboratory performs prenatal diagnosis and the testing of patients with terminal cancer, which can be distressing.

**Working Conditions*** Frequent exposure to unpleasant working conditions, hazardous chemicals and potentially infectious body fluids and specimens.
* Controlled exposure to reagents, chemicals, solvents, during test analysis in the laboratory; many of which are potentially hazardous or carcinogenic.
* May occasionally be exposed to spills of hazardous chemicals; spills, leakage and breakage of specimen containers and culture bottles that may contain highly infectious material. The post holder will be required to deal with any spillage/breakage immediately, ensuring appropriate measures and containment as per SOP.
* Required to wear protective clothing whilst in the laboratory which can be areas where equipment may cause high working temperatures.
* Extensive use of visual display units.
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| 1. **MOST CHALLENGING/DIFFICULT PARTS OF THE JOB**
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| * Multitasking and managing time effectively.
* Prioritising work to meet competing demands, ensuring some specimens e.g. new born baby samples are processed urgently.
* Ensuring that accurate patient records are kept.
* Knowing that errors in labelling blood and DNA samples, or in the analysis and interpretation of results could lead to serious clinical consequences, e.g. the termination of a normal baby, or the birth of a severely handicapped child.
* Working to very demanding Professional Standard Guidelines. These cover both the necessary quality of the work undertaken and also the acceptable turn-around times.
* The acquisition and maintenance of knowledge with regards to laboratory procedures, and the interpretation and the reporting of results, which must be refreshed as practice and guidelines change.
* Absolute requirement for concentration all the time to avoid human error. Many checking and validation steps required to ensure accuracy of own work and work of others.
* Participation in continuous personal development where there are time constraints due to routine service commitments.
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| 1. **KNOWLEDGE, TRAINING AND EXPERIENCE REQUIRED TO DO THE JOB**
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| * First or Second Class Honours degree or equivalent in a biological science.
* Post graduate qualification to diploma level or equivalent level of knowledge.
* State registration with the Health and Care Professions Council (HCPC) in an appropriate discipline is desirable.
* Demonstrable postgraduate experience in a genetics laboratory, preferably in a diagnostic laboratory.
* Experience with genetic diagnostic equipment and software packages.
* Considerable experience in the writing of complex diagnostics reports.
* Ability to handle hazardous chemicals and biological specimens safely.
* Ability to work as a team member.
* Careful and meticulous, adhering to good laboratory practice.
* Enthusiastic, motivated and capable of prolonged concentration and attention to detail.
* Demonstrate continuous professional development.
* Computer literate.
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| **12. JOB DESCRIPTION AGREEMENT** **Job Holder’s Signature:** **Head of Laboratory Signature:** | **Date:****Date:** |