**NHS GREATER GLASGOW & CLYDE**

# JOB DESCRIPTION

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| 1. **JOB IDENTIFICATION** | |
| **Job Title:** | **Healthcare Scientist Practitioner, Band 5** |
| **Responsible to:** | **Head of Laboratory** |
| **Department:** | **Laboratory Genetics** |
| **Directorate:** | **Acute Diagnostics** |
| 1. **JOB PURPOSE** | |
| * Responsible for the day-to-day processing of patient specimens and maintaining all associated electronic records using the laboratory information management system. * To send specimens to other laboratories for genetic investigations. * To perform laboratory tasks for a set of non-routine laboratory procedures. * To analyse and interpret genetic diagnostic tests for a subset of conditions. | |
| 1. **ROLE OF DEPARTMENT** | |
| 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 Laboratory Genetics department is 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 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** |
| The post holder is a healthcare scientist practitioner who will provide technical support to the scientific staff of the Laboratory Genetics department and will report to the Head of Laboratory. There are >115 members of staff in the Laboratory Genetics department including Consultant Clinical Scientists (Head of Laboratory and Deputy Head), Principal Clinical Scientists, Principal Healthcare Scientists, Clinical Scientists/Healthcare Scientists Advanced, Healthcare Scientists, Biomedical Scientists, Healthcare Science Practitioner Specialists, Healthcare Science Practitioners, Healthcare Science Associate Practitioners, Healthcare Science Assistants (Higher level) and admin and clerical staff.  The Laboratory Genetics department receives specimens from hospitals, health centres and general practitioners from the west coast of Scotland and offers a comprehensive genetic service to these users. It 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 and delivers specialised testing for particular disorders to the rest of the UK and overseas. The post holder works under the direction of the laboratory’s scientists to help deliver this service. |

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| 1. **MAIN TASKS, DUTIES AND RESPONSIBILITIES** |
| The post holder will be responsible for the processing of patient specimens and for the provision of support for a set of routine, non-routine and specialised laboratory procedures. They will work with the scientific staff to ensure that the laboratory’s genetic tests are processed and results are reported within contracted times, as instructed by head of the laboratory. This involves the processing of patient samples performed to standard operating procedures and within UKAS standards. The duties of the post holder are:  **Clinical, scientific and technical**   * To adhere strictly to the departmental policies and Standard Operating Procedures designed to minimise the risk of sample mix-up and maintain an accurate record of all work. This includes the use of checklists at all appropriate stages of a procedure and performing appropriate sample checks for colleagues when required. * To follow Health and Safety regulations, as outlined in the laboratories protocols and policies. * Prepare and maintain stocks of reagents and consumables. * Perform equipment maintenance and participate in laboratory housekeeping, including the correct disposal of waste. * Receive and process specimens for genetic testing. This will require the post holder to ascertain the suitability of specimens, select, prepare and prioritise specimens, and organise an appropriate work schedule. * To perform work in the laboratory on a day-to-day basis, and to ensure that urgent samples are prioritised appropriately. * To store specimens and send samples to other centres for testing. * To possess knowledge of the scientific principles in relation to specimen extraction and testing, including basic troubleshooting where appropriate. * To undertake non-routine genetic investigations using specialised techniques, for a subset of referral criteria, under the direction of senior colleagues. * To analyse non-routine genetic tests using specialised software packages, and to be able to use scientific and clinical skills to interpret the results of these tests. * Maintain an accurate record of the work undertaken, including both manual and computerised records, and preserve the confidentiality of patient, laboratory and clinical information taking into account the sensitive and emotional nature of genetic test results. * To maintain and update the Laboratory Information Management System. * Produce laboratory information reports from the Laboratory Information Management System for specimen handling and extraction. * Produce laboratory reports for samples giving a ‘normal’ result according to laboratory protocols, from the Laboratory Information Management System. * Participate in internal and external quality control procedures, as directed by the quality manager. * The post holder will be expected to work unsupervised with senior members of staff available for reference if required, and should be able to autonomously plan and organise their daily workload according to the demands of the laboratory. * To perform other duties as deemed appropriate by the head of laboratory.  **Managerial**  * To supervise and train junior staff. * 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 UKAS accreditation status. * To participate in the laboratory audit programme as directed by the quality manager. * To keep records of equipment maintenance and housekeeping duties. * To perform and maintain batch control for the laboratory’s in-house assays. * To perform stock control duties. * Responsible for communicating policy non-compliances to senior members of staff.   **Research and development**   * To be involved in service development initiatives designed to improve the efficiency of existing services, under the direction of senior colleagues. * To incorporate new techniques, developments or services into routine testing. * To participate in the evaluation and validation of changes to standard operating procedures. * To validate new equipment and techniques as directed by senior colleagues.   **Teaching and training**   * Supervise and train other less experienced staff as requested by the head of the laboratory, or by the training officer. * To report any training issues with junior staff to the head of laboratory or the training officer. * To take part in Continuing Professional Development activities to acquire new knowledge and skills for service and personal development.   **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. |
| **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 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 deciding whether these specimens can be processed for testing within the laboratory. * To triage specimens to the appropriate laboratory area for processing. * Performs DNA extraction, deciding priority for individual samples. * Deciding the appropriate DNA extraction methodology depending on the referral information. * Deciding if specimens need to be sent to other laboratories in the UK or abroad, and if so, deciding what paperwork is required to accompany a sample sent to another laboratory. * Deciding whether a DNA extraction needs to be repeated if it fails internal quality assurance measures. * Deciding when tests have failed or need repeated, following genetic test analysis. * Decide whether supplementary tests are required for those cases which produce equivocal or unexpected results, in consultation with senior colleagues when necessary. |
| 1. **COMMUNICATIONS AND RELATIONSHIPS** |
| The post-holder will:   * Communicate as an effective team member alongside colleagues, to ensure optimal use of resources and the delivery of an efficient, high quality service. * Notify colleagues of important sample information which may have been received. * Maintain close links with colleagues in other Departments within the West of Scotland Centre for Genomic Medicine (Clinical Genetics) to provide an integrated high quality service. * Communicate effectively with other healthcare professionals. * Attend the weekly laboratory meeting and discuss laboratory issues with colleagues. * Present data and reports at internal multi-disciplinary clinical case meetings. * Respond to telephone queries as appropriate. * 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. * To abide by the NHSGG&C policy on patient confidentiality. * Attend an annual staff review. * Liaise with the quality manager for issues relating to UKAS accreditation. |

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| 1. **PHYSICAL, MENTAL, EMOTIONAL AND ENVIROMENTAL DEMANDS OF THE JOB** |
| **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**.** * 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**   * Long periods of concentration with attention to detail, when processing large numbers of patient samples. * Prolonged periods of concentration whilst analysing genetic test results. * 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. * 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 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. |
| 1. **MOST CHALLENGING/DIFFICULT PARTS OF THE JOB** |
| * 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. * 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. |
| 1. **KNOWLEDGE, TRAINING AND EXPERIENCE REQUIRED TO DO THE JOB** |
| * First or Second Class Honours degree or equivalent in a biological science. * Previous relevant laboratory experience, including the use of genetic diagnostic equipment. * Capable of prolonged concentration and attention to detail. * Ability to handle hazardous chemicals and biological specimens safely. * Ability to work as an effective team member in the delivery of a diagnostic service. * Careful and meticulous, adhering to good laboratory practice. * Enthusiastic and motivated. * Demonstrates and participate in continuous professional development. * Computer literate. |

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| **12. JOB DESCRIPTION AGREEMENT**  **Job Holder’s Signature:**  **Head of Laboratory Signature:** | **Date:**  **Date:** |