

## **The Newcastle upon Tyne Hospitals NHS Foundation Trust**

### **Job Description**

#### **1 Job Details**

**Job title:** State Registered Clinical Scientist in Genetics

**Pay band:** 7

**Directorate:** Northern Genetics Service

**Ward/Dept Base:** Molecular Genetics/Cytogenetics Laboratory

**Hospital site:** RVI (Centre for Life)

#### **Essential Requirements**

- First class or second class BSc degree in an appropriate subject with a strong genetics component.
- State registered clinical scientist in molecular genetics or cytogenetics with the Health and Care Professions Council (Master's Degree equivalence)
- Previous experience as a pre-registration scientist in a diagnostic genetics laboratory.
- Excellent laboratory bench skills.
- Communication and organisational skills.
- Basic computer skills

#### **Desirable requirements**

- Successful completion of clinical scientist training evidenced by award of Certificate of Competence by the Clinical Molecular Genetics Society or Association for Clinical Cytogenetics or completion of the Modernising Scientific Careers Genetics STP
- Post graduate qualification either Master's degree or PhD in an appropriate subject
- Significant experience in a diagnostic genetics laboratory.
- Staff supervisory experience.

#### **2 Job Purpose**

- Analysis, interpretation and reporting of genetic tests for a broad range of inherited disorders and acquired cancers guided by clearly defined policies and procedures.
- Service development in own area.
- Limited responsibility for an additional component of the genetics service.
- Providing specialist advice to clinicians on specific genetic tests.
- Supervision of technical, junior and trainee staff in section.
- Practical and theoretical training of scientific & technical staff.

### **3 Dimensions**

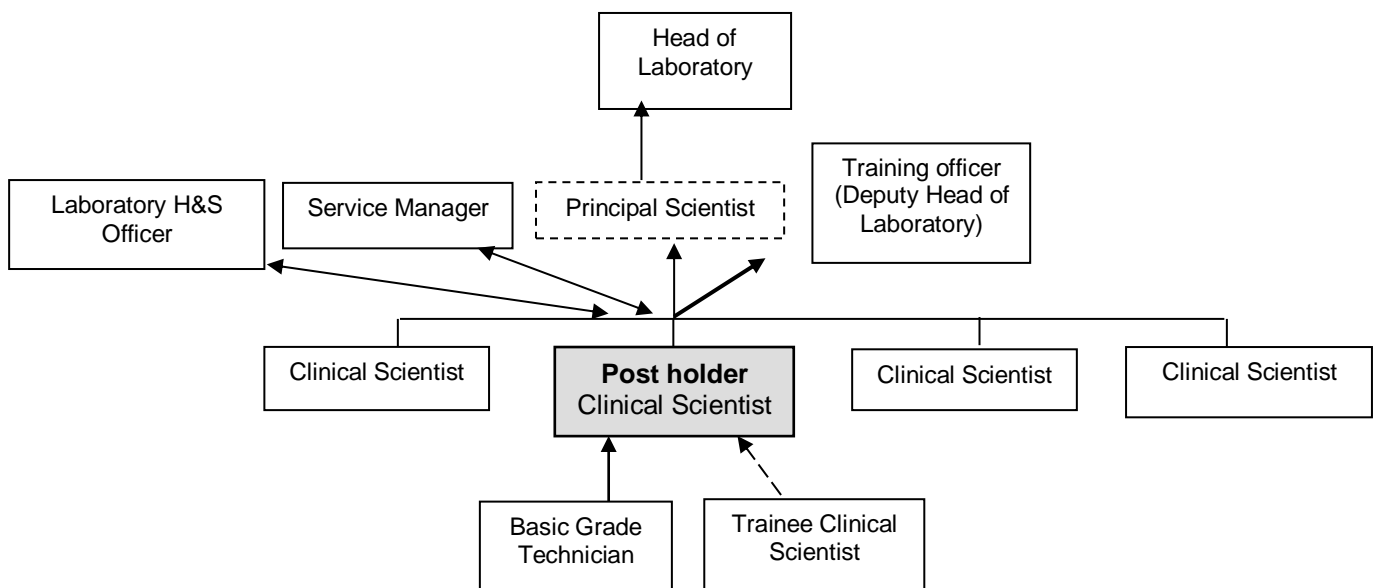
- The Northern Genetics Service provides a comprehensive diagnostic laboratory service that includes cytogenetics, molecular genetics, and muscle immunoanalysis. The post holder will work between the molecular genetics section and cytogenetics section.. Genetic test results carry irreversible consequences for both the patient and their immediate relatives, frequently confirming or predicting hereditary disease and consequently influencing reproductive choices. There are approximately 25,000 referrals per annum. Referrals are made from within the Northern region, throughout the UK and abroad.
- The post holder is responsible for performing and reporting significant, defined aspects of the laboratory workload on a rotation with other scientists of similar grade. They participate in training of junior members of staff and in directing the day to day laboratory analysis work of a basic grade technician. They will be expected to maintain a high level of accuracy and reliability and to collaborate with other members of the laboratory and other referring centres to achieve a high quality of service.

### **4 Organisational arrangements**

**Reports to:** Lead scientist with overall responsibility for specific work area

**Professionally accountable to:** Consultant Clinical Scientist, Head of Laboratory

**Staff responsible for:** Basic grade technician. Trainee technician(s) / trainee clinical scientist(s).



### **5 Knowledge Training and Experience**

- In addition to the essential requirements for the post as listed above, the post holder:
  - Possesses highly specialist scientific knowledge in the field of diagnostic

- genetics, both theoretical and practical.
- Has experience in the use of specialist laboratory equipment.
- Has experience in the use and application of basic computer programmes including Word, Excel, PowerPoint and Access, and in the use of the internet for gathering up to date genetic information.
- They are expected to maintain and improve knowledge, skills and competencies in line with professional standards by the following methods:
  - Participation in local CPD activities, keeping a record of these in order to maintain State Registration, including attendance at local lectures, seminars, journal clubs and laboratory meetings.
  - Attendance at appropriate local and national courses and conferences.
  - Work towards part 1 of Membership of the Royal College of Pathologists.
  - Develop an active interest in national activities within diagnostic molecular genetics such as training, external quality assurance and development of best practice, and participate at an appropriate level.
- They are expected to be fully trained in a specialist area and to take responsibility for this specialty within the laboratory. Specialty roles include Qualified First Aider, Radiation Protection Supervisor and Risk Assessor.

## **6 Skills**

### **Communication and Relationships**

- On a regular basis, the post holder is required to:
  - Receive sensitive genetic information about patients from referring clinicians within the Trust, throughout the UK and internationally.
  - Deliver complex and sensitive genetic information in the form of fully interpreted test results to referring clinicians. This is usually in the form of written reports, but may also be verbally communicated from time to time.
  - Communicate with the Service Manager at the regular service meetings, and with clinical scientists of similar grade that work as part of a rotation, to ensure smooth running of the service.
  - Communicate daily with a technician for whom the post holder has some responsibility. This involves explaining and directing laboratory analytical work and advising the technician in the event of technical failures.
  - Explain theoretical and demonstrate practical aspects of the job to trainee clinical scientists and technicians, visiting scientists and clinical staff. Deliver 1 to 2 seminars per year as part of an ongoing programme for technical staff.
  - Communicate (in writing and verbally) the details of any new laboratory procedures with which the post has been directly involved, including the writing of Standard Laboratory Operating Procedures when requested by the head of laboratory or quality manager.
  - Participate in the fortnightly laboratory group meetings, presenting relevant information from time-to-time and participate in the laboratory journal club, summarising papers of interest from current scientific literature.
  - Participate in local and/or national scientific meetings presenting results that have been generated through R&D activities and developing national best practice guidelines.

### **Analytical and Judgemental Skills required for the post**

- The post holder is required to:
  - Decide on the most appropriate tests to be performed on all samples that

- are referred for a designated number of disorders, in order that the clinical question will be answered.
- Differentiate between complex and straightforward tests. Instruct technical staff to perform routine analyses and carry out those tests that require a high degree of skill him/herself.
- Judge the standard of laboratory results that are generated by technical staff and determine whether they are of reportable quality.
- Use a high level of knowledge and skill to interpret the results of the tests in the context of the clinical referral.
- These skills will be developed through previous training programmes and will be maintained through continued on the job experience and CPD activities.

### **Planning and Organisational skills required for the post**

- The post holder is required to:
  - Organise and prioritise their own working schedule, recognising the relative urgency of specific clinical referrals. He/she must be able to respond to urgent workload pressures and thus ensure the delivery of test results in a timely manner.
  - Help prioritise the workload of a member of the technical staff.
  - Provide cover for scientists of similar grade, often with minimal notice in the event of sickness.
  - Plan the detail of specific training modules for trainee staff for specific modules within the context of the over all training programme.
  - Plan ahead so that heavily used laboratory equipment is booked for timely use.

### **Physical dexterity skill requirements**

- The post holder is required to:
  - Use considerable manual dexterity in the manipulation of scientific equipment.
  - Perform activities at the laboratory bench with a high degree of precision and accuracy. Speed is a less important factor.
  - Develop skills, as required, when new equipment or techniques are introduced into the laboratory.
- These skills will be developed through previous training programmes and will be maintained through continued on the job experience. New skills are acquired through attendance at training programmes arranged by equipment manufacturers or through in-house training by more experienced members of staff.

## **7 Key result areas**

### **Responsibilities**

- The post holder will be responsible for maintaining high quality in their work and will undertake an equitable proportion of the workload of the laboratory.
- They will take responsibility for directing part of the workload of a technician and part of the training of trainee staff.
- They will contribute to service development within their specialist area and will collaborate with the head and deputy head of the laboratory in the provision of a unified service.

### **Patient / Client care**

- The post holder has a high level of responsibility for patient care and is required to:
  - Ensure that appropriate tests are carried out on the samples for which he/she has responsibility.
  - Perform complex tests on genetic samples in a timely and effective manner.
  - Interpret test results that will have life long implications for patients and their relatives, and write clear reports for the referring clinician.
  - Conform with all aspects of laboratory Internal Quality Control to ensure that the highest level of service is provided to patients including participation in shared duty scientist responsibilities to ensure that no errors relating to sample mix-up occur.
  - Participate in External Quality Assurance schemes as directed by the head of the laboratory to ensure that high levels of service delivery are monitored appropriately.

### **Policy and Service Development**

- The post holder influences policy and service developments within their own specialist area and is required to:
  - Modify existing laboratory operating procedures if these lead to improved service delivery.
  - On instruction from more senior colleagues, introduce new laboratory techniques including work-up and trouble shooting and introduce new laboratory operating procedures as appropriate.
  - Contribute to UK and European Best Practice Guidelines for a variety of test procedures. This will involve attendance at UK Best Practice Meetings from time to time.
  - Participate in the regular laboratory audit programme that is organised by the laboratory manager.

### **Financial and Physical Resources**

- The post holder will be aware of budgetary constraints but not of precise details. They will:
  - Be responsible for the ordering of a small number of specialist items relating to their own area of work and will ensure that the best value is obtained when placing these orders.
  - Ensure that their own area of work does not result in unnecessary wastage of consumable items.
  - Respect all items of equipment, but particularly ensure that expensive equipment, valued at £30 000 or more, and highly complex items are used in the proper manner.

### **Human Resources**

- The post holder is responsible for the:
  - Supervision and allocation of the analytical laboratory work of a member of the technical staff.
  - Training of junior staff, including trainee scientists and technicians, in specific aspects of laboratory testing procedures, both practical and theoretical. This responsibility is shared with other scientists of similar grade.
  - Education of visiting clinicians and scientists in specific areas of diagnostic molecular genetics. This responsibility is shared with other scientists of

similar grade.

- Participate in Individual Performance Review with the Head of the Laboratory on an annual basis, or as required.

### **Information Resources**

- The post holder is required to:
  - Access and up date both paper and electronic records of all types including patient information, specimen information, laboratory tests performed and results generated.
  - Efficiently use the departmental data base to generate worksheets, produce clinical reports and answer simple enquiries.
  - Generate records of the results that are generated for their own special area of work using spread sheets and data bases.
  - Effectively use specialist computer software that may be an integral part of some items of equipment to retrieve and analyse test data such as DNA sequence information.
  - Access data bases (e.g. Human Genome data bases) through the internet to assimilate current genetic information that is required for the design of specific laboratory tests and for the accurate interpretation of test results.
  - Provide monthly activity figures for use by the head of the laboratory or departmental data manager.

### **Research and Development**

- Within their own work area, the post holder will:
  - Develop and validate new laboratory protocols that are likely to lead to improved overall service provision.
  - Undertake specific detailed case studies on specific patients.

## **8 Freedom to act**

- The post holder is:
  - Expected to work within all Operational Policies and Safety Regulations of the laboratory, Directorate and Trust.
  - Expected to work with a considerable degree of autonomy but guidance is given by the service manager, head of section or deputy/head of laboratory when required.
  - Free to make suggestions concerning alterations to policies and procedures.
  - Not allowed to issue clinical reports without the authorisation of a clinical scientist of at least Principal grade.
  - Expected to conform to all aspects of clinical governance

## **9 Effort & Environment**

### **Physical**

- Only light physical effort is required, but work is carried out at the laboratory bench for 50-60% of the working day. The remaining time is spent at a designated desk within shared office space.

### **Mental**

- The post holder is expected to concentrate for substantial periods each day.

Setting up laboratory analyses requires uninterrupted concentration to avoid any potential for error.

- High levels of mental effort are required for most other aspects of the job, including deciding on appropriate tests for particular patients, interpretation of laboratory results, writing clinical reports, instructing other members of staff and carrying out R&D.

### **Emotional**

- The post holder has direct access to the clinical details of patients and their work will directly lead to:
  - The diagnosis of inherited terminal conditions in adults (e.g. cancers, Huntington's disease) and children (e.g. muscular dystrophy, cystic fibrosis).
  - The diagnosis of an inherited disorder in a foetus as a result of a prenatal investigation. This frequently leads to termination of the pregnancy.

### **Working conditions**

- From time to time, the post holder is required to work with unpleasant factors within a controlled environment such as:
  - Reception and processing of range of biological samples for molecular genetic analysis including blood, tumour biopsies, foetal tissue and mouth swabs. Occasionally, the samples will have a known high hazard risk, for example from HIV or hepatitis. More often, the hazard risk of the samples will be unknown.
  - Handling of potentially harmful chemicals such as carcinogens, mutagens, neurotoxins and irritants for which training and knowledge of COSHH is required.
  - Handling of radioisotopes for which registration with the radiological protection officer is required.

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*Agreed post holder* ..... *Agreed manager* .....

*Date* .....

*Date* .....