

JOB DESCRIPTION

1. JOB IDENTIFICATION

Job Title:	Consultant Clinical Scientist (Medical Microbiology)
Responsible to (insert job title):	Head of Molecular Diagnostics
Department(s):	Laboratory Medicine
Directorate:	DATCC
Operating Division:	Lothian University Hospital Division
Job Reference:	165242 - L-DATCC-LAB-MM-CCS
No of Job Holders:	1
Last Update (insert date):	13/01/2023

2. JOB PURPOSE

To take a lead role in partnership with Clinical Scientists, Biomedical Scientist and other Consultant staff in the delivery of the Microbiology service, including the development and implementation of molecular assays for bacterial, fungal and parasitic pathogens for NHS Lothian and other boards in conjunction with Service level agreements.

To support the provision of a clinical advisory service communicating test results and other information to clinical, nursing and scientific colleagues relating to microbiology and infection control.

To closely work with consultant colleagues in virology, microbiology and infection control to implement the scientific and diagnostic priorities of virology, microbiology and infection control.

To provide training and development activities for Registered Clinical Scientists and Clinical Scientists Trainees within the service.

3. DIMENSIONS

The Department of Laboratory Medicine in NHS Lothian includes the Departments of Blood, Cell and Gene Sciences and operates from 3 sites. The Directorate has an establishment of over 500 staff including medical consultants and specialist registrars, consultant, principal, registered and trainee clinical scientists, biomedical scientists, biomedical support workers and A&C staff.

Staffing Responsibilities:

The establishment for Molecular Diagnostics consists of approximately 100 staff . 1 8D - 3 8C, 1 8B, 8 8A , 14 band 7, 25 Band 6, 5 band 5, 25 band 4, 4 band 3. The post holder will have line management responsibilities for Clinical Scientists Trainees within the specialty and provide scientific leadership for Clinical Scientist staff within the Molecular Microbiology service which includes Principal Clinical

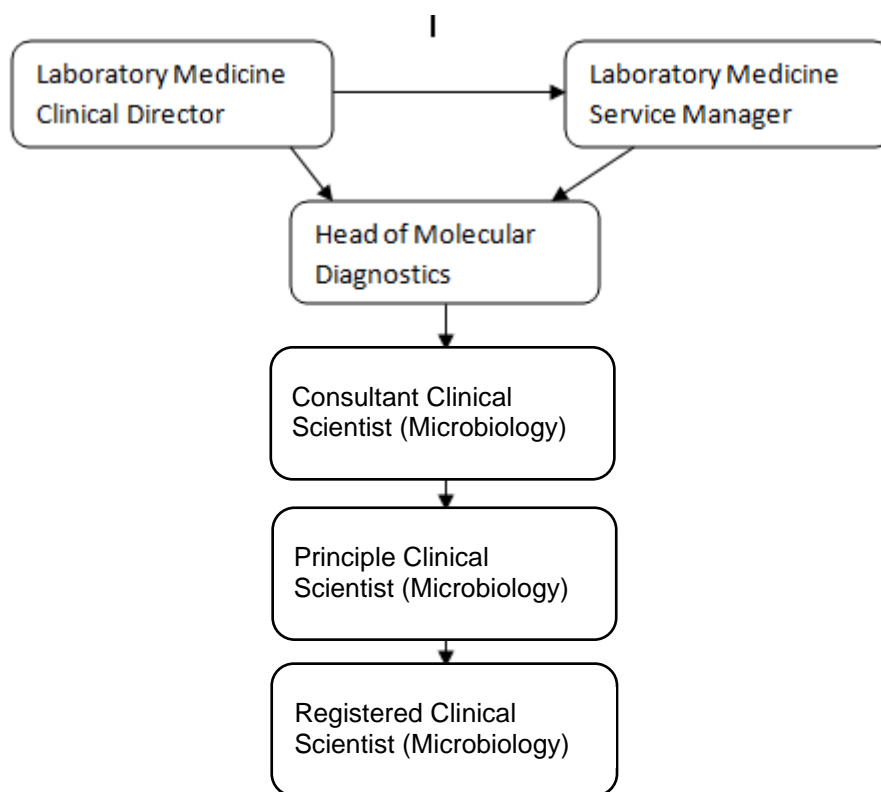
Scientists and Registered Clinical Scientists.

Financial Responsibilities:

The post holder will work with Laboratory Managers in the selection and procurement of analytical equipment in use across the specialty.

4. ORGANISATIONAL POSITION

Clinical Scientist: Staffing Structure in Microbiology



See appendix for overall Microbiology structure

5. ROLE OF DEPARTMENT

The Department of Laboratory Medicine provides laboratory services to primary and secondary care centres within and beyond Lothian. These services are currently delivered from 3 sites; the Western General Hospital (WGH), the Royal Infirmary of Edinburgh (RIE), and St Johns Hospital Livingston (SJH). The laboratories perform over 13 million tests per annum, and employ over 500 staff. Laboratories provide a 24/7 clinical and medical laboratory service and a comprehensive range of investigations including decentralised testing sites. The laboratories are well equipped, fully computerised and accredited by UKAS.

The NHS Lothian Molecular Diagnostic service provides a national, highly specialised, technical, scientific & clinical service in support of the investigation and management of a very wide range of analysis in Molecular Diagnostics.

6. KEY RESULT AREAS

1. To provide evidence based clinical advice on the diagnostic and prognostic significance of multi-stranded results to clinical staff both within NHS Lothian and the wider NHS Scotland. This includes treatment advice as specified by the discipline.
2. To participate in the provision of a comprehensive microbiology service to national standards. This will include involvement in data analysis, interpretation and validation of results and the provision of relevant advice.
3. To provide support for the continuous improvement in service delivery and quality within the microbiology service including responsibility for monitoring and ensuring compliance with national laboratory accreditation standards (UKAS), external quality assurance (e.g. UKNEQAS, QCMD), health and safety legislation, liaison with users including complaints in conjunction with laboratory management.
4. The post holder will have line management responsibilities for Clinical Scientists Trainees within the specialty and provide scientific leadership for Clinical Scientist staff within the Molecular Microbiology service which includes the posts of Principal Clinical Scientist and Registered Clinical Scientist.
5. To participate in Clinical Governance by collecting and collating activity data and conducting audits as necessary.
6. To work with laboratory management in the selection and integration of new technology or tests into the laboratory routine, e.g. procurement of large expensive equipment, advice on specific methods relating to the molecular diagnostics service.
7. To participate in the formulation of long-term strategic plans for Microbiology for NHS Lothian, taking cognisance of potential developments in the field.
8. To develop new microbiology diagnostic tests and assays in conjunction with laboratory managers providing scientific support for the evaluation and validation introduction of new technologies/services and the development of associated policies, and the management of their implementation.
9. To develop, instigate and implement in conjunction with laboratory management, policies, proposed changes to practices, new ways of working for the specialist area and interpretative guidelines for the molecular and microbiology diagnostics service both internally within NHS Lothian and externally for all users.
10. To initiate research and development in the discipline with a view to evaluating any clinical/diagnostic benefits of new developments in the field of microbiology diagnostics and to collaborate with academic departments with a view to developing research programmes.
11. To take responsibility for producing high quality R&D data for publication arising from these activities. The post holder should be able to present highly complex information to large groups outside of NHS Lothian, whether by presentation at scientific meetings or by publication in national and international scientific journals.

12. To maintain up to date knowledge of scientific, clinical and technical developments in Microbiology.
13. To support laboratory managers with the preparation and maintenance of Standard Operating Procedures, policies and other relevant documentation for the introduction of new technology or tests in molecular microbiology.
14. To provide relevant specialist training for internal and external groups i.e. training for medical trainees, clinical scientist trainees in Microbiology (including Infection Control) and support training in other sections of Molecular Microbiology at varying levels for health professionals and medical staff. To supervise research assistants and students from time to time.
15. To support NHS Lothian's values of quality, teamwork, care and compassion, dignity and respect, and openness, honesty and responsibility through the application of appropriate behaviours and attitudes.
16. Support the development and implementation of Infection Prevention and Control policies, in collaboration with the Infection Prevention and Control Team, across NHS Lothian.

7a. EQUIPMENT AND MACHINERY

Possess broad ranging and detailed knowledge of all equipment used within the specialty. Many items of equipment have a value >>£40,000.

Complex: Qiagen BioRobot for nucleic acid extraction, ABI real-time thermal cycler and product detection system, Automated Fluorescent DNA sequencers, Next Generation Sequencing.

Standard: Basic office equipment (standard PC and office packages, photocopier, fax, telephone).

7b. SYSTEMS

Frequently (daily) analyse electronically, on a computer, complex laboratory data using specialised statistical and graphics packages.

Possesses an in-depth knowledge of the laboratory computer system and uses this knowledge to order tests and report patient results, including interpretative comments, to clinicians. Hold an authorisation level that permits modification of patient records and thus allow data and demographic entry errors to be corrected.

Use standard PC word processing database and spreadsheet packages to daily write reports, letters, publications etc.

Have knowledge of and be able to use electronic incident reporting procedures (DATIX).

Possess a working knowledge of other electronic systems (e.g. PECOS, SCI Store, Trak, ILab, e KSF, SSTS) in order to provide a quality service to clinicians.

Uses the Internet to appropriately research detailed scientific/medical information. This may require complex literature searches.

8. ASSIGNMENT AND REVIEW OF WORK

All daily work is prioritised and self-managed.

Clinical work must deal with clinical and scientific problems for which there are minimal guidelines and must draw on his/her experience and scientific judgement to provide solutions working to agreed deadlines.

Objectives are set and reviewed annually with Head of Molecular Diagnostics through both a Personal Development Plan and the Department's ISO 15189 Quality System.

Priorities influenced by clinical demand and service research and development.

Subject to annual appraisal and performance review by the Clinical Director for Laboratory Medicine.

9. DECISIONS AND JUDGEMENTS

The post- holder will:

Work autonomously to interpret complex results and make valid judgements across the comprehensive advisory service for screening, diagnostic and prognostic tests, including advising on further testing strategies, diagnosing disease and modifying clinical management based on laboratory results.

Interprets published data (highly complex) from national and international journals to inform local and national policy, demand optimisation, prioritising tests/profiles.

Be expected to make clinical decisions that require immediate patient management "on call" as well as during normal working hours that require knowledge and skills at the level of FRCPath.

Participate in the planning and delivery of National Education Service training programmes for Clinical Scientist trainees in microbiology (including virology) across Scotland.

Supervision of the local training of Clinical Scientist trainees in microbiology (including virology).

Be expected to initiate, develop and implement clinical policies, procedures and guidelines and interpreting any national policy or guidance and translating into local policy i.e. local healthboard i.e. Point of Care Testing Protocols for Respiratory virus.

Represent the laboratory/directorate on organisation-wide clinical working groups and committees.

To prioritise microbiology activity in conjunction with the departmental managers.

Review research suggestions, protocols and grant applications, both internally and for external bodies.

10. MOST CHALLENGING/DIFFICULT PARTS OF THE JOB

Considering the conflicting pressures of increased need for development of service and education and training of staff within the constraints of budget and limited staff resource.

Requires advanced scientific knowledge, interpretative skills and the ability to concentrate and review computerised laboratory results.

Ability to work under pressure, to handle complaints and to communicate with all grades of staff throughout the organisation.

Managing time effectively to meet competing demands, often resulting from the unpredictable nature of the workload and lack of administrative/secretarial support.

11. COMMUNICATIONS AND RELATIONSHIPS

Divisional communication

Divisional Management Team Members: implementation of local strategies informed by national policy.

Laboratory Specialty Management Team Members: strategic and future trends and the need for new demands and adaption within the service.

Senior clinical staff: updating protocols, effective use of new technology to enhance patient management.

Non-clinical staff: consideration of workflows and prioritisation of new technology to improve service and how existing technology could improve workflows in conjunction with Laboratory Management.

Internal (Departmental) communications

The post-holder communicates on a regular basis with all Healthcare Science Managers, Operational Managers (Cell Science), Clinical, technical, scientific and Administrative staff within Microbiology regarding the day-to-day activities of the Department and negotiates agreed solutions to on-going problems.

Works closely with Virology colleagues (clinical, technical and managerial) to support common issues, usually on a daily basis.

Daily communication with other members of the NHS Lothian Infection Service (NIS; Infectious Diseases, Infection Prevention and Control Team) to support patient and hospital-wide infection management,

Other Pathology disciplines and Clinical Groups i.e. Infection group Communications in the Directorate.

Regular communication with Consultant Colleagues, Operational Managers on Directorate business.

Consultant and senior colleagues in Molecular Diagnostics across Lothian in connection with Molecular Diagnostics issues.

Frequently deal with highly sensitive and contentious issues such as the proposed reconfiguration of laboratory services across Lothian where there may be a significant degree of hostility from both clinical and laboratory staff.

Work with Laboratory Managers in the implementation of changes in laboratory working practices by providing expert advice and supporting and motivating staff.

External communications

Other NHS Boards attend national meetings, networks, present business cases for change nationally.

Local Authority partners: in relation to microbiological contamination of food and water and the local council in relation to schools and communication on the control of microbiological outbreaks.

Royal College of Pathologists: participate in working groups, advising on curriculum development and assessment of Clinical Scientist trainees.

Universities research projects work with academia in NHS related projects and grants.

On a regular (usually daily) basis, work with medical (up to consultant level) and nursing staff in the Acute Hospitals, Primary Care and General Practice, offering advice on the interpretation of microbiology results and appropriate investigations on specific patients or dealing with wider issues relating to the service.

Regular contact with a range of UK-wide colleagues in the Diagnostics community in relation to Diagnostics issues (e.g. discussion with other Scottish and UK screening laboratories in relation to antenatal screening issues).

Negotiate with outside suppliers and procurement officials on the provision of laboratory equipment and services for R&D projects only.

Participate in and establish clinical and professional networks of staff locally and nationally.

Formal presentations

Formal presentations of complex biochemical information to large groups (50-100) of clinical staff e.g. at Grand Rounds, external national / international scientific meetings.

Formal teaching of medical students (the post-holder holds an honorary Senior Lectureship in the University of Edinburgh) and Specialist Registrars, laboratory staff and other healthcare professionals.

12. PHYSICAL, MENTAL, EMOTIONAL AND ENVIRONMENTAL DEMANDS OF THE JOB

Physical:

Sitting at a computer station for prolonged periods of time with extensive use of on-line media. Frequent light effort for several short periods.

Mental:

Frequent requirement for intense concentration e.g. in providing clinical advice and analysing complex scientific and laboratory data.

Working to tight clinical and managerial deadlines.

Emotional:

Resolve enquiries and complaints as required from clinicians, patients (where there may be barriers to understanding), managers and staff, which may be complex, sensitive and contentious.

Provision and receipt of highly complex and sensitive information effectively.

Occasional exposure to distressing or emotional circumstances whilst taking part in ward rounds and clinics.

Environmental:

Combination of office and laboratory based working environments with long periods of VDU usage.

Occasional exposure to unpleasant working conditions, e.g. exposure to contained and uncontained body fluids, faecal samples, toxic/carcinogenic chemical hazards, radioactive substances, infectious agents in a controlled environment.

Working environment is mainly office based with some laboratory work.

Travel between LUHS sites and to regional meetings as required.

13. KNOWLEDGE, TRAINING AND EXPERIENCE REQUIRED TO DO THE JOB

Qualifications

Upper second or first class honours degree in a relevant biological or molecular science.

Masters degree, MSc in a Molecular Science or doctorate PhD in a relevant field.

Fellow of the Royal College of Pathologists (FRCPath) in Medical Microbiology achieved through examination as required for medical consultant posts.

Demonstration of Continuing Professional Development, e.g., registration with the Royal College of Pathologists scheme.

Registration

The post-holder must possess Healthcare Clinical Scientist State Registration with the Health and Care Professions Council (HCPC).

Experience

Significant experience as a Clinical Scientist in Microbiology and developed expertise in one or more specialist analytical or clinical areas.

To have attained a good record of achievement in research, development and audit activities, through presentations at national or international conferences and publication in peer reviewed medical and scientific journals.

Extensive knowledge and expertise in Microbiology and healthcare Diagnostics.

14. JOB DESCRIPTION AGREEMENT

A separate job description will need to be signed off by each jobholder to whom the job description applies.

Job Holder's Signature:

Head of Department Signature:

Date:

Date:

