

**NHS TAYSIDE – AGENDA FOR CHANGE
JOB DESCRIPTION**

1. JOB IDENTIFICATION	Job Title	PRINCIPAL CLINICAL SCIENTIST (PORPHYRIA CLINICAL BIOCHEMISTRY SERVICE & PHOTOBIOLOGY RESEARCH)
	Department(s)/Location	Photobiology Unit, Department of Dermatology, Ninewells Hospital & Medical School, Dundee (NHS Scotland – employing board NHS Tayside)
	Number of job holders	
2. JOB PURPOSE		
<p>This is a key post in the Scottish Photobiology Service (SPS), based in the Photobiology Unit in Dundee and is funded by the National Services Division. The Unit is internationally renowned as one of the few key centres involved in diagnosis and management of the photodermatoses, including the cutaneous porphyrias. The Unit's work has led to numerous clinical developments in photodermatology, including investigation of the photodermatoses, the phototherapies and photodynamic therapy.</p> <p>The main role of the post-holder is to undertake highly specialist scientific, clinical and technical healthcare science to deliver a high quality diagnostic service to the Photobiology Unit. The post-holder will be required to provide expert advice and opinion to consultant medical, scientific and technical staff in the specialist areas of porphyria and photodermatoses. They will lead, and provide specialist training for, a team of technical and scientific staff delivering the biochemical testing part of the Scottish Porphyria Service.</p> <p>1. Porphyria testing service as part of the Scottish Photobiology Service (SPS)</p> <p>The laboratory in the Photobiology Unit (PBU) provides testing to contribute to diagnosis in the porphyrias, with external quality assurance through WEQAS, provider of CPA (EQA) accredited porphyrin schemes, and also through the RCPA porphyrin biochemistry external quality assurance scheme. The Photobiology Unit as part of Medical Physics and Immunodiagnostics, is BSI registered under BS EN ISO 9001:2000 (FM 338 38) and ISO 13485:2003 (MD 77843).</p> <p>The post-holder will provide highly specialist biochemical testing including:</p> <ul style="list-style-type: none"> • porphyrin plasma and blood spectrofluorimetry tests • quantification of porphyrins in red blood cells, urine and stool • HPLC analyses of porphyrins in urine and stool samples, <p>These tests are used to biochemically diagnose rare porphyrias as an important function of the Porphyria Service, an integral part of the SPS.</p> <p>They will also be required to provide expert advice and clinical opinion on the results of the biochemical testing to consultant physicians in the PBU team. The post-holder will provide specialist input into clinical reports.</p> <p>Continuous critical assessment is undertaken of service needs and, consequently, developments are constantly required. These include enzyme activity assays and quantitative analysis of the porphyrin precursors. The post-holder will be responsible for leading, managing and training technical staff in the clinical biochemistry part of the Porphyria Service.</p>		

2. The post-holder will, with medical and medical physics colleagues, regularly co-ordinate and participate in Research and Development activities including clinical trials. These activities are driven by clinical service developments and the need for laboratory research to underpin the diagnosis and management advice for patients referred for assessment in the PBU.

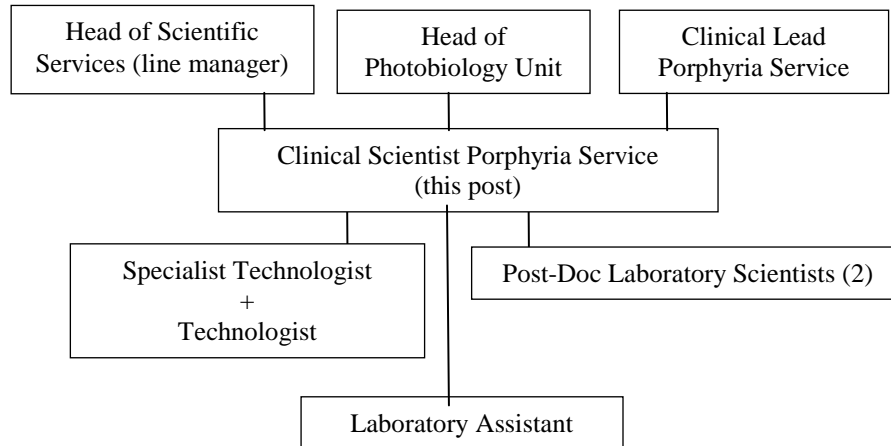
The Photobiology Laboratory is an essential component of the highly specialised SPS and PBU activities. The modern laboratory has been specifically designed to provide an area for delivering a high quality service and expert teaching facility. Various avenues of clinical service development and research are ongoing, including in vitro studies in relation to porphyrin-based phototoxic and photodynamic work and assessing drug phototoxicities.

The post-holder will thus:

- perform highly specialist clinical service activities
- provide expert advice to professionals in the unit
- lead, deliver and develop the clinical service
- undertake clinically driven research and participate in clinical trials
- teach and train professionals from a wide range of disciplines.

3. ORGANISATIONAL POSITION

The postholder will be responsible for the biochemical testing of the national porphyria service. They will also be responsible for leadership and supervision of the PBU laboratory and staff members and for leading the clinical service development and research activities of the laboratory. The postholder will work closely with the consultant dermatologist who is clinical lead for the porphyria service, the Head of PBU Scientific Services (who will be their line manager) and the consultant dermatologist who is Head of the PBU.



4. SCOPE AND RANGE

The postholder is based at Ninewells Hospital and Medical school, but participates in an analytical, interpretive and adviser service that is Scotland-wide.

5. MAIN DUTIES/RESPONSIBILITIES

The postholder will:

1. Have day to day scientific and managerial responsibility for the PBU laboratory
2. Be line manager for a Specialist Technologist, a Technologist, Post-doc Scientists and a Laboratory Assistant. They will lead, manage and train staff in clinical biochemistry.
3. Provide specialist teaching and training to post-graduate standards to medical, nursing and laboratory staff.
4. Provide specialist teaching to undergraduate medical and science students.
5. In liaison with clinical colleagues, be responsible for performance and interpretation of highly complex tests, providing expert opinion on test results which are open to interpretation. These test results will be used for advice on differential diagnoses, and monitoring of treatment for patients across Scotland.
6. Authorise clinical reports, provide written interpretive comments on complex test results and advice for inclusion within patient records.
7. Respond to requests for telephone consultations from users.
8. Have advanced theoretical and practical knowledge of metabolic medicine in adults, children and neonates including metabolic processes, inherited disorders, dermatology, endocrinology, nutrition, pharmacology, drug interference and toxicology and specialist laboratory equipment.
9. Have freedom to act autonomously within professional guidelines while referring to Consultant medical staff where necessary.
10. Act as lead clinical biochemistry specialist for the Photobiology Unit.
11. Interpret, develop and ensure the implementation of clinical guidelines and policies for complex laboratory testing strategies. Contribute to the development of clinical protocols, subject to discussion. Make decisions, which may be out with immediate field of expertise.
12. Participate in medium term service development and enhancement.
13. Participate in the introduction of new tests/services which may impact on multiple disciplines within the service.
14. Co-ordinate specialist research and development in areas relevant to the needs of the service.
15. Undertake grant applications to secure research funding and obtain funding for clinical service development.

16. Communicates specialist information at local, national and international clinical/scientific meetings in order to maintain knowledge and acquire new knowledge and skills for service development.
17. Have detailed awareness of analytical methods, in order to identify and resolve complex analytical problems.
18. Provide expert analytical and clinical knowledge for the provision and development of this specialist service and have highly specialist technical skills requiring accuracy and precision, which are essential for the service.
19. Contribute to the evaluation and implementation of recent developments in clinical biochemistry, including new analytical methods and equipment, and ensure the service provides evidence-based good practice.
20. Analyse complex laboratory data using statistical packages and produce appropriate reports.
21. Be familiar with the health and safety policies operating within the Department and ensure that they are carried out to maintain a safe working environment for employees and visitors.
22. Participate in appropriate internal, regional, national and international quality control and assessment schemes.
23. Take overall responsibility for planning and organising specialist service and workload to ensure efficient working in the laboratory, including staff workload, audits, laboratory meetings, service-planning projects and the management of laboratory finances and budgets.
24. Spend a proportion of their time in evaluation of published literature relating to clinical biochemistry, disseminating knowledge gained during private study or research and resulting in presentation and publications at local, regional, national and international meetings and in peer reviewed scientific journals.
25. Ensure the development, maintenance and dissemination of the highest professional standards of practice, through active participation in internal and external specialist training and development programmes to postgraduate standards including participating in Departmental and other seminars and local and national meetings and training events.

Maintenance of the Quality Management System/ Clinical Governance

Preparation and review of Standard Operating Procedures and COSHH Assessments in section(s) within which they have been given responsibilities.

Audit/EQAS

Participate in appropriate external quality assurance schemes concerning porphyrin and porphyrin precursor, analysis. Inspect all returns from external quality assessment. Regularly audit workload, performance, turnaround time. Participate in national audit as appropriate.

6. COMMUNICATIONS AND RELATIONSHIPS

The postholder will be required to:

Be able to interpret and explain the clinical significance of highly complex laboratory test results to a range of staff including medical and nursing staff up to consultant level.

Liaise with clinical colleagues within the Unit and in the hospital and external referrers on the interpretation of results and appropriateness of testing in conjunction with the Clinical Lead for the Porphyria Service, the Head of Scientific Services and the Head of the Photobiology Unit.

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

Undertake leadership and management of laboratory personnel, with emphasis on communication and teamwork.

Present research and development results, clinical audit findings, and clinical cases at local and national conferences.

Provide instructional specialist training and on-going education to laboratory staff, other health professionals and patients.

Teach and communicate basic and advanced complex clinical and scientific concepts and provide education within and outwith the hospital. Provide specialist training to professionals from a range of disciplines.

Deal with the provision and receipt of highly complex and sensitive information effectively.

Participate in departmental, local and national professional and health and safety committees as appropriate

Promote the reputation of the Scottish Porphyria Service and the NHS.

Encourage and support junior staff to develop their full potential for the benefit of the Scottish Porphyria service and their careers.

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

Qualifications

Upper second or first class Honours degree in relevant science eg Biochemistry.

Completion of the nationally accredited Clinical Scientist training programme or equivalent experience.

Higher degree (PhD or MSc) in an appropriate discipline.

Encouraged to work towards a higher professional qualification.

Registration

Clinical Scientist Registration with the Health Care Professions Council, or evidence that will work towards this.

Experience

Advanced theoretical and practical knowledge of metabolic medicine, a broad range of dermatologic conditions and specialist laboratory equipment.

Extensive experience in a broad range of laboratory investigations.

Lead in the provision of an effective and high quality Scottish Porphyria service to patients throughout Scotland.

Expertise in specialised analytical areas.

Training

Demonstration of Continuing Profession Development as laid down by the Health Care Professions Council.

Adhere to the Health Care Professions Council (HCPC) standards of conduct, performance and ethics.

Attend and maintain mandatory training as outlined by NHS Tayside.

Develop and maintain skills appropriate to the grade and to participate in the NHS Tayside appraisal scheme.

ESSENTIAL ADDITIONAL INFORMATION

8. SYSTEMS AND EQUIPMENT

The post holder will:

Possess broad ranging detailed knowledge of all equipment within the Department

Take responsibility for the daily operation, training and the performance quality of highly specialised laboratory investigations and instrumentation within specialist area.

Have a lead role in the replacement, selection and evaluation of laboratory equipment for use in the PBU laboratory (value in excess of £350,000).

Possess an in depth knowledge of the laboratory computer system and interfaced technologies, in order to provide a quality service to clinicians.

Use standard PC word processing, database and spreadsheet packages.

Responsibility for Records Management

All records created in the course of the business of NHS Tayside are corporate records and are public records under the terms of the Public Records (Scotland) Act 1937. This includes email messages and other electronic records. It is your responsibility to ensure that you keep appropriate records of your work in NHS Tayside and manage those records in keeping with the NHS Tayside Records Management Policy and with any guidance produced by NHS Tayside specific to your employment.

9. PHYSICAL DEMANDS OF THE JOB

Physical

Combination of sitting, standing and walking required. Prolonged periods of restricted movement (standing and sitting) when working at fume hoods and microscopes. Prolonged periods of working in low lighting conditions due to sensitivity of samples to light. Occasional requirement for lifting e.g. equipment, reagents. There is a frequent requirement to carry out highly complex analytical procedures requiring expert skilled performance. Accurate visual skills are required to evaluate protein electrophoresis gels, iso-electric focussing blots, and chromatographs. There is a requirement to handle samples of blood, urine and faeces - this may be unpleasant and may arise from "high risk" patients.

Mental

There is frequent requirement for prolonged intense concentration including clinical authorisation sessions where large numbers of complex laboratory results require review and validation with frequent interruptions for enquiries. These interruptions are unpredictable and may require multi-tasking and re-prioritisation of work pattern. There is occasional need to vigorously challenge medical or managerial opinions, maintaining conviction in own knowledge and opinions. The capacity to retain up to date information on all aspects of the laboratory repertoire, current regulations, current professional and governmental guidelines, etc. is essential.

Emotional

The post-holder is regularly required to direct staff to change some aspect of work procedures or priorities. It is occasionally necessary to respond to complaints/disputes arising from laboratory users and staff. There is occasional need to vigorously challenge medical or managerial opinions.

10. DECISIONS AND JUDGEMENTS

The post holder will:

Work autonomously to interpret complex results and provide a comprehensive advisory service for screening, diagnostic and prognostic tests. This will include advising on further testing strategies diagnosing disease and modifying care and treatment based on biochemistry results, patient history, drug information, patient signs and symptoms and results of tests from other disciplines which may be conflicting. There will be a number of options available. Back-up, when required, is available from Consultant staff, and from the Head of Scientific Services (line manager).

Be expected to contribute to and implement managerial and clinical policies, procedures and guidelines.

Propose and develop changes to laboratory practices, which may impact on other disciplines in the department.

Monitor performance and internal quality control of analyses performed in their area.

Carry out external quality assurance procedures, submit results and act on returns from external quality assurance schemes.

Be expected to organise their own time and prioritise work accordingly.

Assist with specialist training of internal and external staff.

11. MOST CHALLENGING/DIFFICULT PARTS OF THE JOB

The varied list of roles and tasks that may be undertaken as part of this job.

Organising workload with the need for flexibility and simultaneously maintain efficiency and effectiveness.

Meeting regulatory and other accreditation standards including RCPA and WEQAS.

Making independent decisions about laboratory scientific issues, often in highly complex, potentially contentious and multifaceted environments.

Working with potentially hazardous and infectious clinical samples using personal protective clothing and equipment.

Working under pressure to meet immediate clinical needs of patients and users.

Provision of a national service and ensuring that this is kept at the forefront of medical science. Ensuring that the service develops based on cutting edge clinically relevant research.

12. JOB DESCRIPTION AGREEMENT

The job description will need to be signed off using the attached sheet by each postholder to whom the job description applies.

