

**CHEMICAL PATHOLOGY FELLOWSHIP ATTACHMENT  
PROGRAMME IN SGH**

Components	Information
<b>1. Division/ Department</b>	Pathology/ Clinical Pathology
<b>2. Title of Programme</b>	Fellowship Training in Chemical Pathology
<b>3. Relevant Registrations</b>	<ul style="list-style-type: none"> <li>• Temporary Registration with Singapore Medical Council (SMC)</li> <li>• Training employment pass application with Ministry of Manpower, Singapore (MOM) (upon successful Temporary Registration with Singapore Medical Council)</li> </ul>
<b>4. Overview</b> 4.1 Background information	<p>This fellowship programme provides post-graduate training for Chemical Pathologists who have exited from a post-graduate traineeship programme in chemical pathology.</p> <p>The programme provides an integrated &amp; comprehensive exposure to Chemical Pathology - a major sub-speciality of Pathology and Laboratory Medicine. The Clinical Fellow will work closely with Chemical Pathologists who helm the SGH clinical biochemistry service which hosts a wide 250-test repertoire, an annual workload in excess of 12 million tests requests and a rich clinical case-load from in-house, local and regional referrals. Cutting edge test methodologies and technologies, such as total laboratory automation systems, high performance liquid chromatography and tandem mass spectrometry, are extensively utilized.</p> <p>The department, being part of an academic institution, conducts a series of educational sessions and workshops for local and regional laboratory professionals; the Clinical Fellow will be strongly encouraged to join the sessions as a participant and potentially as teaching faculty.</p>
4.2 Goal/ aim(s)	Upon successful completion of the programme, the Clinical Fellow will learn to lead and manage a reliable clinical biochemistry laboratory and contribute to clinical investigation and management of patients.
4.3 Duration	6 months (with provision to extend to a maximum of 12 months to allow more hands-on opportunity)
4.4 Hyperlinks/URL Sites	<p>SGH Pathology: <a href="https://www.sgh.com.sg/patient-care/specialties-services/clinical-pathology">https://www.sgh.com.sg/patient-care/specialties-services/clinical-pathology</a></p> <p>Pathology ACP: <a href="https://www.singhealthdukenus.com.sg/acp/pathology">https://www.singhealthdukenus.com.sg/acp/pathology</a></p>
<b>5. Target Audience</b>	Chemical Pathologists who have exited from a post-graduate chemical pathology traineeship programme.
5.1 Pre-requisite /eligibility requirement(s)	<p>General requirements for Temporary Registration for training (required by SMC):</p> <ul style="list-style-type: none"> <li>• A basic medical degree from an accredited medical university or medical school</li> <li>• Passed the relevant national licensing examination in the country of conferment of basic degree, where applicable</li> <li>• Evidence of at least 12 months' houseman-ship / internship with a certificate of satisfactory completion of houseman-ship or equivalent</li> </ul>

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	<ul style="list-style-type: none"> <li>• Been registered as a medical practitioner in the country where he is currently practising</li> <li>• Been certified to be of good standing by the Medical Council or the relevant national authority</li> </ul> <p>Note: the doctor should be in active clinical practice for the 3 years preceding the application for medical registration.</p> <p>In addition to the above criteria, <b>Clinical Fellow</b> must:</p> <ol style="list-style-type: none"> <li>a) Have a minimum of 3 years of relevant working experience as a medical officer (or equivalent)</li> <li>b) Fulfil English Language requirements of SMC if the medium of instruction for the basic medical qualification is not in English</li> <li>c) Preferably have obtained a postgraduate diploma or degree in his country or overseas</li> <li>d) As a Clinical Fellow, the doctor will be allowed to be involved in patient care and make entries in patients' case note, communicate care plans to patients and fellow healthcare professionals, and perform procedures under <u>direct</u> supervision or Level 1 supervision</li> </ol> <p><b>Department's requirement, if any (only for Clinical Fellow in this subspecialty):</b> Not applicable.</p>
<p><b>6. Learning Objectives</b></p>	<p>This fellowship would allow the Fellow to enhance his/her:</p> <ul style="list-style-type: none"> <li>• Specialised factual knowledge of Clinical Biochemistry</li> <li>• Experience in clinical consultation and clinical liaison</li> <li>• Knowledge and experience in quality control and quality assurance procedures</li> <li>• Experience in laboratory test result verification and interpretation</li> <li>• Knowledge in laboratory technology</li> <li>• Skills in data management</li> <li>• Experience in planning departmental and laboratory policies</li> <li>• Skills in teaching and coaching</li> <li>• Experience in research and publishing results of research work</li> </ul>
<p><b>7. Course/Training Syllabus</b></p>	<p>The Chemical Pathology fellowship programme will span the wide range of clinical biochemistry practice in the SGH Department of Clinical Pathology. It will be conducted at both the central laboratory and satellite laboratories.</p> <p>The fellowship programme will cover the following areas:</p> <ul style="list-style-type: none"> <li>• Clinical Consultation and Clinical Liaison</li> <li>• Laboratory Quality Management</li> <li>• Laboratory Assay/Test Management (including Point-of-Care Testing)</li> <li>• Laboratory Workflow/Operation/Safety Management</li> <li>• Laboratory Management and steering prioritisation of hospital/organisational resources to enable an effective and productive laboratory service</li> <li>• Education and teaching for Chemical Pathology trainees and Medical Laboratory Scientists/Technologists</li> </ul>

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	<ul style="list-style-type: none"> <li>Research on laboratory quality, laboratory assays (including point-of-care testing) and laboratory workflow improvement</li> </ul>											
<b>8. Training Method</b>	<p><b>Method of Supervision:</b></p> <ul style="list-style-type: none"> <li>Direct observation</li> <li>Socratic interaction and feedback</li> <li>Clinical Fellow will only practise in Department of Clinical Pathology, SGH and will be supervised by a SMC-approved supervisor from Department of Clinical Pathology, SGH at all times</li> </ul> <p><b>Observed Only:</b> Fellows will have opportunities to observe the following procedures:</p> <ol style="list-style-type: none"> <li>Data Management</li> <li>Laboratory Management</li> <li>Departmental and Laboratory Policy Planning</li> </ol> <p><b>Hands-On Experience:</b> Fellows will assist in the following procedures under supervision:</p> <ol style="list-style-type: none"> <li>Laboratory result verification and interpretation</li> <li>Performance of laboratory testing and quality control and quality assurance</li> <li>Participate in continuing education and teaching of the laboratory medical technologists and scientific officers</li> <li>Research and publishing results of research work</li> </ol> <p><b>No job rotation to other Departments within SGH is required.</b>  <b>No job rotation to other Institutions is required.</b>  <b>No night duties requirement.</b>  <b>No running of clinics requirement.</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th colspan="3">TRAINING ACTIVITIES &amp; METHODOLOGY</th> </tr> <tr style="background-color: #cccccc;"> <th style="width: 40%;">Name of activity</th> <th style="width: 30%;">Frequency / No. of sessions / Length of session</th> <th style="width: 30%;">Teaching methodology</th> </tr> </thead> <tbody> <tr> <td>Clinical Consultation and Clinical Liaison</td> <td rowspan="3">Daily (Routine)</td> <td rowspan="3"> <ol style="list-style-type: none"> <li>Direct Observation and Feedback</li> <li>Socratic Method through one-on-one question and answer interaction with the supervisor</li> <li>Log of training activities and assisted /observed procedures performed under supervision</li> </ol> </td> </tr> <tr> <td>Laboratory result verification and interpretation</td> </tr> <tr> <td>Performance of laboratory testing and quality control and quality assurance procedures</td> </tr> </tbody> </table>	TRAINING ACTIVITIES & METHODOLOGY			Name of activity	Frequency / No. of sessions / Length of session	Teaching methodology	Clinical Consultation and Clinical Liaison	Daily (Routine)	<ol style="list-style-type: none"> <li>Direct Observation and Feedback</li> <li>Socratic Method through one-on-one question and answer interaction with the supervisor</li> <li>Log of training activities and assisted /observed procedures performed under supervision</li> </ol>	Laboratory result verification and interpretation	Performance of laboratory testing and quality control and quality assurance procedures
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	Data Management  Laboratory Management  Planning departmental and laboratory policies	Daily	1) Observation 2) Socratic Method through one-on-one question and answer interaction with the supervisor
	Education and teaching for Chemical Pathology trainees and medical laboratory scientists/ technologists	Weekly	1) Didactic Method 2) Socratic Method
	Research and publishing results of research work, in a team or individually	One poster and one publication in a peer review journal	1) Co-author with supervisor
<b>9. Assessment and Evaluation</b>	<p>Clinical Fellow will need to demonstrate their proficiency level based on the following competencies:</p> <p><b>1) Patient Care</b></p> <ul style="list-style-type: none"> <li>Timely handling (under direct supervision) of cases for clinical consult or liaison</li> <li>Timely participation (under direct supervision) in laboratory result verification and interpretation, performance of laboratory testing and quality control and quality assurance procedures</li> <li>Due diligence towards patient safety</li> </ul> <p><b>2) Medical Knowledge</b></p> <ul style="list-style-type: none"> <li>Demonstrate competency in theoretical and practical knowledge in chemical pathology, particularly in clinical biochemistry, laboratory test methodologies and technology, quality control/assurance procedures</li> <li>Proficiency in the recognition and, where necessary, workup of common and rare entities spanning the diagnostic spectrum</li> </ul> <p><b>3) Practice-Based Learning and Improvement</b></p> <ul style="list-style-type: none"> <li>Ability to access and competently use traditional and web-based resources for handling assigned duties in patient care and for learning</li> <li>Active participation in teaching sessions and multidisciplinary meetings</li> </ul> <p><b>4) Interpersonal and Communication Skills</b></p> <ul style="list-style-type: none"> <li>Uphold professional, collegiate working relationships with all staff</li> <li>Ability to hold professional discussions and convey information in an unambiguous, accurate and timely manner (written and verbal) to all stakeholders</li> </ul> <p><b>5) Professionalism</b></p> <ul style="list-style-type: none"> <li>Adherence to professional ethnics and SingHealth core values</li> <li>Regular and dependable attendance</li> </ul>		

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	<p><b>6) Systems-Based Practice</b></p> <ul style="list-style-type: none"> <li>Uphold and practice safety and quality measures relating to patient care and laboratory practice</li> </ul>						
9.1 Assessment approaches	<p><b>Formative assessment:</b></p> <ul style="list-style-type: none"> <li>Regular evaluation between Clinical Fellow and Supervisor / Head of Department</li> <li>Reflective journal- logbook recordings of training activities</li> </ul> <p><b>Summative assessment:</b></p> <ul style="list-style-type: none"> <li>Periodical assessment reports as required by Singapore Medical Council</li> </ul> <p><b>Feedback:</b></p> <ul style="list-style-type: none"> <li>End-of-training feedback form as required by Singapore Medical Council</li> <li>End-of-training feedback session with SGH-PGMI</li> </ul>						
9.2 Evaluation Process 9.2.1 General overall grading system	<p>The general overall grading system evaluates the Clinical Fellow's performance upon completion of the fellowship programme. All Clinical Fellow will be given a general overall grading status at the end of the fellowship programme based on the grading criteria requirements incorporating the six competencies based knowledge, skills and performance that Clinical Fellow must demonstrate throughout the programme.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #4F81BD; color: white;">Grading Status</th> <th style="background-color: #4F81BD; color: white;">Description</th> <th style="background-color: #4F81BD; color: white;">Grading Criteria Requirements</th> </tr> </thead> <tbody> <tr> <td style="background-color: #D9E1F2;"><b>CMP</b></td> <td style="background-color: #D9E1F2;">Completes the programme</td> <td style="background-color: #D9E1F2;"> <ul style="list-style-type: none"> <li>Full attendance at Department of Clinical Pathology, Singapore General Hospital on all working days for duration of attachment (except when absent with explicit approval from supervisor or with valid reasons, e.g. medical/ emergency leave); total period of absence not exceeding 90% of overall programme duration)</li> <li>Attendance at (at least) 80% of scheduled laboratory or educational meetings (Clinical Biochemistry Lab Workflow Meetings, Clinical Biochemistry Journal Clubs, other meetings as assigned by supervisor)</li> <li>Demonstrate professional behaviour at all times.</li> </ul> </td> </tr> </tbody> </table>	Grading Status	Description	Grading Criteria Requirements	<b>CMP</b>	Completes the programme	<ul style="list-style-type: none"> <li>Full attendance at Department of Clinical Pathology, Singapore General Hospital on all working days for duration of attachment (except when absent with explicit approval from supervisor or with valid reasons, e.g. medical/ emergency leave); total period of absence not exceeding 90% of overall programme duration)</li> <li>Attendance at (at least) 80% of scheduled laboratory or educational meetings (Clinical Biochemistry Lab Workflow Meetings, Clinical Biochemistry Journal Clubs, other meetings as assigned by supervisor)</li> <li>Demonstrate professional behaviour at all times.</li> </ul>
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9.3 Criteria for Early Termination	<p>The attachment programme will be terminated early on the ground of the Clinical Fellow's poor performance, misdemeanour, misconduct, negligence or breach of any terms stipulated or referred to in the Fellowship Letter of Offer and Institution Terms and Conditions.</p> <p>The Clinical Fellow may also request to terminate the attachment programme for reasons such as serious illness or other personal obligations. The institution will review all requests for early termination with the Clinical Fellow and the Supervisor / Head of Department.</p>									
<b>10. Course Administration</b>	<p>Type of Certification: Certificate of Training</p> <p>Training Fee: S\$3,210 per month</p> <p>Programme Funding source: Self-funded</p>									
<b>11. Number of Clinical Fellow to be accepted at any one time</b>	One									