

## LABORATORY MEDICINE/MEDICAL BIOCHEMISTRY

<b>Definition</b>	<p>Medical Biochemistry is the practice of pathology devoted primarily to the use of biochemical and molecular techniques in the laboratory diagnosis and management of human diseases. The biochemical analysis of body fluids identifies normal and abnormal values of their different biochemical elements which help in the diagnosis and follow up of diverse clinical conditions.</p> <p>A chemical pathologist / Medical Biochemist can advise clinicians on the selection and interpretation of clinical chemistry tests, can manage, and direct the clinical chemistry section of the clinical laboratory.</p>
<b>Scope of Practice</b>	<p>This area of specialisation uses different processes for the measurement of chemical components, both as liquid blood fractions as well as urine, and applies different testing techniques for their analysis.</p> <p>Medical Biochemist/ Chemical pathologists /Clinical Chemist oversees the performance of the following tests:</p> <ul style="list-style-type: none"> <li>• General or routine chemistry: commonly ordered blood chemistries using Automated, semi-automated analysers or manual methods (e.g., Lipid profile, liver, and kidney function tests, electrolytes, etc.....).</li> <li>• Special chemistry techniques: such as electrophoresis, turbidimetry, nephelometry, tumour markers and manual testing methods.</li> <li>• Endocrinology tests: the study of hormones, and diagnosis of endocrine disorders.</li> <li>• Toxicology: the study of drugs of abuse and other chemicals.</li> <li>• Therapeutic Drug Monitoring: measurement of therapeutic medications' blood level to optimise dosage.</li> <li>• Urinalysis: chemical analysis of urine for a wide array of diseases, along with other fluids such as CSF and other effusions.</li> <li>• Faecal analysis: mostly for the detection of gastrointestinal disorders.</li> </ul> <p>He/she should advise clinicians about the appropriate tests for the investigation of a particular clinical problem, the interpretation of the results and follow-up, and the effect of interferences e.g. by therapeutic drugs on test results.</p> <p>He/she should be able to validate and interpret test results, particularly for abnormal results or more uncommon and highly specialised tests.</p> <p>He/she must be an expert in Quality management, Quality control, proficiency testing and laboratory safety.</p> <p>A Medical Biochemist / Chemical pathologist / Clinical Chemist has expertise in the biochemistry of the human body as it applies to the understanding of the cause and progress of disease. This specialist functions as a clinical consultant in the diagnosis and treatment of human disease and entails the application of biochemical data to the detection, confirmation or monitoring of different diseases.</p>
<b>Privileges</b>	<p>Medical Biochemist/ Chemical pathologists /Clinical Chemist is eligible to work in or to manage and direct the clinical chemistry section or unit of the clinical laboratory.</p> <p>Medical Biochemists/ Chemical Pathologists /Clinical Chemists are not eligible to lead a medical laboratory alone, they must work together with a licensed clinical pathology doctor.</p>
<b>References</b>	<p>DHP Experts</p>
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