

Center of Excellence

HEMATOPATHOLOGY & FLOW CYTOMETRY

PURELAB⁺

OVERVIEW

The division of hematopathology at PureLab's Center of Excellence provides a wide variety of basic and special high-complexity hematology and coagulation testing services, including Marrow Examination, Hemoglobinopathy Screening, Platelet Aggregation Studies, as well as expert consultation services for the laboratory diagnosis of hematologic diseases.

The Flowcytometry section is the unique reference lab for the region, providing diagnosis and (sub) classification of benign and malignant hematological diseases as well as the evaluation of treatment effectiveness during follow-up. In addition to monitoring immunosuppressive patients, the Flowcytometry Lab has been certified for High-Sensitivity Flow cytometric Paroxysmal Nocturnal Hemoglobinuria (PNH) testing by Flaer since 2012.



Accreditations

The laboratory has received accreditations from reputable organizations such as CAP (College of American Pathologists), ISO 15189 (International Standards Organization), and JCI (The Joint Commission).



OUR SERVICES

- Leukemia and Lymphoma Immunophenotyping on Peripheral Blood, Bone Marrow, and Tissues: A high-complexity test using comprehensive 10 color panels with highly informative diagnostic markers and new marker combinations for better characterization of specific populations of normal and neoplastic cells present in the patient sample in alignment with the most recent WHO classification of tumors of Hematopoietic and Lymphoid malignancies.

All new and relapsed leukemia cases received at PureLab are treated as top priority with a TAT of **24 hours**.

- Paroxysmal Nocturnal Hemoglobinuria (PNH): PNH is a haematopoietic stem cell defect. The hemolytic form of the disease is characterized by complement-dependent lysis of RBCs and is caused by a defective expression of cell surface proteins. It often occurs in bone marrow failures (e.g., aplastic anemia and MDS).

The use of FLAER labeling on leukocytes proves that this reagent is a valuable tool for PNH diagnosis and particularly appropriate for high-sensitivity tests aiming to detect minor PNH clones.

- Platelet Dysfunction assay for the diagnosis of Glanzmann's Thrombasthenia and Bernard-Soulier Syndrome. Platelet flowcytometric analysis is the preferred method to assess hereditary platelet disorders due to surface glycoprotein (GP) deficiencies.

Glanzmann's Thrombasthenia (GT) is characterized by the absence or reduced expression of platelet glycoprotein (GP) IIb/IIIa. GPIIb/IIIa is analyzed on the flow cytometer using both CD41 and CD61.

Bernard-Soulier Syndrome (BSS) is characterized by the absence or reduced expression of von Willebrand Factor receptor complex GPIb/IX/V. GPIX/Ib is analyzed on the flow cytometer using CD42a and CD42b.

- Leukocyte Adhesion to assist in the diagnosis of Leukocyte Adhesion Deficiency (LAD).

Leukocyte Adhesion Deficiency (LAD) is a rare disease that can be further classified into LAD Type I and LAD Type II. In LAD, phagocytes are unable to adhere to the endothelium or migrate to tissues in response to an infection.

The Flow panel consists of CD18, CD11b, CD11a, and CD11c.

- Lymphocyte Subset Analysis (CD4/CD8): CD4/CD8 testing is a routine Flowcytometry test with less complexity. It is a quantitative assay providing automated analysis and results for the identification and enumeration of CD3+CD4+, CD3+CD8+, CD3+, CD19+ and CD3-CD56+ lymphocyte percentages and absolute counts in peripheral whole blood. CD4:CD8 ratio is also included as a calculated parameter. This test is indicated for use in the immunologic assessment of patients with or suspected of having immune deficiency.

OUR EXPERTS



We are privileged to have a team of highly skilled and experienced pathologists and consultants at our Center of Excellence.

- **Dr. Chethan Belludi**
MD, Consultant Physician, Certified by the American Board of Pathology in Anatomic Pathology, Clinical Pathology, Hematopathology, and Molecular Genetic Pathology

- **Dr. Rahul Matnani**
MD, PhD, Consultant Physician, Certified by the American Board of Pathology in Anatomic Pathology, Clinical Pathology, and Hematopathology
- **Dr. Shikha Rajani**
MD, Specialist Physician



“We are privileged to have an always-dependable team of highly skilled and experienced pathologists and consultants for our patients and clients.”

PureLab™ HQ

13, Tunb Al Kubra Street, Al Rawdah
Abu Dhabi, UAE. P.O Box 134808

T +971 2 693 6444 | 800 700 522 (LAB)

E customercare@purelab.com

 [pureLab](#)
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