

Pediatric Immunology and Leukocyte Biology National Institute of Immunohematology (ICMR-NIIH) 'Centre of Excellence For Primary Immunodeficiency Diseases'

Our center has the privilege of being designated as a Center of Excellence for Research, Diagnosis and Management of Primary Immunodeficiency Disorders (PID) by the Indian Council of Medical Research. It is also designated as a FPID-NIIH/ Regional Diagnostic Center for primary Immunodeficiencies at Mumbai by the Foundation for Primary Immunodeficiencies, USA (FPID; www.fpid.org). Our Institute has a ratified Memorandum of Understanding with the FPID in this regard.

Laboratory facilities:

Laboratory services are being provided by the Pediatric Immunology leukocyte biology. Our department started working on primary immunodeficiency disorders in 2007. Under Centre of excellence we have established the state of art facilities for evaluation of suspected cases of PIDs and is being availed by >1200 patients per year from all over India and now routinely used for PID diagnosis. The Department also has the requisite infrastructure, expertise and trained personnel for conducting state of the art research in field of immunology.

Research based assays

CMC workup: Detection of Th1, Th2 and Th17 cells

T cell function test: T cell proliferation

CGD workup: component detection

CTLA4 deficiency

Treg cells detection

CD25 deficiency

IRAK4 deficiency: CD62L shedding, TNF-a expression on monocytes

Extended B cell immunophenotyping for BENTA and CVID

NK cell immunophenotyping

Workup for EBV susceptibility

Luminex based bead assay and ELISA assay for

- > evaluation of cytokine levels viz. IFN- γ , IL-6, IL-10, IL-12, TNF-a,
- > FasL, Vit. B12
- > sCD25, Ferritin levels
- > anti-IFN- γ antibodies
- > CF150 and AH50
- > Specific antibody response against typhi

Tests available, cost to patient and sample requirement

Patients below poverty line and follow-up patients provided these tests free of cost.

	Test	Sample	Vacutainer for collection	Volume of sample	Days	Time	Charges
1	PRIMARY IMMUNODEFICIENCY DISEASES WORKUP Lymphocyte subset analysis: Evaluations of T, B, NK cell, T and HLA –DR expression , NBT/ DHR, Serum Immunoglobulin - IgG, IgA, IgM, IgE.	Peripheral Blood	EDTA Plain Heparin	3ml each	Monday & Thursday	9am-12pm	Rs. 7000/-
2	HLH WORKUP (Perforin, GRA, XIAP)	Peripheral Blood	EDTA Plain Heparin	3ml each			Rs. 3000/-
	CVID WORKUP Lymphocyte subset analysis, B memory, Serum Immunoglobulin	Peripheral Blood	EDTA Plain Heparin				No charges
3	SCID WORKUP (Lymphocyte subset analysis): Evaluations of T, B, NK cell, T memory and naïve subsets , HLA –DR expression, ADA level, TREC	Peripheral Blood	EDTA Plain Heparin				No charges
3	ALPS WORKUP Lymphocyte subset analysis, DNT, Serum Immunoglobulin	Peripheral Blood	EDTA Plain	3ml each			No charges
4	Hyper IgE work up Serum Immunoglobulin , DOCK8, Stat 3	Peripheral Blood	EDTA	3ml			No charges
5	PNH	Peripheral Blood	EDTA	3ml			Rs. 2500/-
6	XLA WORKUP Lymphocyte subset analysis, BTK, Serum Immunoglobulin	Peripheral Blood	EDTA Plain	3ml each			No charges
7	LAD-1 CD18, CD11a, CD11b, CD11c expression	Peripheral Blood	EDTA	3ml			No charges
8	WASP	Peripheral Blood	EDTA	3ml			No charges
9	Hyper IgM WORKUP Serum Immunoglobulin , B memory , Expression of CD 154, CD 40	Peripheral Blood	EDTA Plain Heparin	3ml each			No charges
10	MSMD WORKUP IL12Rβ1, IFNγR1, IFNγR2	Peripheral Blood	Heparin Plain Heparin	3ml each	Monday	No charges (confirm before sending)	
11	expression Prenatal for PID	CVS/ Cordocentesis	RPMI media /EDTA vacutainer	3ml	Wednesday & Thursday (Strictly by appointment)	Rs. 5000/-	

Sample sending details:

DD should be drawn in favour of "NIIH investigation A/c"

- All travelled sample must have one normal control sample with the patient sample.
- All the samples should reach our lab within 24 hrs of collection.
- Samples should be received at our lab preferably on Monday, latest by Wednesday.

Address: Dr Manisha Madkaikar,
Director,
National Institute of Immunohaematology, ICMR,
13th Floor, K E M Hospital, Parel,
Mumbai, Post Code: 400012. India Phone: 022-24132928

Turnaround time:

- o 2 days Flow assays
- o 15daysforNephelometry
- o 7-10days Prenatal Diagnosis
- o 3-6monthsformoleculartesting

Therapeutic facilities like IVIG, BMT and others for PID: Not applicable

Any degree course in Immunology: affiliation to university and details of how to apply and website to look out for information:

- PhD courses in Applied Biology, Biochemistry and Biotechnology under Mumbai University
- PhD under MUHS
- MSc by research under Mumbai University

Work load details approximately: >1200 suspected cases of PIDs per year.

Educational courses conducted by institutions in PID:

Annual Advanced flowcytometry workshop for Diagnosis of PID.

CME courses for Primary Immunodeficiency Diseases under Centre of Excellence.