



DMCH MOLECULAR GENETICS LABORATORY

**INTRODUCING
NEXT GENERATION SEQUENCING
FOR THE FIRST TIME IN THE STATE OF PUNJAB**



**DMCH
DNA
TESTING**

MOLECULAR GENETICS LAB



WHAT IS GENETIC TESTING?

Genetic testing includes the identification of specific alleles, mutations, genotypes or karyotypes.

These are related to heritable traits, diseases or susceptibility to disease for the individual or their descendants.

These can also be used for the evaluation of malignancies and risk assessment for familial cancers.

BENEFITS OF GENETIC TESTING

Genetic testing has potential benefits whether the results are positive or negative for a gene mutation. These include:

- A sense of relief from uncertainty.
- A greater understanding of your health and your cancer risk.
- A negative result can eliminate the need for unnecessary check-ups and screening tests in some cases.
- A positive result can direct a person toward available prevention, monitoring, and treatment options.
- Information to help make informed medical and lifestyle decisions.
- Opportunity to help educate other family members about the potential risk.
- Newborn screening can identify genetic disorders early in life so treatment can be started as early as possible.

GENETIC TESTING RECOMMENDATIONS

- To diagnose a genetic condition or a syndrome.
- To identify the cause of a genetic disease.
- To identify individuals at risk for developing a genetic disease.
- To assist in preconception counselling for individuals who are carriers of a genetic disease.
- To guide health care providers in choosing the best treatment protocol for the patient.
- To identify disease as early as possible by prenatal diagnosis and newborn screening.

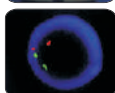
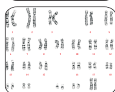
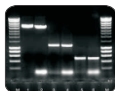
EQUIPMENT LIST

In order to provide the best quality, the laboratory incorporates routine quality control procedures and is also involved in external quality control schemes.

The laboratory is equipped with state-of-the-art equipment and latest technology such as :

- Conventional PCR
- Real time PCR
- Gel-doc system
- Nano Drop System
- CO₂ Incubator
- Karyotype system
- Inverted Microscope
- Ion chef
- Ion torrent S5 plus (NGS)
- FISH

(fluorescence *in situ* hybridization)



DMCH MOLECULAR GENETICS LAB TESTS

LEUKEMIA PANELS

Acute Myeloid Leukemia(AML)
Acute Lymphoblastic Leukemia(ALL)
Qualitative BCR-ABL -RNA
JAK-2 (V617F) Genotype
BCR - ABL –Quantitative
PML -RARA –Qualitative -RNA
Myeloproliferative Neoplasm(MPN)I
Myeloproliferative Neoplasm(MPN)II
CLL-Panel FISH
Chromosome Analysis for Haem. Malignancies
Multiple Myeloma FISH
BCR-ABL FISH
PML RARA FISH
MDS Panel FISH
HER2 FISH

THALASSEMIA'S PANELS

Alpha Thalassemia
Beta Thalassemia -Individual
Beta Thalassemia Panel - Family
XMN1 Polymorphism (Thalassemia)
Prenatal Beta Thalassemia –Carrier screening

INBORN ERROR

Chromosome Analysis (Aneuploidy)

INHERITED DISORDERS

Duchenne Muscular Dystrophy(DMD)
Acute Pancreatitis (PRESS1, SPINK1, CFTR)
Apo-B Mutation Analysis
HFE Mutational Analysis
HLA-B27 Genotyping
Prothrombin(G20210A) Genotyping
MTHFR (A1298C and C677T) Genotyping
Thrombophilia panel (MTHFR, Factor V Leiden & Prothrombin)
Factor v Leiden (R506Q) Genotyping

INFERTILITY PANELS

FSHR (S680N) Genotype

Y- Chromosome micro-deletion

CERVICAL CANCER SCREENING

HPV 16/18 DNA Testing

PHARMACOGENOMICS

Statin Sensitivity

TPMT genotyping

Warfarin Sensitivity

NUDT15 genotyping

Clopirogrel Sensitivity

DPYD Genotyping

NEXT GENERATION SEQUENCING (NGS) PANELS

BARCA 1/2 Testing

Cancer Hotspot Panel

MPN Panel

ABOUT US

DMCH Molecular genetics laboratory is the finest genetic laboratory in the state of Punjab. It was established with the aim of providing the Best Quality care services to the patients with the latest technology.

The Laboratory continues to increase the list of genetic tests available to the patients and provides genetic consultation, focuses on the physician-patient relationship and the potential roles of the primary care provider in this dynamic field.

The Laboratory is led by a team of competent Doctors and Biotechnologists experienced in the field of genetic testing.

PATIENT SUPPORT

- Patient specimens are accepted on all weekends and holidays. Laboratory staff is available for urgent after-hour needs.
- Reports are available to the physicians on E-mail ID and Whatsapp on request.
- Home collection services are also available (**Within Ludhiana City**).



CONTACT US

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