

## MedGenome Test list

## About MedGenome

MedGenome is the largest throughput genomics diagnostics laboratory in India spearheading the decoding of genetic information to enhance personalized medicine.

A market leader in genomics-based diagnostics and research, MedGenome has worked with thousands of doctors, hospitals, and patients across India by applying Next-generation Sequencing (NGS) techniques in cancer, ophthalmic and neurological disorders, diabetes, cardiovascular diseases and rare genetic diseases.

MedGenome offers a broad range of pre-designed gene mutation panels which have been developed with in-depth disease understanding and are invaluable for deciphering the following:

- Disease biology/pathogenesis
- Familial association/inheritance pattern
- Prognosis
- Therapeutic response

MedGenome currently functions from two different laboratory locations. The NGS lab is located in Bangalore while the molecular diagnostic lab is located in Cochin. MedGenome offers seamless logistic services across the country with best-in-class pre-analytic specimen preservation, temperature control and turn around for transit of specimen from client's doorstep. All laboratory reports are available online/via email.

MedGenome has also established its state-of-the-art pre-test and post-test counselling services wherein the clinician can discuss intricacies of genetic tests and their results with the trained and informed personnel at the lab or with its dedicated Scientific Affairs team.

Besides molecular and genomic tests MedGenome also offers a broad range of Immunohistochemistry (IHC) tests which add trust to its Oncology diagnostic services.

For more information, please visit us at www.medgenome.com or call our customer support services (available between 9 am and 6 pm Monday through Saturday) at +91-80-67154932



NGS: Next-Generation Sequencing, MLPA: Multiplex Ligation-dependent Probe Amplification, PCR: Polymerase chain reaction, Sanger: Sanger Sequencing, RT-PCR: Real-Time PCR, IHC: Immunohistochemistry

the C	CARDIOLOGY [preferred sample type - EDTA blood/DNA]									
CODE	TEST	METHOD	TAT	CODE	TEST	METHOD	TAT			
MGM001 MGM002	Cardiac channelopathy gene panel Cardiomyopathy gene panel	□ NGS □ NGS	4 WEEKS 4 WEEKS	MGM007	Fabry disease (GLA) deletion/ duplication analysis	□ MLPA	3 WEEKS			
MGM003	Cardiomyopathy predisposition - <i>MYBPC3</i> (25bp deletion)	☐ Sanger	7 DAYS	MGM006	MGM006 Fabry disease ( <i>GLA</i> ) gene analysis Pompe disease - (refer to metabolic disorders)		4 WEEKS			
MGM004	Clopidogrel dosage: CYP2C19*2 & CYP2C19*3	☐ Sanger	10 DAYS	MGM008	Statin induced myopathy predisposition - <i>SLCO1B1</i> p. (Val174Ala)	☐ Sanger	7 DAYS			
MGM005	Clopidogrel dosage: CYP2C19*2 & CYP2C19*3	□ RT-PCR	7 DAYS	MGM009	Warfarin dosage- VKORC1 (c1639 G>A), CYP2C9*2, CYP2C9*3 & CYP2C9*13	☐ Sanger	7 DAYS			
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				г пля	PLASIAS [preferred sample type - EDT/					
CODE	TEST	METHOD	TAT	CODE	TEST	METHOD	TAT			
MGM301	Achondroplasia <i>FGFR3</i> G380R common mutation screening	☐ Sanger	2 WEEKS	MGM014	Marfan's syndrome (FBN1) deletion/duplication analysis	□ MLPA	3 WEEKS			
MGM310	Hypochondroplasia <i>FGFR3</i> N540K common mutation screening	☐ Sanger	2 WEEKS	MGM015 MGM016	Marfan's syndrome ( <i>FBN1</i> ) gene analysis Osteogenesis imperfecta gene panel	□ NGS	4 WEEKS			
MGM010	Achondroplasia ( <i>FGFR3</i> ) gene analysis	□ NGS	4 WEEKS	MGM017	Osteopetrosis gene panel	□ NGS □ NGS	4 WEEKS 4 WEEKS			
MGM011	Connective tissue disorder gene panel	□ NGS	4 WEEKS	MGM018	Pachydermoperiostosis & primary	□ NGS	4 WEEKS			
MGM012	Cutis-laxa gene panel	□ NGS	4 WEEKS		hypertrophic osteoarthropathy gene panel					
MGM013	Ehler Danlos syndrome gene panel	□ NGS	4 WEEKS	MGM019	Skeletal dysplasia gene panel	□ NGS	4 WEEKS			
	DERMATOLOGY (SKIN) [preferre	ed sample tyr	ne - FDTA h	lood/DNA1						
CODE	TEST	METHOD	TAT	CODE	TEST	METHOD	TAT			
MGM020		_		MGM023		_				
MGM021	Ectodermal dysplasia gene panel Epidermolysis bullosa gene panel	□ NGS □ NGS	4 WEEKS 4 WEEKS	MGM024	Oculocutaneous albinism gene panel	□ NGS	4 WEEKS 4 WEEKS			
MGM021	Icthyosis gene panel	□ NGS	4 WEEKS 4 WEEKS	MUMU24	Sjogren-Larsson syndrome (ALDH3A2) gene analysis	□ NGS	4 WEEKS			
	Totaly colo golio parior	_ NGO	· TILLING	MGM025	Xeroderma pigmentosum gene panel	□ NGS	4 WEEKS			

(i) E	ENDOCRINOLOGY [preferred sample type - EDTA blood/DNA]								
CODE	TEST	METHOD	TAT	CODE	TEST	METHOD	TAT		
MGM026	Androgen receptor (AR) deletion/duplication analysis	□ MLPA	3 WEEKS	MGM292	Congenital hyperparathyroidism gene panel	□ NGS	4 WEEKS		
MGM027	Androgen receptor (AR) gene analysis	□ NGS	4 WEEKS	MGM031	Congenital hypopituitarism gene panel	□ NGS	4 WEEKS		
MGM030	Congenital adrenal hyperplasia <i>CYP21A</i> 2 (21-0H) deletion/duplication analysis	□ MLPA	3 WEEKS	MGM309 MGM032	Hereditary pancreatitis gene panel Kallmann syndrome gene panel	□ NGS □ NGS	4 WEEKS 4 WEEKS		
MGM028	Congenital adrenal hyperplasia <i>CYP21A2</i> (21-0H) gene analysis	☐ Sanger	3 WEEKS	MGM033	Maturity-Onset Diabetes of the Young (MODY) & neonatal diabetes gene panel	□ NGS	4 WEEKS		
MGM029	Congenital adrenal hyperplasia <i>CYP21A2</i> (21-0H) gene analysis	□ NGS	3 WEEKS						

Xeroderma pigmentosum gene panel

Plot no: SDF 17. First Floor, C Block, CSEZ, Kakkanad, Cochin, Kerala – 68203;



#### **GENETIC TEST SELECTION LIST:**

<i>\$</i> E	<b>ENT</b> [preferred sample type - EDTA blood/DNA]									
CODE	TEST	METHOD	TAT	CODE	TEST	METHOD	TAT			
MGM034	Connexin-30 ( <i>GJB6</i> ) deletion/duplication analysis	□ MLPA	3 WEEKS	MGM037 MGM038	Deafness gene panel Mondini defect ( <i>SLC26A4</i> ) gene analysis	□ NGS □ NGS	4 WEEKS 4 WEEKS			
MGM035	Connexin-26 ( <i>GJB2</i> ) deletion/ duplication analysis	□ MLPA	3 WEEKS	MGM039	Usher syndrome - refer to opthalmology Waardenburg syndrome gene panel	□ NGS	3 WEEKS			
MGM036	Connexin-26 ( <i>GJB2</i> ) gene analysis (exon 2)	☐ Sanger	7 DAYS							

Q H	AEMATOLOGY [preferred sample	type - EDTA	blood/DNA]				
CODE	TEST	METHOD	TAT	CODE	TEST	METHOD	TAT
MGM040	Alpha thalassemia (HBA1 & HBA2)	□ MLPA	3 WEEKS	MGM307	Haemophilia B (F9) gene analysis	□ NGS	4 WEEKS
MGM041	deletion/duplication analysis Alpha thalassemia ( <i>HBA1 &amp; HBA2</i> ) gene analysis	□ Sanger	2 WEEKS	MGM068	Hemophagocytic lymphohistiocytosis ( <i>PRF1</i> , <i>STK11</i> , <i>UNC13D</i> )deletion/duplication analysis	□ MLPA	3 WEEKS
MGM042	Aplastic anemia gene panel	□ NGS	4 WEEKS	MGM067	Hemophagocytic lymphohistiocytosis	□ NGS	4 WEEKS
MGM262	ATRX gene analysis	□ NGS	4 WEEKS	MGM054	gene panel Hereditary elliptocytosis gene panel	□ NGS	4 WEEKS
MGM043	Beta thalassemia ( <i>HBB</i> ) deletion/duplication analysis	□ MLPA	3 WEEKS	MGM293	Hereditary hemolytic anemia panel (For RBC membrane disorders and	□ NGS	4 WEEKS
MGM044	Beta thalassemia (HBB) gene analysis	☐ Sanger	2 WEEKS		enzymopathies)		
MGM045	Congenital afibrinogenemia gene panel	□ NGS	4 WEEKS	MGM059 MGM288	Hereditary spherocytosis gene panel HLA typing high resolution (HLA A, B, C,	□ NGS □ NGS	4 WEEKS 10 DAYS
MGM046	Congenital dyserythropoietic anemia gene panel	□ NGS	4 WEEKS		DRB1, DQB1, DRB3,4,5, DPA1, DPB1)		TO DAYS
MGM047	Diamond blackfan anemia gene panel	□ NGS	4 WEEKS	MGM056	MTHFR gene analysis - 2 exons (5 & 8)	☐ Sanger	10 DAYS
MGM048	Dyskeratosis congenita gene panel	□ NGS	4 WEEKS	MGM071	Primary immunodeficiency gene panel	□ NGS	4 WEEKS
MGM049	Factor V Leiden mutation analysis (exon 10)	□ Sanger	7 DAYS	MGM319	Protein S deficiency ( <i>PROS1</i> gene deletion/duplication analysis )	□ MLPA	3 WEEKS
MGM050	Factor VII deficiency gene analysis	□ NGS	4 WEEKS	MGM072	Severe combined immunodeficiency (SCID)	□ NGS	4 WEEKS
MGM051	Fanconi anemia gene panel	□ NGS	4 WEEKS		gene panel and analysis (DOCK8, STAT3)		
MGM052	Haemophilia (F8 & F9) gene panel	□ NGS	4 WEEKS	MGM057	Sickle cell anemia ( <i>HBB</i> ) gene analysis (exon 1)	☐ Sanger	10 DAYS
MGM053	Haemophilia (F8) deletion/duplication analysis	□ MLPA	3 WEEKS	MGM058	Sideroblastic anaemia gene panel	□ NGS	4 WEEKS
MGM306	Haemophilia A (F8) gene analysis (analysis of the F8 inversion is not included)	□ NGS	4 WEEKS	MGM060	Von Willebrand disease (VWF) gene analysis	□ NGS	4 WEEKS

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#### **GENETIC TEST SELECTION LIST:**

	IMMUNOLOGY [preferred sample type - EDTA blood/DNA]									
CODE	TEST	METHOD	TAT	CODE	TEST	METHOD	TAT			
MGM061	Agammaglobulinemia (BTK) gene analysis	□ NGS	4 WEEKS	MGM064	Cystic fibrosis (CFTR) gene analysis	□ NGS	4 WEEKS			
MGM062	Chediak-Higashi syndrome (LYST) gene analysis	□ NGS	4 WEEKS	MGM066	Cystic fibrosis ( <i>CFTR</i> ) deletion/ duplication analysis	□ MLPA	3 WEEKS			
MGM063	Congenital neutropenia gene panel	□ NGS	4 WEEKS	MGM069	Hyper-immunoglobulin E syndrome deletion/duplication	□ MLPA	3 WEEKS			
MGM065	Cystic fibrosis ( <i>CFTR</i> ) del508 mutation analysis	□ Sanger	7 DAYS							

N (S	METABOLIC DISORDERS [preferred sample type - EDTA blood/DNA]								
CODE	TEST	METHOD	TAT	CODE	TEST	METHOD	TAT		
MGM073	Citrullinemia gene panel	□ NGS	4 WEEKS	MGM091	Menkes disease (ATP7A) gene analysis	□ NGS	4 WEEKS		
	Fabry disease - (refer to cardiology)			MGM092	Methylmalonic aciduria gene panel	□ NGS	4 WEEKS		
MGM074	Fanconi bickel syndrome (SLC2A2) gene analysis	□ NGS	4 WEEKS	MGM093 MGM094	Mucopolysaccharidosis gene panel Neurometabolic disorder (MLC1, L2HGDH,	□ NGS □ MLPA	4 WEEKS 3 WEEKS		
MGM075	Fatty acid oxidation disorders gene panel	□ NGS	4 WEEKS		D2HGDH, MLYCD) deletion/	□ MEI /	0 1122.10		
MGM076	Gilbert syndrome (UGT1A1) gene analysis	□ NGS/	4 WEEKS		duplication analysis				
	(both point mutation and repeat analysis)	Fragment analysis		MGM095	Niemann-Pick disease gene panel	□ NGS	4 WEEKS		
MGM077	GLUT1 deficiency ( <i>SLC2A1</i> ) deletion/duplication analysis	□ MLPA	3 WEEKS	MGM096 MGM097	Organic acidemia gene panel Peroxisomal disorder gene panel (includes adrenoleukodystrophy)	□ NGS □ NGS	4 WEEKS 4 WEEKS		
MGM078	GLUT1 deficiency (SLC2A1) gene analysis	□ NGS	4 WEEKS	MGM098	Pompe disease (GAA) deletion/	□ MLPA	3 WEEKS		
MGM079	Glycine encephalopathy ( <i>GLDC</i> ) deletion/duplication analysis	□ MLPA	O MEEICO		duplication analysis	□ IVILFA	J WLLKJ		
MGM080	Glycine encephalopathy gene panel	□ NGS	4 WEEKS	MGM099	Pompe disease (GAA) gene analysis	□ NGS	4 WEEKS		
MGM081	Glycogen storage disorder gene panel	□ NGS	4 WEEKS	MGM100	Progressive familial intrahepatic	□ NGS	4 WEEKS		
MGM082	Glycosylation (CDG) disorders gene panel	□ NGS	4 WEEKS		cholestasis gene panel				
MGM083	Hemochromatosis gene panel	□ NGS	4 WEEKS	MGM101	Urea cycle defects gene panel	□ NGS	4 WEEKS		
MGM084	Homocystinuria gene panel	□ NGS	4 WEEKS	MGM102	Wilson disease (ATP7B) gene analysis	□ NGS	4 WEEKS		
MGM086	Hyperargininemia (ARG1) gene analysis	□ NGS	4 WEEKS	MGM314	Niemann Pick disease (NPC1, NPC2,	□ MLPA	3 WEEKS		
MGM085	Hypercholesterolemia gene panel	□ NGS	4 WEEKS		SMPD1) deletion/duplication analysis				
MGM087	Leigh syndrome & mitochondrial encephalopathy gene panel	□ NGS	4 WEEKS	MGM318	Propionic acidemia ( <i>PCCA</i> ) deficiency deletion/duplication	□ MLPA	3 WEEKS		
MGM088	Maple syrup urine disease gene panel	□ NGS	4 WEEKS		analysis				
MGM089	McArdle disease (PYGM) gene analysis	□ NGS	4 WEEKS	MGM325	Wilson disease (ATP7B) deletion/	□ MLPA	3 WEEKS		
MGM090	Menkes disease (ATP7A) deletion/ duplication analysis	□ MLPA	3 WEEKS		duplication analysis				



analysis

gene panel

Arthrogryposis & congenital

Charcot-Marie-Tooth and 1A/HNPP

(PMP22, COXIO, TEKT3) deletion/

myasthenic syndrome

duplication analysis

MGM132 Charcot-Marie-Tooth and sensory

neuropathies gene panel

MGM131

MGM133

NGS: Next-Generation Sequencing, MLPA: Multiplex Ligation-dependent Probe Amplification, PCR: Polymerase chain reaction, Sanger: Sanger Sequencing, RT-PCR: Real-Time PCR, IHC: Immunohistochemistry

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GAP N	<b>IEPHROLOGY</b> [preferred sample ty	pe - EDTA blo	od/DNA]				
CODE	TEST	METHOD	TAT	CODE	TEST	METHOD	TAT
MGM103 MGM104	Alport syndrome gene panel	□ NGS	4 WEEKS	MGM317	Polycystic kidney disease ( <i>PKHD1</i> ) deficiency deletion/duplication analysis	□ NGS	3 WEEKS
MGM308	Bartter syndrome gene panel Hemolytic uremic syndrome (CFH, CFHR1 & CFHR3) deletion	□ NGS □ MLPA	4 WEEKS 3 WEEKS	MGM106	Polycystic kidney disease gene panel (ARPKD: <i>PKHD1</i> /ADPKD: <i>PKD1</i> & <i>PKD2</i> )	□ NGS	4 WEEKS
	duplication analysis			MGM107	Primary hyperoxaluria gene panel	□ NGS	4 WEEKS
MGM105	Meckel Gruber syndrome gene panel	□ NGS	4 WEEKS	MGM108	Xanthinuria (XDH) gene analysis	□ NGS	4 WEEKS
	ITUDOL GOV						
(f) N	IEUROLOGY [preferred sample typ	e - EDTA bloo	d/DNA]				
CODE	TEST	METHOD	TAT	CODE	TEST	METHOD	TAT
MGM294	Chromosomal microarray - Affymetrix Cytoscan 750K genechip	☐ Microarray	4 WEEKS	MGM212	Neurofibromatosis type 1 ( <i>NF1</i> ) deletion/duplication analysis	□ MLPA	3 WEEKS
MGM295	Chromosomal microarray - Affymetrix	☐ Microarray	4 WEEKS	MGM229	TSC1 & TSC2 gene analysis	□ NGS	4 WEEKS
	Cytoscan HD genechip			MGM230	TSC1 & TSC2 gene analysis	☐ Sanger	3 WEEKS
MGM213	Neurofibromatosis type 1 ( <i>NF1</i> ) gene analysis	□ NGS	4 WEEKS	MGM231	TSC1 deletion/duplication analysis	□ MLPA	3 WEEKS
MGM214	Neurofibromatosis type 2 ( <i>NF2</i> )	□ MLPA	3 WEEKS	MGM232	TSC1 gene analysis	□ Sanger	4 WEEKS
	deletion/duplication analysis	□ WEI /	0 1122.10	MGM233	TSC2 deletion/duplication analysis	□ MLPA	3 WEEKS
MGM215	Neurofibromatosis type 2 ( <i>NF2</i> ) gene analysis	□ NGS	4 WEEKS	MGM234	TSC2 gene analysis	□ Sanger	4 WEEKS
	MOVEMENT DISORDERS						
MGM316	Pantothenate kinase-associated	□ MLPA	3 WEEKS	MGM125	Dystonia gene panel	□ NGS	4 WEEKS
	neurodegeneration (PLA2G6)			MGM126	Early-onset juvenile parkinsonism	□ NGS	4 WEEKS
MCM122	deletion/duplication analysis		O MEENO		gene panel		
MGM123	Ataxia-telangiectasia (ATM) deletion/ duplication analysis	□ MLPA	3 WEEKS				
MGM124	Ataxia-telangiectasia (ATM) gene analysis	□ NGS	4 WEEKS				
	NEUROMUSCULAR						
MGM302	Charcot-Marie-Tooth type 4 ( <i>EGR2</i> , <i>GDAP1 NEEL PRX</i> ) deletion/duplication	□ MLPA	3 WEEKS	MGM134	Charcot-Marie-Tooth <i>PMP22</i> deletion/duplication analysis	□ MLPA	3 WEEKS

MGM135

MGM136

MGM137

4 WEEKS

3 WEEKS

4 WEEKS

Congenital Muscular Dystrophy (LAMA2)

Duchenne Muscular Dystrophy (DMD)

Duchenne Muscular Dystrophy (DMD)

deletion/duplication analysis

deletion/duplication analysis

gene analysis

□ NGS

□ MLPA

 $\square$  NGS

☐ MLPA

□ MLPA

□ NGS

3 WEEKS

3 WEEKS

4 WEEKS



NEUR	OLOGY (continued)						
CODE	TEST	METHOD	TAT	CODE	TEST	METHOD	TAT
	OTHERS (NEUROLOGY)						
MGM324	WAGR syndrome ( <i>PAX6</i> ) deletion/duplication	□ MLPA	3 WEEKS	MGM129	Pantothenate kinase-associated degeneration (PANK2) deletion/duplication analysis	□ MLPA	3 WEEKS
11011445	analysis	- NO	4	MGM130	Pantothenate kinase-associated	□ NGS	4 WEEKS
MGM145	4H syndrome gene panel	□ NGS	4 WEEKS	MGM160	neurodegeneration gene panel Pontocerebellar hypoplasia gene	□ NGS	4 WEEKS
MGM146	Aicardi-Goutieres syndrome	□ NGS	4 WEEKS		panel	_ 1100	
	gene panel			MGM161	Rett syndrome ( <i>MECP2</i> ) deletion/ duplication analysis	□ MLPA	3 WEEKS
MGM147	Cockayne syndrome	□ NGS	4 WEEKS	MGM162	Rett syndrome gene panel	□ NGS	4 WEEKS
MCM140	gene panel		CMEEKO	MGM144	Spinal muscular atrophy (SMN1)	□ Sanger	4 WEEKS
MGM148	Comprehensive neurology panel	□ NGS	6 WEEKS		gene analysis		
MGM304	Cystic megalencephaly (MLC1) deletion/duplication analysis	□ MLPA	3 WEEKS	MGM143	Spinal muscular atrophy (SMN1/SMN2) deletion/duplication analysis	□ MLPA	3 WEEKS
MGM150	Cystic megalencephaly (MLC1) gene	□ NGS	4 WEEKS	MGM321	Spinal muscular atrophy gene panel	□ NGS	4 WEEKS
MGM138	analysis  Dysferlinopathy/LGMD2A (CAPN3)	□ MLPA	3 WEEKS	MGM279	Spinocerebellar ataxia 1 (ATXN1) repeat expansion analysis	☐ Fragment analysis - PCR	2 WEEKS
MGM139	deletion/duplication analysis Dysferlinopathy/LGMD2B ( <i>DYSF</i> ) deletion/duplication analysis	□ MLPA	3 WEEKS	MGM283	Spinocerebellar ataxia 10 (ATXN10) repeat expansion analysis	☐ Fragment analysis - PCR	2 WEEKS
MGM127	Episodic ataxia gene panel	□ NGS	4 WEEKS	MGM284	Spinocerebellar ataxia 12 (PPP2R2B)	☐ Fragment	2 WEEKS
MGM151	Familial hemiplegic migraine gene panel	□ NGS	4 WEEKS		repeat expansion analysis	analysis - PCR	_
MGM152	Hereditary spastic paraplegia gene panel	□ NGS	4 WEEKS	MGM280	Spinocerebellar ataxia 2 (ATXN2)	☐ Fragment	2 WEEKS
MGM128	Hyperekplexia gene panel	□ NGS	4 WEEKS	MGM281	repeat expansion analysis Spinocerebellar ataxia 3 (ATXN3)	analysis - PCR	2 MEEKS
MGM153	Joubert syndrome gene panel	□ NGS	4 WEEKS	MUMZOI	repeat expansion analysis	☐ Fragment analysis - PCR	2 WEEKS
MGM120	Krabbe disease (GALC)	□ MLPA	3 WEEKS	MGM282	Spinocerebellar ataxia 6 ( <i>CACNA1A</i> )	☐ Fragment	2 WEEKS
MCM110	deletion/duplication analysis	- NCC	AMEERO		repeat expansion analysis	analysis - PCR	
MGM119	Krabbe disease (GALC) gene analysis	□ NGS	4 WEEKS	MGM322	Spinocerebellar ataxia 7 (ATXN7)	☐ Fragment	2 WEEKS
MGM121	Leukodystrophy gene panel	□ NGS	4 WEEKS		repeat expansion analysis	analysis - PCR	
MGM140	Limb-girdle muscular dystrophy deletion/duplication analysis (SGCA, SGCB, SGCD, SGCG & FKRP)	□ MLPA	3 WEEKS	MGM285	Spinocerebellar ataxia repeat expansion analysis: Any two of (SCA1, SCA2, SCA3, SCA6, SCA7,	☐ Fragment analysis - PCR	2 WEEKS
MGM154	Lissencephaly gene panel	□ NGS	4 WEEKS		SCA10, SCA12)		
MGM122	Metachromatic leukodystrophy gene panel		4 WEEKS	MGM286	Spinocerebellar ataxia repeat	☐ Fragment	2 WEEKS
MGM155 MGM141	Microcephaly gene panel	□ NGS	4 WEEKS		expansion analysis: SCA1, SCA2, SCA3, SCA12	analysis - PCR	
MGM141	Muscular dystrophy & congenital myopathy gene panel	□ NGS	4 WEEKS	MGM287	Spinocerebellar ataxia repeat	□ Fragment	4 WEEKS
MGM142	Myotonia congenita gene panel	□ NGS	4 WEEKS		expansion analysis: SCA1, SCA2,	analysis - PCR	
MGM313	Neuronal ceroid lipofuscinosis (CLN3,	☐ MLPA	3 WEEKS		SCA3, SCA6, SCA7, SCA10, SCA12		_
	PPT1, TPP1) deficiency deletion/			MGM163	Tay-Sachs disease ( <i>HEXA</i> ) deletion/duplication analysis	□ MLPA	3 WEEKS
MGM156	duplication analysis Neuronal ceroid lipofuscinosis gene panel	□ NGS	4 WEEKS	MGM164	Tay-Sachs disease (HEXA) gene analysis	□ NGS	4 WEEKS
MGM157	Neuronal migration disorder gene panel	□ NGS	4 WEEKS	MGM166	X-linked mental retardation gene	□ NGS	4 WEEKS
MGM158	NOTCH3 (CADASIL) gene analysis	□ NGS	4 WEEKS		panel		
MGM159	NOTCH3 (CADASIL) gene analysis -2 exons (2 & 3)	□ Sanger	10 DAYS	MGM165	X-linked spastic paraplegia-2 (PLP1) deletion/duplication analysis	□ MLPA	3 WEEKS

Plot no: SDF 17 First Floor C Block CSFZ Kakkanad Cochin Kerala = 682037



#### **GENETIC TEST SELECTION LIST:**

	OLOGY (continued)						
CODE	TEST	METHOD	TAT				
	Neurology Immunology (Drug Reactions)						
MGM337	HLA-B* 1502 for carbamazepine toxicity	□ NGS	10 DAYS				
	Neurology-Epilepsy						
MGM109	Benign infantile epilepsy gene panel	□ NGS	4 WEEKS	MGM112	Epileptic encephalopathy gene panel	□ NGS	4 WEEKS
MGM111	Dravet syndrome (SCN1A) deletion/duplication analysis	□ MLPA	3 WEEKS	MGM113	Familial female mental retardation/epilepsy gene panel	' □ NGS	4 WEEKS
MGM110	Dravet syndrome (SCN1A) gene analysis	□ NGS	4 WEEKS	MGM114	Progressive myoclonic epilepsy gene panel	□ NGS	4 WEEKS
MGM305	Early infantile epileptic encephalopathy-4 (STXBP1) deletion/duplication analysis	□ MLPA	3 WEEKS				
	Neurology-leukodystrophies						
MGM117	Canavan disease (ASPA) deletion/ duplication analysis	□ MLPA	3 WEEKS	MGM118	Hypomyelination syndrome gene panel	□ NGS	4 WEEKS
MGM116	Canavan disease (ASPA) gene analysis	□ NGS	4 WEEKS				



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CODE	TEST	METHOD	TAT	PREFERRED SAMPLE TYPE
MGM168	ALL risk stratification gene panel - B-ALL	□ NGS	3 WEEKS	Peripheral Blood / Bone Marrow / Purified Genomic DNA
MGM169	ALL risk stratification gene panel - T-ALL	□ NGS	3 WEEKS	Peripheral Blood / Bone Marrow / Purified Genomic DNA
MGM170	AML risk stratification gene panel	□ NGS	3 WEEKS	Peripheral Blood / Bone Marrow / Purified Genomic DNA
MGM171	APC (Adenomatous polyposis coli) gene analysis	□ NGS	3 WEEKS	Peripheral Blood / Purified Genomic DNA
MGM172	APC (Adenomatous polyposis coli) gene analysis	□ Sanger	3 WEEKS	Peripheral Blood / Purified Genomic DNA
MGM173	BCR-ABL qualitative gene fusion analysis	□ Qualitative	5 DAYS	Peripheral Blood / Bone Marrow
MGM174	BCR-ABL quantitative (International Scale) gene fusion analysis	RT-PCR □ RT-PCR	7 DAYS	Peripheral Blood / Bone Marrow
MGM175	BCR-ABL quantitative gene fusion analysis	□ RT-PCR	7 DAYS	Peripheral Blood / Bone Marrow
MGM334	Bladder cancer - sensitivity to mTOR inhibitors	□ NGS	7 WEEKS	Fresh frozen tissue/FFPE blocks & Peripheral Blood
MGM176	BRAF gene analysis - 2 exons (11 & 15)	□ Sanger	7 DAYS	Fresh frozen tissue / FFPE blocks
MGM177	BRAF V600E mutation analysis	□ RT-PCR	7 DAYS	Fresh frozen tissue / FFPE blocks
MGM178	BRCA1 & BRCA2 deletion/duplication analysis	□ MLPA	3 WEEKS	Peripheral Blood / Purified Genomic DNA
MGM179	BRCA1 & BRCA2 gene analysis	□ NGS	3 WEEKS	Peripheral Blood / Purified Genomic DNA
MGM180	BRCA1 & BRCA2 gene analysis	□ Sanger	6 WEEKS	Peripheral Blood / Purified Genomic DNA
MGM181	BRCA1 gene analysis	□ Sanger	3 WEEKS	Peripheral Blood / Purified Genomic DNA
MGM182	BRCA2 gene analysis	☐ Sanger	3 WEEKS	Peripheral Blood / Purified Genomic DNA
MGM335	Breast cancer - NGS theranostic panel	□ NGS	8 WEEKS	Fresh frozen tissue/FFPE blocks & Peripheral Blood
MGM183	Carney complex (PRKAR1A) gene analysis	□ NGS	4 WEEKS	Peripheral Blood / Purified Genomic DNA
MGM330	CEL/HES (Chronic eosinophilic leukemia/hyper eosinophilic syndrome) diagnostic and prognostic gene panel	□ NGS	4 WEEKS	Peripheral Blood / Bone Marrow/ Purified Genomic DNA
MGM184	CMPD (Chronic myeloproliferative disorder gene panel)	□ NGS	3 WEEKS	Peripheral Blood / Bone Marrow/ Purified Genomic DNA
MGM185	CLL prognostication/risk stratification gene panel	□ NGS	3 WEEKS	Peripheral Blood / Bone Marrow/ Purified Genomic DNA
MGM186	CML/CNL (chronic myeloid leukemia/chronic neutrophilic leukemia - atypical) - prognostication gene panel	□ NGS	3 WEEKS	Peripheral Blood / Bone Marrow/ Purified Genomic DNA
MGM329	CMML (Chronic myelomonocytic leukemia) risk stratification gene panel	□ NGS	3 WEEKS	Peripheral Blood / Bone Marrow/ Purified Genomic DNA
MGM332	Colorectal cancer - theranostic panel	□ NGS	5 WEEKS	FFPE blocks & Peripheral Blood
MGM340	DPYD (IVS14+1G>A) mutation analysis	□ Sanger	7 DAYS	Peripheral Blood / Purified Genomic DNA
MGM339	DYPD gene analysis (for 5 FU toxicity evaluation)	□ NGS	4 WEEKS	Peripheral Blood / Purified Genomic DNA
MGM189	EGFR gene analysis - 4 exons (18, 19, 20, 21):	□ Sanger	10 DAYS	Fresh frozen tissue/FFPE blocks
MGM190	EGFR gene analysis (Hot Spot)	□ RT-PCR	7 DAYS	Fresh frozen tissue/FFPE blocks
MGM193	FLT3 gene internal tandem duplication analysis and D835 point mutation analysis	☐ Fragment analysis & Sanger	2 WEEKS	Bone Marrow / Purified Genomic DNA



Oncol	Oncology (continued)								
CODE	TEST	METHOD	TAT	PREFERRED SAMPLE TYPE					
MGM333	GIST (Gastrointestinal stromal tumor) - theranostic panel (Hot Spot)	□ NGS	6 WEEKS	FFPE blocks & Peripheral Blood					
MGM187	Hereditary cancer gene panel - extended	□ NGS	6 WEEKS	Peripheral Blood / Purified Genomic DNA					
MGM194	Hereditary cancer gene panel - focussed	□ NGS	6 WEEKS	Peripheral Blood / Purified Genomic DNA					
MGM197	IDH1 gene analysis (exon 4)	□ Sanger	7 DAYS	Peripheral Blood; Fresh frozen tissue/FFPE blocks					
MGM198	Imatinib Resistance (ABL kinase) gene analysis:	□ Sanger	10 DAYS	Peripheral Blood / Bone Marrow					
MGM199	JAK2 gene analysis - 2 exons (12, 14)	□ Sanger	7 DAYS	Peripheral Blood / Bone Marrow/ Purified Genomic DNA					
MGM200	JMML (Juvenile myelomonocytic leukemia) risk stratification gene panel	□ NGS	3 WEEKS	Peripheral Blood / Bone Marrow/ Purified Genomic DNA					
MGM201	KIT gene analysis - 2 exons (9,11)	□ Sanger	7 DAYS	Fresh frozen tissue / FFPE blocks					
MGM202	KIT gene analysis - 4 exons (9, 11, 13, 17)	□ Sanger	10 DAYS	Fresh frozen tissue / FFPE blocks					
MGM204	KRAS gene analysis - 2 exons (2 & 3)	☐ Sanger	7 DAYS	Fresh frozen tissue / FFPE blocks					
MGM203	KRAS gene analysis (Hot Spot)	☐ RT-PCR	7 DAYS	Fresh frozen tissue / FFPE blocks					
MGM205	LCH/hairy cell leukemia - <i>BRAF</i> V600E mutation analysis	□ NGS	3 WEEKS	Peripheral Blood / Bone Marrow					
MGM070	Lymphoproliferative disorder gene panel	□ NGS	4 WEEKS	Fresh frozen tissue / FFPE blocks					
MGM311	Lynch syndrome (MLH1, MSH2, EPCAM) deletion/duplication analysis	□ MLPA	3 WEEKS	Peripheral Blood / Purified Genomic DNA					
MGM167	Lynch syndrome gene panel	□ NGS	4 WEEKS	Peripheral Blood / Purified Genomic DNA					
MGM206	MDS (Myelodysplastic syndrome) prognostication and risk stratification gene panel	□ NGS	3 WEEKS	Peripheral Blood / Bone Marrow					
MGM191	MDS-AML (Myelodysplastic syndrome-acute myeloid leukemia) familial gene panel	□ NGS	3 WEEKS	Peripheral Blood / Bone Marrow/ Purified Genomic DNA					
MGM192	MDS-AML (Myelodysplastic Syndrome-Acute myeloid leukemia) Familial gene panel-reflex	□ MLPA	3 WEEKS	Peripheral Blood / Bone Marrow/ Purified Genomic DNA					
MGM336	Melanoma - theranostic panel	□ NGS	9 WEEKS	FFPE blocks & Peripheral Blood					
MGM207	MGMT gene methylation analysis (Temozolomide resistance)	□ RT-PCR	2 WEEKS	FFPE blocks					
MGM208	Myeloproliferative neoplasms - CALR (exon 9) gene analysis	☐ Fragment analysis	7 DAYS	Peripheral Blood / Bone Marrow					
MGM209	Myeloproliferative neoplasms - JAK2 V617F mutation analysis	□ Sanger	7 DAYS	Peripheral Blood / Bone Marrow					
MGM210	Myeloproliferative neoplasms - MPL (exon 10) gene analysis	□ Sanger	7 DAYS	Peripheral Blood / Bone Marrow					
MGM211	Myeloproliferative neoplasms prognostication and risk stratification panel	□ NGS	3 WEEKS	Peripheral Blood / Bone Marrow					
MGM290	Multiple myeloma gene panel	□ NGS	4 WEEKS	Peripheral Blood / Bone marrow/ Purified Genomic DNA					
MGM289	MPN (Myeloproliferative neoplasm) reflex Panel	□ Sanger	10 DAYS	Peripheral Blood / Bone Marrow					
MGM331	NSCLC (Non small cell lung cancer) NGS Panel (Hot Spot)	□ NGS	4 WEEKS	FFPE blocks & Peripheral Blood					



Oncol	Ogy (continued)			
CODE	TEST	METHOD	TAT	PREFERRED SAMPLE TYPE
MGM216	NPM1 gene analysis (Hot Spot - exon 12)	☐ Fragment analysis	2 WEEKS	Peripheral Blood / Bone Marrow
MGM217	NRAS gene analysis (Hot Spot)	□ RT-PCR	7 DAYS	Fresh frozen tissue / FFPE blocks
MGM218	PDGFRA gene analysis - 3 exons (12, 14, 18)	☐ Sanger	10 DAYS	Peripheral blood/Bone marrow/Fresh frozen tissue /
MGM219	PML-RARa gene fusion analysis (Qualitative)	□ RT-PCR	10 DAYS	FFPE blocks Peripheral Blood / Bone Marrow
MGM220	PTEN gene analysis	☐ Sanger	3 WEEKS	Peripheral Blood / Purified Genomic DNA
MGM291	RAS extended profiling analysis by NGS	□ NGS	12 DAYS	Fresh frozen tissue/FFPE blocks
MGM223	RET oncogene - 2 exons (10, 11)	□ Sanger	10 DAYS	Peripheral Blood / Purified Genomic DNA
MGM224	RET oncogene - 8 exons (5, 8, 10, 11, 13, 14, 15, 16)	□ Sanger	3 WEEKS	Peripheral Blood / Purified Genomic DNA
MGM225	ROS1 gene fusion analysis	□ RT-PCR	2 WEEKS	FFPE blocks
MGM196	Somatic cancer mutation - Hot Spot tumor panel	□ NGS	4 WEEKS	Fresh frozen tissue/FFPE blocks & Peripheral Blood in 2 Streck Tubes
MGM226	STK11 gene analysis	☐ Sanger	3 WEEKS	Peripheral Blood / Purified Genomic DNA
Tuberous	sclerosis - refer to neurology			
MGM227	TP53 gene analysis	□ NGS	4 WEEKS	Peripheral Blood / Purified Genomic DNA
MGM228	TP53 gene analysis	□ Sanger	3 WEEKS	Peripheral Blood / Purified Genomic DNA
MGM235	VHL (Von Hippel-Lindau syndrome) gene analysis	☐ Sanger	10 DAYS	Peripheral Blood / Purified Genomic DNA
MGM323	VHL (Von Hippel-Lindau syndrome) deletion/duplication analysis	□ MLPA	3 WEEKS	Peripheral Blood / Purified Genomic DNA
IMMUN	IOHISTOCHEMISTRY*			
MGM236	ALK D5F3	□ IHC	4 DAYS	FFPE blocks
MGM237	BRAF V600E IHC analysis	□ IHC	4 DAYS	FFPE blocks
MGM239	Breast prognostic/predictive IHC1 panel (ANY ONE OF - ER, PR,Her2/neu, MIB-1/Ki67)	□ IHC	4 DAYS	FFPE blocks
MGM240	Breast prognostic/predictive IHC2 panel (ER, PR)	□ IHC	4 DAYS	FFPE blocks
MGM241	Breast prognostic/predictive IHC3 panel (ER, PR, Her2/neu)	□ IHC	4 DAYS	FFPE blocks
MGM242	Breast prognostic/predictive IHC4 panel (ER, PR, Her2/neu, MIB-1/Ki67)	□ IHC	4 DAYS	FFPE blocks
MGM238	c-MET IHC analysis	□ IHC	4 DAYS	FFPE blocks
MGM312	Lynch syndrome mismatch repair (MMR) 4 gene (MLH1, MLH2, MSH6 & PMS2) panel - IHC [Microsatellite instability]	□ IHC	4 DAYS	FFPE blocks
MGM243	ROS1 IHC analysis	□ IHC	4 DAYS	FFPE blocks

<sup>\*</sup>Note: If we receive test requests for two or more non ER, PR IHC markers for a single patient (example: ALK, ROS1 and cMET) - the TAT will be 6 days.

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#### **GENETIC TEST SELECTION LIST:**

OPHTHALMOLOGY [preferred sample type - EDTA blood/DNA]								
CODE	TEST	METHOD	TAT					
MGM303	Corneal dystrophy gene panel	□ NGS	4 WEEKS					
MGM244	Bardet-Biedl syndrome gene panel	□ NGS	4 WEEKS					
MGM245	Cataract gene panel (congenital/developmental)		4 WEEKS					
MGM249	Congenital stationary night blindness gene panel	□ NGS	4 WEEKS					
MGM252	Leber congenital amaurosis gene panel	□ NGS	4 WEEKS					
MGM254	Microphthalmia and anophthamia gene panel	□ NGS	4 WEEKS					
MGM256	Optic atrophy gene panel:	□ NGS	4 WEEKS					
MGM221	RB1 gene analysis	□ NGS	4 WEEKS					
MGM222	RB1 gene deletion/duplication analysis	□ MLPA	3 WEEKS					
MGM257	Retinal degeneration gene panel	□ NGS	4 WEEKS					
MGM260	Usher syndrome ( <i>USH2A</i> ) deletion/ duplication analysis	□ MLPA	3 WEEKS					
MGM259	Usher syndrome gene panel	□ NGS	4 WEEKS					

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#### **GENETIC TEST SELECTION LIST:**

MISCELLANEOUS (includes syndromes) [preferred sample type - EDTA blood/DNA]										
CODE	TEST	METHOD	TAT	CODE	TEST	METHOD	TAT			
MGM277	Additional family member (investigational)	☐ Sanger	4 WEEKS	MGM274	Whole exome sequencing - 50MB(80-100)	) 🗆 NGS	6 WEEKS			
MGM261	testing		4 WEEKS	MGM275	Whole genome sequencing (mean 30x)	□ NGS	8 WEEKS			
	Alagille syndrome gene panel	□ NGS		MGM276	Whole mitochondrial genome sequencing	□ NGS	2 WEEKS			
MGM272	Clinical exome - 20MB (80-100x)	□ NGS	6 WEEKS							
MGM328	Clinical exome with reflex sanger for investigational - 20MB (80-100x)	□ NGS & Sanger	6 WEEKS							
MGM263	Ciliopathy gene panel	□ NGS	4 WEEKS							
MGM264	Cohen's syndrome (VPS13B) gene analysis	□ NGS	4 WEEKS							
MGM265	Cornelia de Lange syndrome gene panel	□ NGS	4 WEEKS							
MGM268	Craniosynostosis gene panel	□ NGS	4 WEEKS							
MGM315	Non-immune hydrops gene panel	□ NGS	4 WEEKS							
MGM266	Noonan syndrome gene panel	□ NGS	4 WEEKS							
MGM267	Pallister Hall syndrome (GLI3) gene analysis	□ NGS	4 WEEKS							
MGM269	Smith-Lemli-Opitz syndrome ( <i>DHCR7</i> ) gene analysis	□ NGS	4 WEEKS							
MGM271	Sotos syndrome (NSD1) deletion/duplication analysis	□ MLPA	3 WEEKS							
MGM270	Sotos syndrome gene panel	□ NGS	4 WEEKS							
MGM278	Raw data charges	□ NA	7 DAYS							
MGM326	TRIO - Whole exome sequencing - 45-50MB (80-100x)	□ NGS	6 WEEKS							
MGM327	TRIO Reflex - Clinical Exome sequencing - 20MB (80-100x)	□ NGS & Sanger	6 WEEKS							

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#### GENETIC TEST SELECTION LIST:

NGS: Next-Generation Sequencing, MLPA: Multiplex Ligation-dependent Probe Amplification, PCR: Polymerase chain reaction, Sanger: Sanger Sequencing, RT-PCR: Real-Time PCR, IHC: Immunohistochemistry

## § Panorama™ Non invasive prenatal screening test

CODE TEST

MGM273

Panorama<sup>™</sup> Non invasive prenatal screening test or (NIPS) (Trisomy 21, Trisomy 18, Trisomy 13,

METHOD NGS

TAT 12 DAYS

Monosomy X and Triploidy)

12

For NIPS, 2 x 10 ml blood in Streck tubes should be collected from the pregnant woman and a cheek swab from the father of the pregnancy (optional) [Note: Please request for an exclusive kit, that includes the Streck tubes, cheek swab, TRF, syringe and needle as well as sample collection instructions from a MedGenome representative].

### Pre-Implantation Genetic Screening (PGS)

CODE TEST

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METHOD

TAT

MGM297 Pre-Implantation Genetic Screening (PGS)

□ NGS

10 DAYS

For PGS, A few trophectoderm cells from a day 5 embryo [Note: Please request for an exclusive PGS kit, that includes the PCR tubes, Cell wash solution(CWS), 1 x PBS for collecting biopsy, TRF, and instruction material from a MedGenome Representative].

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#### **GENETIC TEST SELECTION LIST:**

NGS: Next-Generation Sequencing, MLPA: Multiplex Ligation-dependent Probe Amplification, PCR: Polymerase chain reaction, Sanger: Sanger Sequencing, RT-PCR: Real-Time PCR, IHC: Immunohistochemistry

#### **SAMPLE REQUIREMENT:**

- ✓ Blood: 3-4 ml EDTA anticoagulated blood, packed securely to avoid spillage, must be shipped to reach within 48 hours after collection on ice (4-8°C).
- In case of BCR-ABL, PML-RARα and IRMA testing, 2-3 ml blood collected in PaxGene/EDTA tubes (provided on request) must be packed securely to avoid spillage, must be shipped to reach within 48 hours after collection on ice at (4-8°C).
- ✓ FFPE tissue: 3-4 mm sections of FFPE tumor tissue shipped in ambient temperature.
- ✓ We accept 1 stained slide (H & E) and 10 unstained non-baked slides with 10-um thick sections of FFPE tumor tissue.
- Tumor section should contain at least 70% tumor content as verified by the pathologist. Pathology report should accompany specimen.
- Tissue in FFPE blocks/slides may not be available after testing. If available, the sample shall be sent back provided the courier charges are borne by the patient.
- Fresh frozen tissue: The tumor should be sectioned and a pathology report to be generated that includes an assessment of tumor content Frozen tissue should be shipped in dry ice. Please call us prior to shipping fresh frozen samples.
- ✓ For tumor panel test, FFPE/fresh frozen tissue should be accompanied by matched normal (blood) sample of the patient.
- ✓ DNA of the patient can also be sent directly. If DNA is tumor derived, please confirm if the tumor content was > = 70% and 10-ug high quality DNA A260/A280 value in the range 1.7 1.9.
- Please provide relevant clinical indications for accurate testing. In case of Genome sequencing, Exome sequencing, NGS Panels and testing for germline mutations (ex: BRCA) on blood, provision of the clinical details and family history are mandatory.

# MedGenome offers broadest range of genomic tests for diverse clinical specialties





258/A, 3rd Floor, Narayana Nethralaya Building, Narayana Health City, Hosur Road, Bommasandra, Bangalore, Karnataka, India – 560 099

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