MNG LABORATORIES
Neurogenetic Answers™

5424 Glenridge Drive NE
Atlanta, GA 30342 USA
toll-free: 678.225.0222
fax: 678.225.0212
mnglabs.com

Neurochemistry & Metabolic Test Request Form

We gladly accept deliveries Monday-Saturday, excluding holidays
CLIA License #11D0703390; CAP License #1441004; State of Georgia License #060-381

Patient Name _____ **DOB** _____

STAT Testing Now Available

For STAT Testing, please see page 4.

Metabolic

CSF

- ☐ (MET01) Amino Acids
- ☐ (MET07) Lactate
- ☐ (MET11) Pyruvate*
- ☐ (NC01) 5-Methyltetrahydrofolate
- ☐ (NC02) Neopterin [*Marker for CNS Immune System Stimulation*]
- ☐ (NC03) Neopterin/Tetrahydrobiopterin
- ☐ (NC04) Neurotransmitter Metabolites (5HIAA, HVA, 3OMD) [*Includes Biomarkers for Pyridoxine Responsive Seizures*]
- ☐ (NC05) Pyridoxal 5'-phosphate [*Pyridox[am]ine Phosphateoxidase Deficiency + CNS Pyridoxal 5'-phosphate Deficiency*]
- ☐ (NC06) Succinyladenosine [*Adenylosuccinate Lyase Deficiency*]
- ☐ (NC07) Sialic Acid [*Disorders with Hypomyelination of Unknown Etiology/ Sialic Acid Storage Disorders*]
- ☐ (NC08) Alpha-Aminoadipic Semialdehyde [*Pyridoxine-Responsive Seizures*]
- ☐ (NC09) 4-Hydroxybutyric Acid [*Succinic Semialdehyde Dehydrogenase Deficiency*]
- ☐ (NC10) Glucose [*Glucose Transporter Deficiency*]

Blood & Muscle

- ☐ (MET02) Amino acids (Plasma)
- ☐ (MET04) Coenzyme Q10 Level (Leukocytes)
- ☐ (MET05) Coenzyme Q10 Level (Muscle)
- ☐ (MET08) Lactate (Plasma)
- ☐ (MET09) Phenylalanine Loading Assay (Plasma)
- ☐ (MET10) Pyruvate* (Blood)
- ☐ (MET12) Thymidine/Deoxyuridine Analytes (Plasma)
- ☐ (MET23) Creatine & Guanidinoacetate (Plasma)
- ☐ (MET24) Glucose (Plasma)
- ☐ (MET29) 3-O-Methyldopa (Plasma) [*Specific Marker for Aromatic L-Amino Acid Decarboxylase Deficiency]*

Urine

- ☐ (MET03) Amino Acids
- ☐ (MET21) Sialic Acid
- ☐ (MET19) Creatine & Guanidinoacetate
- ☐ (MET20) Alpha Aminoadipic Semialdehyde [*for Pyridoxine-Responsive Seizures]*

Enzymology

Blood

- ☐ (ENZ01) Aromatic L-amino Acid Decarboxylase Enzyme Analysis (Plasma) - *STAT Not Available*
- ☐ (ENZ06) Thymidine Phosphorylase Enzyme Analysis (Blood) - *STAT Not Available*

Immunoassays

- ☐ (MET22) Folate Receptor Antibody Assay (Plasma/ Serum) [*Cerebral Folate Deficiency*] - *STAT Not Available*
- ☐ (MET25) Folate Receptor Antibody Assay (CSF) [*Cerebral Folate Deficiency*] - *STAT Not Available*

Genetic Testing

IMPORTANT: All NGS Panels include Copy Number Analysis.

Next-Generation Sequencing

- ☐ (NGS310) GABA Metabolism Deficiency; 30 Genes
- ☐ (NGS315) Neurotransmitter Metabolism Deficiency; 101 Genes
- ☐ (NGS316) Dopamine Metabolism Deficiency; 16 Genes
- ☐ (NGS317) Serotonin Metabolism Deficiency; 28 Genes
- ☐ (NGS318) Tetrahydrofolate Metabolism Deficiency; 12 Genes
- ☐ (NGS320) Tyrosinemia; 4 Genes
- ☐ (NGS344) Aicardi-Goutieres Syndromes; 6 Genes

***requires deproteinization**

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IMPORTANT: Deletion/Duplication [Del/Dup] Testing for select single genes are in gray boxes. Genes may be offered as Sequencing Only, Del/Dup Only Testing or as Combination Testing (Gene Sequencing + MLPA [Del/Dup]).

Single Gene Sanger Sequencing

- ☐ ADAR (MOL309)
- ☐ ALDH5A1 (MOL125)
- ☐ ALDH7A1 (MOL030)
- ☐ ARHGEF9 (MOL306)
- ☐ DBH (MOL141)
- ☐ DDC (MOL025)
- ☐ DHFR (MOL237)
- ☐ FOLR1 (MOL166)
- ☐ GCH1 (MOL060)
  - ☐ GCH1 + MLPA [Del/Dup] (MOL234)
  - ☐ GCH1 MLPA [Del/Dup Only] (MOL215)
- ☐ GLDC (MOL212)
  - ☐ GLDC + MLPA [Del/Dup] (MOL236)
  - ☐ GLDC MLPA [Del/Dup Only] (MOL219)
- ☐ GLRA1 (MOL116)
- ☐ GLRB (MOL120)
- ☐ GPHN (MOL251)
- ☐ MTHFR (MOL171)
- ☐ PAH (MOL349)
- ☐ PC (MOL226)
- ☐ PDXK (MOL247)
- ☐ PNPO (MOL074)
- ☐ PROSC (MOL367)
- ☐ PTS (MOL096)
- ☐ QDPR (MOL117)
- ☐ RNASEH2A (MOL124)
- ☐ RNASEH2B (MOL118)
- ☐ RNASEH2C (MOL168)
- ☐ SAMHD1 (MOL172)
- ☐ SLC1A3 (MOL228)
- ☐ SLC18A2 (MOL095)
- ☐ SLC2A1 (MOL121)
  - ☐ SLC2A1 + MLPA [Del/Dup] (MOL231)
  - ☐ SLC2A1 + MLPA [Del/Dup Only] (MOL186)
- ☐ SLC6A3 (MOL097)
- ☐ SLC6A4 (MOL252)
- ☐ SLC6A5 (MOL127)
- ☐ SPR (MOL126)
- ☐ TH (MOL091)
- ☐ TPH2 (MOL092)
- ☐ TREX1 (MOL119)

Gene Sequencing Panels (Sanger)

- ☐ (MOL178) Dopa-Responsive Dystonia Full Gene Sequencing Analysis Panel; 3 Genes
- ☐ (MOL180) Hyperekplexia Full Gene Sequencing Analysis Panel; 5 Genes
  - ☐ (MOL297) Hyperekplexia Full Gene Sequencing Analysis Panel; 5 Genes Del/Dup Analysis
  - ☐ (MOL285) Hyperekplexia Del/Dup Analysis

Test request forms are subject to change. Please visit **www.mnglabs.com/forms** for the most updated test request forms.
Visit **www.mnglabs.com/support** to submit questions by secure HIPAA-Compliant email.
Visit **www.mnglabs.com/tests** for descriptions of each test, as well as molecular differential diagnosis search.
Order test kits online at **www.mnglabs.com/kits** for simplified sample processing, and free inbound and return shipping.

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Patient and Specimen Information

Patient Last Name		Patient First Name	
Patient ID #		Date of Birth [MM/DD/YYYY]	
Diagnosis/ICD-10		Collection Date [MM/DD/YYYY]	
Gender	☐ Male ☐ Female	Specimen Type	☐ Whole Blood ☐ Fibroblasts ☐ Urine ☐ Skin [For Culture] ☐ Plasma ☐ CSF ☐ Buccal Swab ☐ Muscle ☐ DNA [DNA Isoluation Tissue]

Referring Physician Information

Referring Physician Name	Print	Signature
Referring Physician NPI # [Required]		
Facility / Organization		Phone
Select and Provide Email or Fax for Report Delivery	☐ Email	☐ Fax

Billing Information [REQUIRED]

Facility Responsible for Payment		Phone
Facility Contact Person		Fax
Facility Contact Person Email		
Facility Billing Address		
City, State, Zip Code		

Results (sent by secured HIPPA-compliant email or fax)

	Authorized Results Recipient 1	Authorized Results Recipient 2
Name		
Facility		
Phone		
Mark Box and Fill In Information for Preferred Results Transmission Method		
Fax	☐	☐
Email	☐	☐

Forms Check List

All of the following are required before we will process your order (please check the following):

- ☐ All specimens that will be analyzed must be received
- ☐ Clinical Information Form completed
- ☐ Informed Consent for Genetic Testing Form completed and signed (also in compliance with New York State Civil Law)
- ☐ *(optional)* STAT Testing Request Form completed and signed

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STAT Testing Request Form

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Patient Name _____ **DOB** _____

STAT Testing - Expedite Your Results

IMPORTANT: To request STAT Testing, STAT Testing Form must be ***completed, signed and submitted*** with test request form. Failure to do so will delay your order.

For a nominal fee, the following tests are available for STAT Testing:

Neurochemistry (NC) & Metabolic (MET) Tests	Molecular (MOL) Tests	Next-Generation Sequencing (NGS) Panels
$100 per test - 7 day TAT	**$200 per test - 2 week TAT**	**$500 per panel - 2 week TAT**

NOTE: All MNG tests rely heavily on our proprietary Genome MaNaGer™ variant calling process coupled with our Neurogenetic Answers™ first-in-class reporting platform that delivers the actionable results you expect. MNG Laboratories will ensure any STAT orders meet the stated deadline, or the STAT fee will be waived.

Test Code

IMPORTANT: Enzymology tests NOT offered as STAT

Test Code: _____	**Test Code:** _____	**Test Code:** _____
Test Code: _____	**Test Code:** _____	**Test Code:** _____
Test Code: _____	**Test Code:** _____	**Test Code:** _____
Test Code: _____	**Test Code:** _____	**Test Code:** _____

Billing Information For STAT Testing [REQUIRED]

Facility Responsible for Payment	Phone
Facility Contact Person	Fax
Facility Contact Person Email	
Facility Billing Address	
City, State, Zip Code	

I HEREBY ACKNOWLEDGE *(check all & sign below)*:

☐ I acknowledge that the responsibile billing party listed above will pay for the additional costs associated with ordering a STAT Test. I understand that failure to submit payment for STAT Testing will delay my order.

☐ I consent that all requested STAT Tests listed above are either Neurochemistry tests, Metabolic tests, Molecular Tests or Next-Generation Sequencing Panels. I understand that all other tests are not available for STAT Testing and will not be ran as a STAT Test if requested.

Signature of Responsible Billing Party (*required*): _____

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Patient Name _____ **DOB (MM/DD/YYYY)** _____

Gender ☐ Male ☐ Female

Clinical (Check All That Apply)

Neurology

Eye ☐ Optic Atrophy ☐ Retinitis Pigmentosa ☐ Other (comment)

Hearing ☐ Sensorineural ☐ Stickler ☐ Usher

Cognitive/Neurobehavioral ☐ Intellectual Disability (ID) ☐ Syndromic ID ☐ Nonsyndromic ID ☐ Autism ☐ Dementia

Epilepsy ☐ Tonic Clonic ☐ Absence ☐ Myoclonic ☐ Epileptic Encephalopathy ☐ Other (comment)

Neuronal Migration ☐ Joubert ☐ Meckel ☐ Other (comment)

☐ **Stroke**

Movement Disorder ☐ Ataxia ☐ Episodic Ataxia ☐ Dystonia ☐ Chorea/Athetosis ☐ Parkinson Disease ☐ L-Dopa Response

Spasticity ☐ Spastic Quadriplegia ☐ Spastic Paraplegia ☐ Other (comment)

Neuromuscular ☐ Proximal or Distal ☐ Muscle Atrophy ☐ Rhabdomyolysis ☐ Statin Use ☐ Malignant Hyperthermia
☐ Contractures ☐ Arthrogryposis ☐ Myasthenia ☐ Periodic Paralysis

Nerve/Anterior Horn Cell ☐ Charcot-Marie-Tooth ☐ Nerve Conduction ☐ Sensory ☐ Motor ☐ Autonomic ☐ Pain
☐ Neurofibromas ☐ Other (comment)

Additional Comments

Cardiology

Cardiomyopathy ☐ Dilated ☐ Hypertrophic ☐ Noncompaction

Arrhythmias ☐ Ventricular Tachycardia ☐ Long or Short QT ☐ Conduction Defect ☐ Brugada

Congenital Heart Defects ☐ Heterotaxy ☐ Describe

Endocrine

☐ Diabetes Mellitus ☐ Hypothyroidism ☐ Other (comment)

Connective Tissue/Bone

☐ Ehlers Danlos ☐ Marfan ☐ Aneurysms ☐ Other (comment)

Additional Comments

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Patient Name _____ **DOB (MM/DD/YYYY)** _____

Gender ☐ Male ☐ Female

Imaging (Check All That Apply)

Brain MRI

☐ Leigh Disease ☐ Basal Ganglia Calcification ☐ Stroke ☐ Cerebellar Atrophy ☐ Abnormal Myelin (describe)

EEG (Describe Findings)

EMG/NVC (Describe Findings)

Laboratory

Metabolic (Describe Findings)

CPK

Maximum _____ Minimum _____

Genetic (Describe Findings)

☐ Chromosome Microarray ☐ Deletion/Insertion Testing ☐ Other (comment)

Family History

Affected Maternal Lineage

Relationship to Proband Symptoms

Affected Paternal Lineage

Relationship to Proband Symptoms

Siblings

Number (specify gender) Healthy/Affected

Ethnicity (please check)

☐ African ☐ European (Non-Finnish) ☐ Other (comment)
☐ East Asian ☐ European (Finnish)
☐ South Asian ☐ Latino

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Informed Consent for Genetic Testing

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Use this Consent Form for all genetic testing except for Exome or Carrier Screening.
For New York clients, please refer to our website for the New York Consent Form.

1. **Purpose of the Test:** My physician has explained the recommended testing: _____ (name of test or MNG test code), which is performed to help diagnose _____ _____(insert disease description). I am aware that all documentation regarding this testing, including the description of the purpose, methodology, and disorders is freely available at www.mnglabs.com/tests and has either been reviewed with me by my physician or I have read the documentation on my own.

2. **Statement Regarding Test Result:** A positive test result is an indication that the individual has a genetic cause for the specific disease tested for. A negative result may/may not rule out a genetic disorder depending on clinical history and quality/type of specimen tested. The individual may wish to consider further independent testing, consult a personal physician or pursue genetic counseling.

3. **Level of Certainty:** Is test-specific and determined by the methods employed, patient's clinical history and sometimes by the nature of the patient's condition at time of sampling. There is always a small possibility of error or failure in sample analysis; this is true with complex testing in any laboratory. Inclusion of clinical data, such as medical history, family history, images as they relate to the disease or disorder, will decrease the level of uncertainty in an interpretation and are encouraged to be included when submitting samples for analysis. MNG Laboratories will keep personal information private in accordance with HIPAA laws.

4. **Disclosing Test Results:** The following categories of persons or organizations that test results may be released to include, but are not limited to: hospitals or laboratories involved in the patient's care, referring physician(s) and primary care providers, other physician groups (consultants, surgeons), insurance companies (as provided by the patient or referring physician for payment purposes), and other professionals involved in patient care that assist MNG Laboratories in carrying out treatment, payment, and operational activities. Results are kept confidential. Medical Neurogenetics complies with security and privacy statutes of the federal Health Information Portability and Accountability Act (HIPAA). If a patient chooses to specifically declare where results may be released (other than the referring institution and ordering physician), please provide these *in writing* to the Compliance Officer, MNG Laboratories (quickresponse@mnglabs.com).

5. **Testing for Genetic Conditions can be Complex:** If warranted, obtain professional genetic counseling prior to giving consent to fully understand what the risks and benefits are to having the testing completed. I hereby consent to participate in testing described above. I understand that a biologic specimen will be obtained from me and/or members of my family. I understand that this biologic specimen will be used for the purpose of attempting to determine if I, or members of my family, are affected or are carriers of a particular disease or are at increased risk to someday be affected with this genetic disease.

_____ _____

Name of Patient (*please print clearly*) **Date**

_____

Referring Facility or Healthcare Provider (*please print clearly*)

IMPORTANT

***One signature* from either the patient/authorized person or physician is required to complete the consent**

_____

Signature of Patient or Authorized Person

Physician attests that they have reviewed the requested genetic testing with their patient *(sign below)*:

_____

Signature of Physician