MNG LABORATORIES

5424 Glenridge Drive NE
Atlanta, GA 30342 USA
toll-free: 844.TESTMNG
fax: 678.225.0212
mnglabs.com

# NEUROCHEMISTRY AND METABOLIC TEST REQUEST FORM

No Sunday or Holiday Deliveries Accepted | CLIA License #11D0703390; State of Georgia License #060-381

VISIT WWW.MNGLABS.COM/SUPPORT TO SUBMIT QUESTIONS BY SECURE HIPAA-COMPLIANT EMAIL FOR RAPID RESPONSE TO QUESTIONS.
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| PATIENT NAME: | DOB: |
|---|---|

## METABOLIC

### CSF

- ☐ (MET01) CSF AMINO ACIDS
- ☐ (MET07) CSF LACTATE
- ☐ (MET11) CSF PYRUVATE
- ☐ (NC01) CSF 5-METHYLTETRAHYDROFOLATE
- ☐ (NC02) CSF NEOPTERIN [MARKER FOR CNS IMMUNE SYSTEM STIMULATION]
- ☐ (NC03) CSF TETRAHYDROBIOPTERIN AND NEOPTERIN PROFILE
- ☐ (NC04) CSF NEUROTRANSMITTER METABOLITES 5HIAA, HVA, 3OMD [INCLUDES BIOMARKERS FOR PYRIDOXINE RESPONSIVE SEIZURES]
- ☐ (NC05) CSF PYRIDOXAL 5'-PHOSPHATE [PYRIDOX[AM]INE PHOSPHATE OXIDASE DEFICIENCY + CNS PYRIDOXAL 5'-PHOSPHATE DEFICIENCY]
- ☐ (NC06) CSF SUCCINYLADENOSINE [ADENYLOSUCCINATE LYASE DEFICIENCY]
- ☐ (NC07) CSF SIALIC ACID [DISORDERS WITH HYPOMYELINATION OF UNKNOWN ETIOLOGY /SIALIC ACID STORAGE DISORDERS]
- ☐ (NC08) CSF ALPHA-AMINOADIPIC SEMIALDEHYDE [PYRIDOXINE-RESPONSIVE SEIZURES]
- ☐ (NC09) CSF 4-HYDROXYBUTYRIC ACID [SUCCINIC SEMIALDEHYDE DEHYDROGENASE DEFICIENCY]
- ☐ (NC10) CSF GLUCOSE (GLUCOSE TRANSPORTER DEFICIENCY)

### BLOOD AND MUSCLE

- ☐ (MET02) AMINO ACIDS [PLASMA]
- ☐ (MET04) COENZYME Q10 LEVEL [LEUOKOCYTES]
- ☐ (MET05) COENZYME Q10 LEVEL [MUSCLE]
- ☐ (MET08) LACTATE [PLASMA]
- ☐ (MET09) PHENYLALANINE LOADING ASSAY [PLASMA]
- ☐ (MET10) PYRUVATE* [BLOOD]
- ☐ (MET12) THYMIDINE AND DEOXYURIDINE [PLASMA]
- ☐ (MET23) CREATINE & GUANIDINOACETATE [PLASMA]
- ☐ (MET24) GLUCOSE [PLASMA]

### URINE

- ☐ (MET03) AMINO ACIDS [URINE]
- ☐ (MET14) ORGANIC ACIDS [URINE]
- ☐ (MET19) CREATINE & GUANIDINOACETATE [URINE]
- ☐ (MET20) ALPHA-AMINOADIPIC SEMIALDEHYDE [URINE; FOR PYRIDOXINE-RESPONSIVE SEIZURES]

## ENZYMOLOGY

### BLOOD

- ☐ (ENZ01) AROMATIC L-AMINO ACID DECARBOXYLASE [AADC] ENZYMOLOGY [PLASMA]
- ☐ (ENZ06) THYMIDINE PHOSPHORYLASE ENZYMOLOGY [WHOLE BLOOD ACD]

### IMMUNOASSAYS

- ☐ (MET22) FOLATE RECEPTOR ANTIBODY ASSAY [PLASMA, SERUM; CEREBRAL FOLATE DEFICIENCY]
- ☐ (MET25) FOLATE RECEPTOR ANTIBODY ASSAY [CSF; CEREBRAL FOLATE DEFICIENCY]

## GENETIC TESTING

DELETION/DUPLICATION [DEL/DUP] TESTING FOR SELECTED GENES IS IN GREY BOXES. GENES ARE OFFERED AS ONLY DEL/DUP TESTING OR AS COMBINATION TESTING (GENE SEQUENCING + MLPA [DEL/DUP].

### NEXT-GENERATION SEQUENCING

- ☐ (NGS344) AICARDI- GOUTIERES SYNDROMES; 6 GENES
- ☐ (NGS315) NEUROTRANSMITTER METABOLISM; 93 GENES
- ☐ (NGS316) DOPAMINE METABOLISM; 14 GENES
- ☐ (NGS310) GABA METABOLISM; 22 GENES
- ☐ (NGS317) SEROTONIN METABOLISM; 27 GENES
- ☐ (NGS318) TETRAHYDROFOLATE METABOLISM; 15 GENES
- ☐ (NGS320) TYROSINEMIA; 4 GENES

### SINGLE GENE SANGER SEQUENCING

- ☐ (MOL309) ADAR
- ☐ (MOL030) ALDH7A1
- ☐ (MOL141) DBH
- ☐ (MOL237) DHFR
- ☐ (MOL125) ALDH5A1
- ☐ (MOL306) ARHGEF9
- ☐ (MOL025) DDC
- ☐ (MOL166) FOLR1

+☐ (MOL060) GCH1
- ☐ (MOL234) GCH1+MLPA [DEL/DUP]
- ☐ (MOL215) GCH1 MLPA [DEL/DUP ONLY]

+☐ (MOL212) GLDC
- ☐ (MOL236) GLDC+MLPA [DEL/DUP]
- ☐ (MOL219) GLDC MLPA [DEL/DUP ONLY]

- ☐ (MOL116) GLRA1
- ☐ (MOL251) GPHN
- ☐ (MOL226) PC
- ☐ (MOL074) PNPO
- ☐ (MOL117) QDPR
- ☐ (MOL118) RNASEH2B
- ☐ (MOL172) SAMHD1
- ☐ (MOL095) SLC18A2
- ☐ (MOL097) SLC6A3
- ☐ (MOL127) SLC6A5
- ☐ (MOL091) TH
- ☐ (MOL092) TPH2
- ☐ (MOL119) TREX1
- ☐ (MOL120) GLRB
- ☐ (MOL171) MTHFR
- ☐ (MOL349) PAH
- ☐ (MOL247) PDXK
- ☐ (MOL096) PTS
- ☐ (MOL124) RNASEH2A
- ☐ (MOL168) RNASEH2C
- ☐ (MOL095) SLC18A2
- ☐ (MOL228) SLC1A3
- ☐ (MOL252) SLC6A4
- ☐ (MOL126) SPR

### GENE SEQUENCING PANELS [SANGER]

+☐ (MOL181) AICARDI-GOUTIERES (6 GENES- ADAR, RNASEH2A, RNASEH2B, RNASEH2C, SAMHD1, TREX1)
- ☐ (MOL279) AICARDI-GOUTIERES (6 GENES) + MLPA [DEL/DUP]
- ☐ (MOL284) AICARDI-GOUTIERES PANEL MLPA [DEL/DUP ONLY]

☐ (MOL178) DOPA-RESPONSIVE DYSTONIA (3 GENES- GCH1, SPR, TH)

+☐ (MOL180) HYPEREKPLEXIA (5 GENES- ARHGEF9, GLRA1, GLRB, GPHN, SLC6A5))
- ☐ (MOL297) HYPEREKPLEXIA (5 GENES) +MLPA [DEL/DUP INCLUDED]
- ☐ (MOL285) HYPEREKPLEXIA PANEL MLPA: [DEL/DUP ONLY FOR GLRA1, GLRB, SLC6A5]

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| PATIENT NAME: | DOB: |
|---|---|

## 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<br>☐ SKIN [FOR CULTURE] ☐ PLASMA ☐ CSF<br>☐ BUCCAL SWAB ☐ MUSCLE<br>☐ DNA [DNA ISOLATION TISSUE] |

## REFERRING PHYSICIAN INFORMATION

| | |
|---|---|
| REFERRING PHYSICIAN NAME | SIGNATURE |
| **REFERRING PHYSICIAN NPI # (REQUIRED)** | |
| FACILITY/ORGANIZATION | PHONE |
| SELECT AND PROVIDE EMAIL OR FAX FOR REPORT DELIVERY | ☐ EMAIL ☐ FAX |

## BILLING INFORMATION

| | |
|---|---|
| FACILITY RESPONSIBLE FOR PAYMENT | PHONE |
| FACILITY CONTACT PERSON | EMAIL |
| FACILITY BILLING ADDRESS 1 | FAX |
| FACILITY BILLING ADDRESS 2 | |
| CITY, STATE, ZIP CODE | |

## RESULTS (SENT BY SECURE HIPAA-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 | ☐ | ☐ |

## CLINICAL INFORMATION: PLEASE INCLUDE/ ATTACH CLINICAL INFORMATION
## CLINICAL INFORMATION FORM AVAILABLE AT MNGLABS.COM/FORMS

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Patient Name (Last, First): _____ Date of Birth (MM/DD/YYYY): _____

Gender: ☐ Male ☐ Female

| CLINICAL (CIRCLE ALL THAT APPLY) | |
|---|---|
| **NEUROLOGY** | **COMMENTS** |
| EYE | |
| OPTIC ATROPHY | |
| RETINITIS PIGMENTOSA | |
| OTHER | |
| HEARING | |
| SENSORINEURAL | |
| STICKLER | |
| USHER | |
| COGNITIVE/NEUROBEHAVIORAL | |
| INTELLECTUAL DISABILITY (ID) | |
| SYNDROMIC ID | |
| NONSYNDROMIC ID | |
| AUTISM | |
| DEMENTIA | |
| EPILEPSY | |
| TONIC CLONIC | |
| ABSENCE | |
| MYOCLONIC | |
| EPILEPTIC ENCEPHALOPATHY | |
| OTHER | |
| NEURONAL MIGRATION | |
| JOUBERT | |
| MECKEL | |
| OTHER | |
| STROKE | |
| MOVEMENT DISORDER | |
| ATAXIA | |
| EPISODIC ATAXIA | |
| DYSTONIA | |
| CHOREA/ATHETOSIS | |
| PARKINSON DISEASE | |
| L-DOPA RESPONSE | |
| SPASTICITY | |
| SPASTIC QUADRIPLEGIA | |
| SPASTIC PARAPLEGIA | |
| OTHER | |
| 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 | |
| **CARDIOLOGY** | **COMMENTS** |
| CARDIOMYOPATHY | |
| DILATED | |
| HYPERTROPHIC | |
| NONCOMPACTION | |
| ARRHYTHMIAS | |
| VENTRICULAR TACHYCARDIA | |
| LONG OR SHORT QT | |
| CONDUCTION DEFECT | |
| BRUGADA | |
| CONGENITAL HEART DEFECTS | |
| DESCRIBE | |
| HETEROTAXY | |
| **ENDOCRINE** | **COMMENTS** |
| DIABETES MELLITUS | |
| HYPOTHYROIDISM | |
| OTHER | |
| **CONNECTIVE TISSUE/BONE** | **COMMENTS** |
| EHLERS DANLOS | |
| MARFAN | |
| ANEURYSMS | |
| OSTEOGENESIS IMPERFECTA | |
| OTHER | |
| **ADDITIONAL COMMENTS** | |

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## IMAGING (CIRCLE ALL THAT APPLY)

### BRAIN MRI

LEIGH DISEASE
BASAL GANGLIA CALCIFICATION
STROKE
CEREBELLAR ATROPHY
ABNORMAL MYELIN
(DESCRIBE)

### EEG (DESCRIBE FINDINGS)

### EMG/NCV (DESCRIBE FINDINGS)

## LABORATORY

### METABOLIC (DESCRIBE FINDINGS)

### CPK

MAXIMUM

MINIMUM

### GENETIC (DESCRIBE FINDINGS)

CHROMOSOME MICROARRAY

DELETION/INSERTION TESTING

OTHER

## FAMILY HISTORY

### AFFECTED MATERNAL LINEAGE

| RELATIONSHIP TO PROBAND | SYMPTOMS |
|---|---|

### AFFECTED PATERNAL LINEAGE

| RELATIONSHIP TO PROBAND | SYMPTOMS |
|---|---|

### SIBLINGS

| NUMBER (SPECIFY GENDER) | HEALTHY/AFFECTED |
|---|---|

### ETHNICITY (PLEASE CIRCLE)

AFRICAN
EAST ASIAN
SOUTH ASIAN
EUROPEAN (NON- FINNISH)
EUROPEAN (FINNISH)
LATINO
OTHER: _____