Cincinnati Children's

MOLECULAR GENETICS LABORATORY

For courier service and/or inquiries, please contact 513-636-4474 • Fax: 513-636-4373
www.cincinnatichildrens.org/moleculargenetics • Email: moleculargenetics@cchmc.org

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3333 Burnet Avenue, Room NRB 1013
Cincinnati, OH 45229

HEMATOLOGY TEST REQUISITION

All Information Must Be Completed Before Sample Can Be Processed

PATIENT INFORMATION

Patient Name: _____ , _____ , _____
Last First MI

Address: _____

_____

Home Phone: _____

MR# _____ Date of Birth _____ / _____ / _____

Gender: ☐ Male ☐ Female

ETHNIC/RACIAL BACKGROUND (Choose All)

☐ European American (White)
☐ African-American (Black)
☐ Native American or Alaskan
☐ Asian-American
☐ Pacific Islander
☐ Ashkenazi Jewish ancestry
☐ Latino-Hispanic _____
(specify country/region of origin)
☐ Other _____
(specify country/region of origin)

BILLING INFORMATION (Choose ONE method of payment)

☐ PATIENT BILLING

☐ Check Enclosed ☐ Money Order ☐ Credit Card (Visa, MC, Amex., Disc.)

Credit Card Number: _____

Card Holder Name: _____

Expiration Date: _____

Signature: _____

☐ REFERRING INSTITUTION

Institution: _____

Address: _____

City/State/Zip: _____

Accounts Payable Contact Name: _____

Phone: _____

Fax: _____

Email: _____

☐ COMMERCIAL INSURANCE / POLICY HOLDER INFORMATION*

Name: _____

Gender: _____ Date of Birth _____ / _____ / _____

Authorization Number: _____

Insurance Name: _____

Insurance Address: _____

City/State/Zip: _____

Insurance ID Number: _____

Group Number: _____

Insurance Phone Number: _____

* PLEASE NOTE:

- Insurance can only be billed if requested at the time of service
- Please call 866-450-4198 with any billing questions.

SAMPLE/SPECIMEN INFORMATION

SPECIMEN TYPE: ☐ Amniotic fluid ☐ Blood ☐ Cytobrushes
☐ Cord blood ☐ CVS ☐ Bone marrow
☐ Tissue (specify): _____

Specimen Date: _____ / _____ / _____ Time: _____

Specimen Amount: _____

Please call before sending tissue samples.

DRAWN BY: _____

*Phlebotomist must initial tube of specimen to confirm sample identity.
Single gene tests require at least 3mL whole blood in EDTA. Panels require at least 5 mL whole blood in EDTA.

REFERRING PHYSICIAN

Physician Name (print): _____

Address: _____

Phone: (_____) _____ Fax: (_____) _____

Email: _____

Genetic Counselor/Lab Contact Name: _____

Phone: (_____) _____ Fax: (_____) _____

Email: _____

_____ Date: ____/ ____/ _____

Referring Physician Signature (REQUIRED)

☐ Patient signed completed ABN

Medical Necessity Regulations: At the government's request, the Molecular Genetics Laboratories would like to remind all physicians that when ordering tests that will be paid under federal health care programs, including Medicare and Medicaid programs, that these programs will pay only for those tests the relevant program deems to be (1) included as covered services, (2) reasonable, (3) medically necessary for the treatment and diagnosis of the patient, and (4) not for screening purposes.

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Patient Name: _____ Date of Birth: _____

INDICATIONS/DIAGNOSIS/ICD-9 CODE

Reason for Testing:

- ☐ Diagnosis in symptomatic patient
- ☐ Asymptomatic infant with abnormal newborn screen
- ☐ Carrier (Heterozygote) testing
- ☐ Presymptomatic diagnosis of at-risk sibling
- ☐ Prenatal testing (by previous arrangement only)
- ☐ Family history of disease
- ☐ Other: _____

CLINICAL HISTORY

- ☐ Hepatomegaly
- ☐ Splenomegaly
- ☐ Skeletal abnormalities
- ☐ Other positive findings

Has patient received a bone marrow transplant? ☐ Yes ☐ No

If yes, date of bone marrow transplant _____

Percent engraftment _____

PEDIGREE OR FAMILY HISTORY

Parental Consanguinity ☐ Y ☐ N

TEST(S) REQUESTED

Hemoglobin Disorders

- ☐ Comprehensive globin gene analysis
- ☐ *HBA1* and *HBA2* (α-globin) sequence analysis
- ☐ *HBA1* and *HBA2* (α-globin) deletion analysis by MLPA
- ☐ *HBB* (β-globin) sequence analysis
- ☐ *HBB* (β-globin) deletion analysis by MLPA

Hemolytic Anemia

- ☐ Hemolytic Anemia Panel (includes sequence analysis of *AK1, ALDOA, ANK1, CDAN1, EPB41, EPB42, G6PD, GATA1, GCLC, GPI, GPX1, GSR, GSS, HK1, KIF23, KLF1, NT5C3A, PFKM, PGK1, PIEZO1, PKLR, RHAG, SEC23B, SLC2A1 (GLUT1), SLC4A1, SPTA1, SPTB, TPI1, XK)*
  - ☐ Reflex to deletion/duplication of *G6PD*
  - ☐ Reflex to deletion/duplication of *SLC2A1 (GLUT1)*
- ☐ Congenital Dyserythropoietic Anemia (CDA) Panel (includes sequence analysis of *CDAN1, GATA1, KIF23, KLF1, SEC23B)*
- ☐ CDA Panel with reflex to Hemolytic Anemia Panel reanalysis, if indicated
- ☐ RBC Membrane Disorders Panel (includes sequence analysis of *ANK1, EPB41, EPB42, PIEZO1, RHAG, SLC2A1, SLC4A1, SPTA1, SPTB, XK)*
  - ☐ Reflex to deletion/duplication of *SLC2A1 (GLUT1)*
- ☐ RBC Membrane Disorders Panel with reflex to Hemolytic Anemia Panel reanalysis, if indicated
- ☐ RBC Enzymopathy Panel (includes sequence analysis of *AK1, ALDOA, G6PD, GCLC, GPI, GPX1, GSR, GSS, HK1, NT5C3A, PFKM, PGK1, PKLR, TPI1)*
  - ☐ Reflex to deletion/duplication of *G6PD*
  - ☐ Reflex to deletion/duplication of *PGK1*
- ☐ RBC Enzymopathy Panel with reflex to Hemolytic Anemia Panel reanalysis, if indicated

Thrombophilic Disorders

- ☐ Factor V (Leiden)
- ☐ *MTHFR* (677 C>T and 1298 A>C) genotype
- ☐ Prothrombin (Factor II) G20210A genotype
- ☐ Thrombophilic polymorphism panel *(MTHFR* 677C>T and 1298 A>C, Factor V- Leiden, Factor II-Prothrombin G20210A, PAI-1 4G/5G genotypes)

Thrombotic Microangiopathy (aHUS and TTP)

- ☐ aHUS Genetic Susceptibility Panel (includes sequence analysis of *C3, CFB, CFH, CFHR1, CFHR3, CFHR5, CFI, DGKE, MCP, THBD* and MLPA analysis for *CFHR1/CFHR3* deletion)
  - ☐ *CFHR1/CFHR3* deletion analysis by MLPA
  - ☐ Reflex to deletion/duplication of *C3, CFB, CFI,* and *THBD*
  - ☐ Reflex to deletion/duplication of single gene(s)† (specify): _____
- ☐ *ADAMTS13* gene sequencing

☐ **Targeted (family specific) mutation analysis of genes listed above**

Gene of interest _____

Proband's name _____

Proband's DOB _____

Proband's mutation _____

Relationship to proband _____

Please call 513-636-4474 to discuss any family-specific mutation analysis with genetic counselor prior to shipment.

†Deletion/Duplication analysis of *CFH, CFHR5, DGKE* or *MCP* is not available at this time.

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Patient Name: _____ Date of Birth: _____

TEST(S) REQUESTED, CONTINUED

CUSTOM GENE SEQUENCING

Gene(s) to be sequenced (specify): _____

_____

Only genes with clear published functional relationship to disease are accepted.

Suspected syndrome/ condition: _____

Please choose one of the following:

☐ Full gene(s) sequencing

☐ Full gene(s) sequencing with reflex to deletion and duplication analysis, if indicated

☐ Targeted analysis for a common mutation seen in the population of interest

Mutation: _____

☐ Familial mutation analysis

Proband's name: _____

Proband's DOB: _____

Proband's mutation: _____

Patient's relation to proband: _____

Please include proband's report, if not performed at CCHMC.

DELETION AND DUPLICATION ASSAY

Gene(s) to be analyzed (specify): _____

_____

Please see list of available genes at: www.cincinnatichildrens.org/deldup

Suspected syndrome/ condition: _____

Please choose one of the following:

☐ Deletion and duplication analysis of gene(s) specified above

☐ Deletion and duplication analysis of gene(s) specified above with reflex to sequencing, if indicated

☐ Targeted deletion or duplication analysis for a common mutation seen in the population of interest

Mutation: _____

☐ Analysis of gene(s) specified above from previously analyzed deletion and duplication

☐ Familial deletion analysis

Proband's name: _____

Proband's DOB: _____

Proband's mutation: _____

Patient's relation to proband: _____

Please include proband's report, if not performed at CCHMC.

For testing of hemoglobin disorders or hemolytic anemia, entries below that are marked with a ▼ are required to process sample. The unmarked boxes are optional.

<table>
<tr><td rowspan="9">▼ Patient's medical history:</td><td>HEMATOLOGY RESULTS
DATE:</td><td>HEMOGLOBIN ANALYSIS
Method:</td><td>IRON STUDIES/
OTHER LAB TESTS</td></tr>
<tr><td>▼ WBC</td><td>▼ Hb A_2 (%)</td><td>Serum ferritin</td></tr>
<tr><td>▼ RBC</td><td>▼ Hb F (%)</td><td>Serum iron</td></tr>
<tr><td>▼ HGB</td><td>▼ Hb A (%)</td><td>TIBC</td></tr>
<tr><td>▼ HCT</td><td>Hb Variant (%)
Specify (S, C, D, E)</td><td>% Fe Saturation</td></tr>
<tr><td>▼ MCV</td><td>Hb H (%)</td><td>Erythropoietin</td></tr>
<tr><td rowspan="2">▼ Date of last transfusion:</td><td>▼ MCH</td><td>Newborn Screen</td><td>G6PD</td></tr>
<tr><td>▼ MCHC</td><td>Heinz bodies</td><td>Bilirubin</td></tr>
<tr><td rowspan="6">▼ Provisional Hb diagnosis:</td><td>▼ RDW</td><td rowspan="3">Hb H Inclusion bodies</td><td>LDH</td></tr>
<tr><td>▼ RETIC</td><td>Haptoglobin</td></tr>
<tr><td>▼ NRBC</td><td>Creatinine</td></tr>
<tr><td colspan="2" rowspan="2">▼ Red cell morphology</td><td>Platelets</td></tr>
<tr><td>Others</td></tr>
<tr><td colspan="3">Bone marrow morphology</td></tr>
</table>

Which Hemoglobin Disorders Test to Order?

Comprehensive analysis should be ordered for patients in whom the clinical symptoms and hematology testing to date do not suggest a specific diagnosis. Comprehensive analysis includes PCR-based sequencing of *HBA* and *HBB* as well as deletion analysis by MLPA of both genes.

***HBA1/HBA2* (alpha globin) deletion analysis** should be ordered if a common alpha thalassemia deletion is suspected.

***HBA1/HBA2* (alpha globin) deletion analysis with sequencing, if necessary** should be ordered if alpha globin sequencing is desired in the event that alpha globin deletion(s) which would explain the patient's symptoms are not detected by deletion analysis.

***HBA1/HBA2* (alpha globin) sequence analysis** should be ordered if a structural alpha globin variant is suspected.

***HBB* (beta globin) sequence analysis** should be ordered if a structural beta globin defect or beta thalassemia mutation(s) are suspected.

Family Study should be ordered if a specific alpha or beta globin mutation has been identified in a family member. This test detects only the specified mutation.

If you are not sure which test to order, please order the "comprehensive analysis".