

For PDF Fillable Requisitions, the following applies:

1. The form shall be completed using a Digital Health assigned computer.
2. Absolutely no personal health information shall be electronically saved on a computer.
3. The completed form shall not be shared electronically. If you reasonably believe that e-mailing the information is the only available method of communication or the only way to send the information then you must adhere to the Privacy guideline titled "E-mailing Personal Health Information".
4. All forms must be completed in their entirety, e.g. if a staff member has only completed half of a form they cannot save their work and then come back to complete it at a later date.
5. Once the personal health information has been recorded onto the form, it is to be printed immediately, deleted (not saved) from the computer, and then stored securely inside the client (paper) health record or scanned into an electronic record.
6. Do not print unnecessary duplicate copies of the form.
7. Regular audits of the Digital Health assigned computer shall be undertaken to ensure that no personal health information is being duplicated and saved.

Email: [morl@uiowa.edu](mailto:morl@uiowa.edu) • <https://morl.lab.uiowa.edu>

CLIA: 16D0966193

**MORL - Kidney Testing Requisition Form**

Effective as of 1/1/2023

| <b>REFERRING LABORATORY USE ONLY: please complete below section</b>  |                 |                          |  | <b>FOR MORL USE ONLY:</b><br>MORL Case #: _____ |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
|--|-----------------|--------------------------|--|---|----------------|---------------------------------|-----------------|---------------|----------------|-----|-------------------|-------|--------------------------|--------------------------|--------------------------|-----------------------------------|-------|--------------------------|--------------------------|--------------------------|-----------------|-------|--------------------------|--------------------------|--------------------------|--------------------------------|-------|--------------------------|--------------------------|--------------------------|-----------------|-------|--------------------------|--------------------------|--------------------------|
| Requisition Date: _____  |                 | Completed by: _____      |  | Accn#: _____                                    |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| Collection: Blood Date: _____ #Tubes: _____ Serum Date: _____ #Tubes: _____ Plasma Date: _____ #Tubes: _____   |                 |                          |  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| <b>Part A) Patient Information or ID Sticker (Required)</b>  |                 |                          | <b>Part A<sub>1</sub>) Patient Demographic Information (Required)</b>  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| <b>Name:</b> _____<br><div style="display: flex; justify-content: space-between; width: 100%;"> <span>Last</span> <span>First</span> </div>  |                 |                          | <b>Ethnicity:</b> <input type="checkbox"/> Hispanic <input type="checkbox"/> Not Hispanic<br><b>Race:</b> <input type="checkbox"/> Caucasian <input type="checkbox"/> Black or African American<br><input type="checkbox"/> Asian <input type="checkbox"/> American Indian/Alaska Native<br><input type="checkbox"/> Native Hawaiian or Other Pacific Islander<br><input type="checkbox"/> More Than One Race _____  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| <b>DOB:</b> ____/____/____<br><div style="display: flex; justify-content: space-between; width: 100%;"> <span>month</span> <span>day</span> <span>year</span> </div>   |                 |                          |  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| <b>Sex:</b> <input type="checkbox"/> Male <input type="checkbox"/> Female  |                 |                          |  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| <b>MRN:</b> _____  |                 |                          |  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| <b>Part B) Reporting Information (Required)</b>  |                 |                          | <b>Part C) Payment Information (Required)</b><br>Institutional billing or payment by Visa or MasterCard is accepted.   |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| Health Care Provider: _____  |                 |                          | <b>***The MORL will <u>NOT</u> submit to insurance.</b>  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| E-mail Address: _____  |                 |                          | Billing Contact: _____   |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| Institution: _____   |                 |                          | Institution: _____   |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| Street Address: _____  |                 |                          | Street Address: _____  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| City: _____  | State: _____    | Zip: _____               | City: _____  | State: _____                                    | Zip: _____     |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| Phone: ( ) _____   |                 | FAX: ( ) _____           | Phone: ( ) _____   |   | FAX: ( ) _____ |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| <b>If you or your patient would like to pay by credit card please contact Jori Hendon at 319-335-6653</b>  |                 |                          |  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| <b>Part D) Pertinent Clinical Information (Required) – Complete the section below</b>  |                 |                          |  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| <b>Diagnosis:</b> <input type="checkbox"/> aHUS: Trigger? <input type="checkbox"/> No <input type="checkbox"/> Yes (if <u>yes</u> , describe trigger, eg. BMT, pregnancy, pneumococcal): _____<br><input type="checkbox"/> DDD <input type="checkbox"/> C3GN <input type="checkbox"/> PIGN <input type="checkbox"/> TTP <input type="checkbox"/> STEC-HUS <input type="checkbox"/> Other (complete): _____ |                 |                          |  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| <b>Family history of renal disease?</b> <input type="checkbox"/> No <input type="checkbox"/> Yes (if <u>yes</u> , please provide details in comment & attach a pedigree if available)  |                 |                          |  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| <b>Disease History</b>   |                 |                          | <b>Specimen Information:</b>   |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| <b>Date of onset of symptoms:</b> _____  |                 |                          | <table style="width:100%; border-collapse: collapse;"> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Was specimen drawn pre or post:</th> <th style="text-align: left; border-bottom: 1px solid black;">Procedure date:</th> <th style="text-align: center; border-bottom: 1px solid black;">Pre-Procedure</th> <th style="text-align: center; border-bottom: 1px solid black;">Post-Procedure</th> <th style="text-align: center; border-bottom: 1px solid black;">N/A</th> </tr> <tr> <td>Eculizumab: _____</td> <td>_____</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>PLEX (*affects serologies): _____</td> <td>_____</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Renal Tx: _____</td> <td>_____</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>BMT (*affects genetics): _____</td> <td>_____</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Liver Tx: _____</td> <td>_____</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table> |   |                | Was specimen drawn pre or post: | Procedure date: | Pre-Procedure | Post-Procedure | N/A | Eculizumab: _____ | _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | PLEX (*affects serologies): _____ | _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Renal Tx: _____ | _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | BMT (*affects genetics): _____ | _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Liver Tx: _____ | _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was specimen drawn pre or post:  | Procedure date: | Pre-Procedure            | Post-Procedure   | N/A   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| Eculizumab: _____  | _____           | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>                        |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| PLEX (*affects serologies): _____  | _____           | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>                        |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| Renal Tx: _____  | _____           | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>                        |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| BMT (*affects genetics): _____   | _____           | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>                        |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| Liver Tx: _____  | _____           | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>                        |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| C3 Level: _____ nl range: _____ Date: _____<br>C4 Level: _____ nl range: _____ Date: _____<br>Renal biopsy: <input type="checkbox"/> Yes <input type="checkbox"/> No Date: _____<br>Hematuria: <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Diarrhea: <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Schistocytes: <input type="checkbox"/> Yes <input type="checkbox"/> No    |                 |                          | <b>Comments:</b><br><div style="height: 150px; border: 1px solid black;"></div>  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| <b>Current Lab Values</b>  |                 |                          |  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
|  | Value           | Normal Range             | Test Date  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| Hg/Hct:  | _____           | _____                    | _____  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| Haptoglobin:   | _____           | _____                    | _____  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| Platelets:   | _____           | _____                    | _____  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| sCr/BUN:   | _____           | _____                    | _____  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| LDH:   | _____           | _____                    | _____  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| uProt/uCr:   | _____           | _____                    | _____  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| Urine Blood:   | _____           | _____                    | _____  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| C3 Level:  | _____           | _____                    | _____  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| C4 Level:  | _____           | _____                    | _____  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |
| ADAMTS13:  | _____           | _____                    | _____  |   |                |                                 |                 |               |                |     |                   |       |                          |                          |                          |                                   |       |                          |                          |                          |                 |       |                          |                          |                          |                                |       |                          |                          |                          |                 |       |                          |                          |                          |

Patient Name: \_\_\_\_\_ DOB: \_\_\_\_\_ MRN: \_\_\_\_\_

**Please see page 3 for sample handling requirements - No Weekend Deliveries**

**Functional Testing Panels Requested**

- ☐ **C3 Glomerulopathy Complement Panel (C3G-CP)**  
(serologies for complement-mediated renal diseases)  
(CH50, APFA, C3b Deposition Assay, Fluid Phase Activity (IFE), FHAA, FBAA, Nephritic Factors (C3Nef (C3CSA), C5Nef (C3CSAP) C4Nef), C3, C3c, C4, FD, FB, Ba, Bb, C5, Properdin, Soluble C5b-9, FI and FH levels)  
• 2 mL frozen serum  
• 2 mL frozen EDTA plasma
- ☐ **aHUS (complement-mediated TMA) Panel (aHUS-FP)**  
(CH50, APFA, C3b Deposition Assay, FHAA, FBAA, Fluid Phase Activity (IFE), C3, C3c, C4, FD, FB, Ba, Bb, C5, Properdin, Soluble C5b-9, FI and FH levels)  
• 2 mL frozen serum  
• 2 mL frozen EDTA plasma
- ☐ **Autoantibody Panel**  
(FHAA, FBAA, Fluid Phase Activity (IFE), Nephritic Factors (C3Nef (C3CSA), C5Nef (C3CSAP), C4Nef)  
• 2 mL frozen serum
- ☐ **Complement Biomarker Panel (CBP)**  
(C3, C3c, C4, FD, FB, Ba, Bb, C5, Properdin levels, Soluble C5b-9, FH and FI levels)  
• 2 mL frozen serum  
• 2 mL frozen EDTA plasma
- ☐ **Complement Pathway Activity Panel (CPAP)**  
(CH50, APFA, C3b Deposition Assay)  
• 2 mL frozen serum

**Genetic Testing Requested**

- ☐ **Genetic Renal Panel** (DNA test for TTP, aHUS, HUS, DDD, C3G and other complement diseases)  
(CFH, CFI, MCP, CFB, CFHR5, C3, THBD, ADAMTS13, PLG, DGKE, G6PD, MMACHC, WT1 and MLPA)  
• 8-10 cc EDTA whole blood (room temp or refrigerated)  
OR  
• 10 µg DNA, minimum concentration 50 ng/µl
- ☐ **MLPA Testing ONLY** (screening for copy number variations in the CFH-CFHR5 genomic region)  
• 8-10 cc EDTA whole blood (room temp or refrigerated)  
OR  
• 10 µg DNA, minimum concentration 50 ng/µl
- ☐ **Familial Testing** (site specific analysis to screen for variants previously identified in a family member)

**Familial Testing Details:**

Gene/s: \_\_\_\_\_

MORL ID# or Variant/s: \_\_\_\_\_

Relationship to previously tested person: \_\_\_\_\_

*If you are interested in ordering Custom Testing please contact Amy Weaver at 319-335-6623 or [amy-weaver@uiowa.edu](mailto:amy-weaver@uiowa.edu)*

**a La Carte Testing Requested**

**Autoantibody Tests – 2 mL Frozen Serum**

- |   |   |
|---|---|
| <input type="checkbox"/> FH autoantibody (FHAA)     | <input type="checkbox"/> FB autoantibody (FBAA) |
| <input type="checkbox"/> Fluid Phase Activity (IFE) | <input type="checkbox"/> C3Nef (C3CSA)          |
| <input type="checkbox"/> C5Nef (C3CSAP)             | <input type="checkbox"/> C4Nef                  |

**Biomarker Tests – 1 mL Frozen EDTA Plasma**

- |   |  |
|---|--|
| <input type="checkbox"/> C3 Level (1 mL frozen serum) | <input type="checkbox"/> C3c Level     |
| <input type="checkbox"/> C4 Level (1 mL frozen serum) | <input type="checkbox"/> FD Level      |
| <input type="checkbox"/> FB Level                     | <input type="checkbox"/> BA Level      |
| <input type="checkbox"/> Properdin Level              | <input type="checkbox"/> Bb Level      |
| <input type="checkbox"/> C5 Level                     | <input type="checkbox"/> Soluble C5b-9 |
| <input type="checkbox"/> FI Level                     | <input type="checkbox"/> FH Level      |

**Complement Pathway Function Tests – 1 mL Frozen Serum**

- |  |   |
|--|---|
| <input type="checkbox"/> CH50  | <input type="checkbox"/> C3b Deposition Assay |
| <input type="checkbox"/> APFA (Alternative Pathway Functional Assay) |   |

**ADAMTS-13 Tests – 1 mL Frozen Citrate Plasma**

- ☐ ADAMTS-13 Activity
- ☐ ADAMTS-13 Activity with reflex to Inhibitor (when activity <25%)

**Important Information for ALL Requests**

All serum and plasma samples MUST be processed and frozen down to -80° C immediately after collection (please see instructions on page 3). Sample type must be clearly labeled (either serum or plasma) and shipped out overnight on at least 5 lb dry ice (Monday – Thursday).

If samples arrive thawed they will be **REJECTED**.

**No Weekend Deliveries**

**Molecular Otolaryngology & Renal Research Laboratories**

For test inquiries please call: 319-335-6623 • Fax: 319-353-5869  
For billing inquiries please call: 319-335-6653 • Fax: 319-353-5869  
Email: [morl@uiowa.edu](mailto:morl@uiowa.edu) • <https://morl.lab.uiowa.edu>

**Ship to:**

**Dr. Richard Smith**  
Molecular Otolaryngology & Renal Research Laboratories  
The University of Iowa  
285 Newton Rd., 5270 CBRB  
Iowa City, IA 52242-1078

**Monday — Friday ONLY – No Weekend Deliveries**

## Molecular Otolaryngology & Renal Research Laboratories Sample Requirements

Questions? Contact Amy Weaver at 319-335-6623 or [amy-weaver@uiowa.edu](mailto:amy-weaver@uiowa.edu)

### Genetic Renal Panel/MLPA/DNA Testing Sample Requirements:

- 8-10 cc. EDTA whole blood (minimum amount of 3-4 cc. is accepted for children under age 4)
- OR** 10 µg DNA, minimum concentration 50ng/µl (A260/A280 1.8-2) resuspended in 0.1mM EDTA (10mM Tris HCl, 0.1mM EDTA, pH 8, Teknova Cat# T0220)  
*Note: MORL is not responsible for broken tubes.*
- \*Please note: blood samples drawn from a bone marrow transplant patient will result in genetic results for the donor rather than the patient.**
- Overnight delivery, Room temperature or refrigerated (**DO NOT FREEZE WHOLE BLOOD**)
- Samples are accepted Monday-Friday.
- Samples may be refrigerated if delivery is delayed (stability – 1 week)

### Serum (FB & FH autoantibody, C3b Deposition, APFA, CH50, Fluid Phase Activity (IFE), C3Nef (C3CSA), C5Nef (C3CSAP), C4Nef, C3 and C4 Levels) Collection Protocol (minimum volume 2ml) **\*PLEX treatments will affect serum tests, please wait ~14 days after PLEX to draw samples:**

- Follow standard phlebotomy techniques to collect at least 6 cc of whole blood drawn in a **red-top** vacutainer tube.  
*Note: Serum separators with "clot activators" should **not** be used for the serum samples.*
- Allow the blood in the **red-top** tube to clot at room temperature for 30 minutes.
- Centrifuge the clotted blood at room temperature (1000 x g for 10 minutes).
- Label "Serum" or "Red-top" on clean screw top-tube (s).
- Pipette cell-free supernatant (at least 2 mL) to each labeled tube (s).
- Place the tube immediately at **-80°C** (or on dry ice). Sample must remain deep frozen.  
*Note: Do not transfer cells with serum. If necessary centrifuge a second time.*

### Plasma (Soluble C5b-9, C3c, Ba, Bb, Properdin, C5, FD, FB, FH, FI levels) Collection Protocol (minimum volume: 2ml)

**\*PLEX treatments will affect plasma tests, please wait ~14 days after PLEX to draw samples:**

- Follow standard phlebotomy techniques to collect at least 6 cc of whole blood drawn in a **lavender-top** (EDTA) vacutainer tube.
- Centrifuge at room temperature immediate after blood draw (1000 x g for 10 minutes).
- Label "Plasma" or "Lavender-top" on clean screw top-tube(s).
- Pipette cell-free supernatant (at least 2 mL) to each labeled tube (s).
- Place the tube immediately at **-80°C** (or on dry ice). Sample must remain deep frozen.  
*Note: Do not transfer cells with plasma. If necessary centrifuge a second time.*

### Plasma (ADAMTS-13 Activity/Inhibitor) Collection Protocol (minimum volume: 0.5ml):

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>Follow standard phlebotomy procedure to collect blood in buffered sodium citrate (<b>light blue-top</b>, 3.2%) plastic tubes (available in 4.5 mL, 2.7 mL or 1.8 mL full draw tubes).</li> <li>After collection, invert the tube gently 5 to 6 times.</li> <li>Label "Citrate Plasma" or "Blue-top" on clean cryovial screw-top tubes.</li> <li>Store the blue-top tube upright at room temperature until centrifugation. Samples should be centrifuged between 15 to 60 minutes after blood collection for best results.</li> <li>Re-mix the blood sample immediately prior to centrifugation by gently inverting the tube 5 to 6 times.</li> <li>Centrifuge blood sample at room temperature in a horizontal rotor (swinging bucket rotor) for 15-20 minutes at 1500 to 1800 x g with the <b>brake off</b>.</li> </ol> | <ol style="list-style-type: none"> <li>Following centrifugation, transfer the top two-thirds of the plasma layer into a new plastic tube.</li> <li>Re-centrifuge the collected plasma at 1500 to 1800 x g with the <b>brake off</b> for an additional 15-20 minutes to remove any red cells or platelets.</li> <li>Transfer the top two-thirds of the plasma into the previously labeled cryovials, taking care not to disturb any cells at the bottom of the tube.</li> <li>Place the tube immediately at <b>-80°C</b> (or on dry ice). Sample must remain deep frozen.<br/><br/><i>Note: if the sample arrives at room temperature a new sample will be required.</i></li> </ol> |
|---|--|

### Serum & Plasma Shipping Requirements:

- Serum and plasma must be **frozen** and shipped **OVERNIGHT** with a minimum of 3 kg (or 6 lbs) of dry ice.
- Cryovials should be put in zip lock bags and completely covered in dry ice to keep the sample frozen until it arrives in the lab.
- Delivery: Monday-Friday. **NO WEEKEND DELIVERIES**
- Thawed OR unlabeled samples will be REJECTED for testing.**

### Ship all samples to:

Dr. Richard Smith  
Molecular Otolaryngology & Renal Research Laboratories  
The University of Iowa  
285 Newton Rd., 5270 CBRB  
Iowa City, IA 52242-1078  
Phone: 319-335-6623

| <b><u>Complement Panel tests offered by the MORL:</u></b>   | <b>Test Code:</b> |
|---|-------------------|
| <b>C3 Glomerulopathy Complement Panel (serologies for DDD, C3GN), Serum and Plasma</b> - CH50, APFA, C3b Deposition Assay, Fluid Phase Activity Assay (IFE), FHAA, FBAA, Nephritic Factors (C3Nef (C3CSA), C5Nef (C3CSAP), C4Nef), C3, C3c, C4, FD, FB, Bb, Ba, C5, Properdin, Soluble C5b-9 (sC5b-9), FI and FH levels | C3G-CP            |
| <b>aHUS (complement-mediated TMA) Panel (serologies for TTP, aHUS, HUS), Serum and Plasma</b> - CH50, APFA, C3b Deposition Assay, FHAA, FBAA, Fluid Phase Activity Assay (IFE), C3, C3c C4, FD, FB, Ba, Bb, C5, Properdin, Soluble C5b-9 (sC5b-9), FI and FH levels   | aHUS-FP           |
| <b>Autoantibody Panel, Serum</b> - Fluid Phase Activity Assay (IFE), FHAA, FBAA, Nephritic Factors (C3Nef (C3CSA), C5Nef (C3CSA)P, C4Nef)   | AAP               |
| <b>Complement Biomarker Panel, Serum and Plasma</b> - C3, C3c, C4, FB, Ba, Bb, C5, FD, Properdin levels, Soluble C5b-9 (sC5b-9), FI and FH levels   | CBP               |
| <b>Complement Pathway Activity Panel, Serum</b> - CH50, APFA, C3b Deposition Assay  | CPAP              |
| <b><u>Autoantibodies to Complement Components</u></b>   | <b>Test Code:</b> |
| <b>Fluid Phase Activity Assay, Serum (IFE)</b>  | 07FPA             |
| <b>FH Autoantibody, Serum (ELISA)</b>   | 07FHAA            |
| <b>FB autoantibody, Serum (ELISA)</b>   | 07FBAA            |
| <b>C3Nef (C3CSA), Serum (Hemolytic)</b>   | 06C3NEF           |
| <b>C5Nef (C3CSAP), Serum (Hemolytic)</b>  | 06C5NEF           |
| <b>C4Nef, Serum (Hemolytic)</b>   | 06C4NEF           |
| <b><u>Functional Assays of Complement Activity - Pathways</u></b>   | <b>Test Code:</b> |
| <b>CH50, Serum (Liposome-based method)</b>  | 07CH50            |
| <b>Alternative Pathway Functional Assay (APFA), Serum (ELISA)</b>   | 06APFA            |
| <b>C3b Deposition Assay (Hemolytic)</b>   | 01C3BDA           |
| <b><u>Complement Protein Biomarkers (including split products)</u></b>  | <b>Test Code:</b> |
| <b>C3 Level, Serum (Turbidimetry)</b>   | 07C3L             |
| <b>C3c Level, Plasma (ELISA)</b>  | 06C3CL            |
| <b>C4 Level, Serum (Turbidimetry)</b>   | 07C4L             |
| <b>FD Level, Plasma (ELISA)</b>   | 01FDL             |
| <b>FB Level, Plasma (ELISA)</b>   | 07FBL             |
| <b>Ba Level, Plasma (ELISA)</b>   | 06BAL             |
| <b>Bb Level, Plasma (ELISA)</b>   | 06BBL             |
| <b>C5 Level, Plasma (ELISA)</b>   | 06C5L             |
| <b>Properdin Level, Plasma ELISA)</b>   | 06PL              |
| <b>Soluble C5b-9, Plasma (ELISA)</b>  | 06SMAC            |
| <b>FI Level, Plasma (ELISA)</b>   | 07FIL             |
| <b>FH Level, Plasma (ELISA)</b>   | 06FHL             |
| <b><u>ADAMTS-13</u></b>   | <b>Test Code:</b> |
| <b>ADAMTS-13 Activity (a la carte only), Citrate Plasma (FRET)</b>  | 01ATS13           |
| <b>ADAMTS-13 Activity with reflex to Inhibitor Assay (if activity is &lt;25%), Citrate Plasma (FRET)</b>  | 01ATS13RFX        |
| <b><u>Genetic Tests Offered by the MORL:</u></b>  | <b>Test Code:</b> |
| <b>Genetic Renal Panel: NGS + MLPA (CNVs) for Complement-Mediated Kidney Disease</b>  | GRP08             |
| <b>MLPA (CFH-CFHR5): Multiplex Ligation Dependent Probe Amplification</b>   | MLPA02            |

**ALL requested information must be provided or testing will not be performed**

***We request extensive patient demographic and clinical information. This information is required as it is very valuable in the interpretation of your patient's results.***

**Patient information:**

- Patient date of birth and gender
- Patient ethnicity and race
- Patient's clinical information and family history of kidney disease

**Specimen information:**

- Patient identifiers (**full name, date of birth, sex and medical record number**)
- Date of collection
- **Sample type – frozen samples must be CLEARLY LABELED as either serum or plasma and type (i.e. EDTA or Citrate)**
- Ordering physician

**Billing information:**

- We are not able to bill insurance, Medicare or patient directly.
- Institutional billing accepted. Visa and Mastercard accepted.
- Personal checks NOT accepted
- Please include contact information including phone and fax number for billing questions.

**Reporting Information:**

Because of confidentiality issues, reports will only be released to the individual indicated on the page 1 of the testing requisition form.

**Research Participation:**

If your patient's genetic and functional testing results are inconclusive, they may qualify for research studies on complement-mediated renal diseases that are ongoing at the MORL. If you would like your patient to be considered for this opportunity, please contact Amy Weaver at [amy-weaver@uiowa.edu](mailto:amy-weaver@uiowa.edu).

**IMPORTANT INFORMATION FOR PHYSICIAN OR GENETIC COUNSELOR:**

DNA tests may detect an abnormality. Detection methods are greater than 99% accurate. Many of these tests are relatively new. The analysis and interpretation represents our best knowledge and understanding of the genetics of these diseases.

There is a small possibility that a test may not work properly or an error may occur. You may be asked for an additional sample if it is felt that confirmatory testing is needed.

An error in diagnosis may occur if incorrect information is provided with the sample.

Kidney diseases are complex disorders and penetrance of a phenotype (the degree of kidney disease, for example) may be variable. Research to determine whether a genotype-phenotype correlation exists is ongoing.

Because of the complexity of DNA testing, results should be discussed with a genetic counselor or physician.

**Note: Kidney diseases are very complex disorders. This complexity means that variants in many different genes can lead to kidney disease. It is possible that no variants will be detected in the variant screens (the genes) you have requested.**

**DISCLAIMER:**

*This request to order molecular diagnostic tests from the MORL certifies to the MORL that the ordering physician has obtained informed consent from the patient as required by applicable state or federal laws for each test ordered, that the ordering physician has authorization from the patient permitting the MORL to report results for each test ordered to the ordering physician, and that the ordering physician assumes responsibility for providing the patient with all associated guidance and counseling regarding the test results.*