

## GENES ON THE GENETIC RENAL PANEL

*ADAMTS13* (A Disintegrin and Metalloproteinase with a Thrombospondin Type 1 Motif, member 13)

*C3* (Complement Component 3)

*CFB* (Complement Factor B)

*CFH* (Complement Factor H)

*CFHR5* (Complement Factor H Related 5)

*CFI* (Complement Factor I)

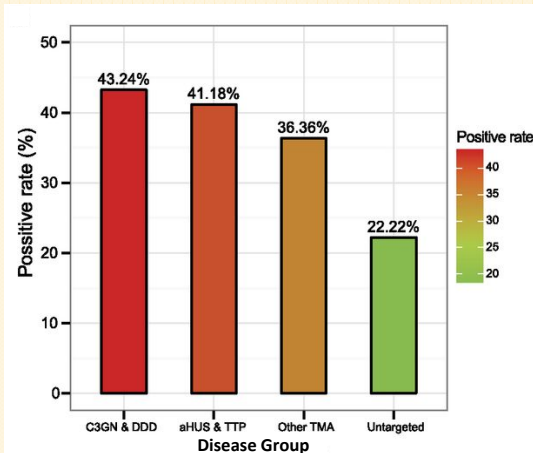
*DGKE* (Diacylglycerol Kinase, Epsilon)

*MCP* (Membrane Co-Factor Protein or CD46)

*MMACHC* (Methylmalonic Aciduria (Cobalamin Deficiency) CblC Type, With Homocystinuria)

*PLG* (Plasminogen)

*THBD* (Thrombomodulin)



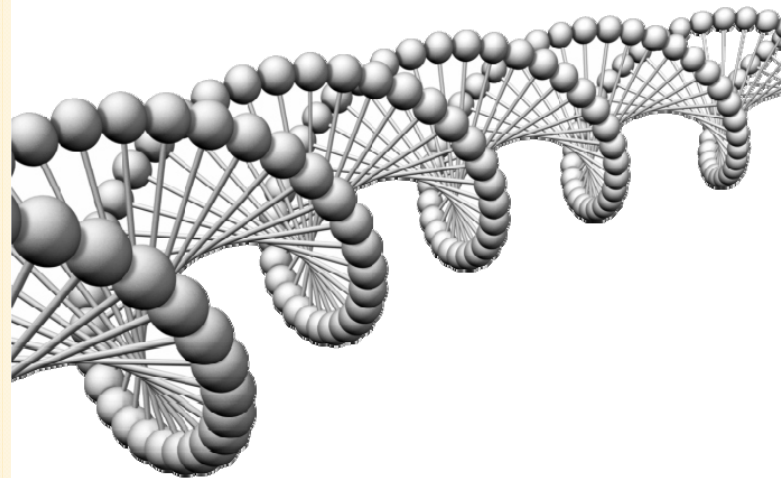
### Genetic Renal Panel Solve Rate

High-Throughput Genetic Testing for Thrombotic Microangiopathies and C3 Glomerulopathies, Fengxiao Bu et. al, J Am Soc Nephrol 27: 1245 – 1253, 2016. doi: 10.1681/ASN.2015040385



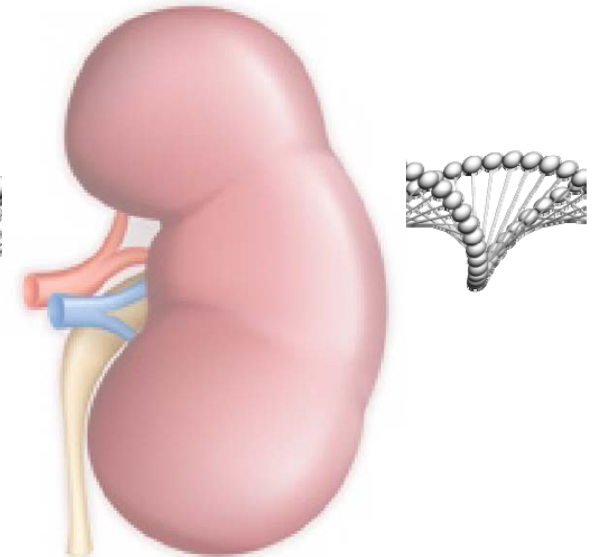
## Genetic Renal Panel

GENETIC TESTING



# Genetic Renal Panel

GENETIC TESTING



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A comprehensive test for the  
Thrombotic Microangiopathies  
and C3 Glomerulopathies



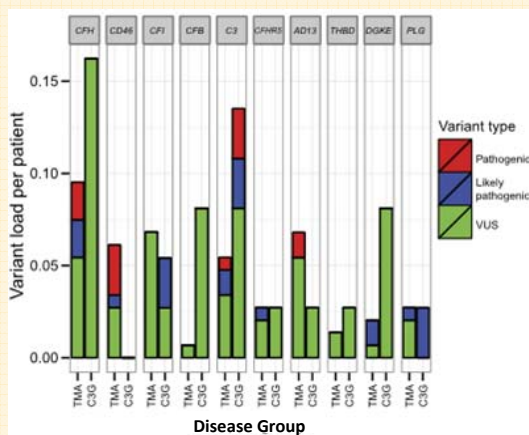
## CLINICAL INDICATIONS FOR GENETIC TESTING

In the past, persons diagnosed with complement-mediated kidney disease required multiple tests to attempt to identify the genetic cause of their disease. The Genetic Renal Panel is a comprehensive test for patients with:

- Thrombotic Microangiopathies (TMAs)
  - ◇ Thrombotic thrombocytopenic purpura (TTP)
  - ◇ Atypical hemolytic uremic syndrome (aHUS)
- C3 Glomerulopathies
  - ◇ Dense Deposit Disease (DDD)
  - ◇ C3 Glomerulonephritis (C3GN)

## REASONS FOR GENETIC TESTING

Genetic testing provides important answers to many questions. Information can be provided on recurrence chance, prognosis (whether a transplant might be successful or what type of transplant is necessary, i.e. kidney only or liver/kidney), and best methods of treatment.



**Spectrum of variants identified using the Genetic Renal Panel**  
High-Throughput Genetic Testing for Thrombotic Microangiopathies and C3 Glomerulopathies, Fengxiao Bu et. al, J Am Soc Nephrol 27: 1245 – 1253, 2016. doi: 10.1681/ASN.2015040385

## BENEFITS OF Genetic Renal Panel TESTING

The University of Iowa Molecular Otolaryngology & Renal Research Laboratories offers the Genetic Renal Panel - one test that is:

- **Comprehensive** – tests for all genes known to be associated with a variety of TMAs, C3Gs and other complement-mediated renal diseases.
- **Easy** – patient provides one blood sample.
- **Fast** – one test shortens waiting time for results.
- **Convenient** – blood sample is taken in local doctor's office.
- **Accurate** – 99% analytical specificity.
- **Diagnostic** – provides a diagnosis and guide to treatment, transplantation and genetic counseling.
- **Personalized** – results are discussed at a multidisciplinary meeting that includes clinical experts, scientists, bioinformaticians, human geneticists and genetic counselors.
- **Collaborative** – MORL will work directly with your physician or genetic counselor to ensure that test results are interpreted appropriately.
- **Inexpensive and efficient** – one test versus many tests.

Helping you solve the puzzle of complement-mediated diseases

To order comprehensive testing for your patient please visit our website at:

[www.medicine.uiowa.edu/morl](http://www.medicine.uiowa.edu/morl)

## BEYOND GENETIC TESTING

A comprehensive evaluation of the complement system requires four types of data to offer to your patient the best chance of accurately defining the cause and consequence of complement dysregulation.

- **Comprehensive Genetic Testing** – Expands the basic genetic evaluation to include an interrogation for fusion genes
- **Complement Biomarker Profiling** – Specific biomarkers provide a detailed and mechanistic understanding of the underlying complement pathology to add to disease definition. By defining a complement pathway signature, biomarkers can be useful to follow disease activity and/or severity in the clinical setting.
- **Identifying Acquired Drivers of Disease** – Identifying acquired drivers of disease such as antibodies to C3 convertase, factor H and factor B provides a metric to follow a patient's clinical course.
- **Assaying Complement Function** – Measuring and following complement activity can predict disease status (active vs. inactive) and response to therapy.

