

DNA-Guided Anti-Platelet Management with the *CLOPIDOGREL HILOmet System*

**FDA revised the Plavix® label in May 2009 including
CYP2C19 DNA Typing to Personalize Anti-Platelet Management.
DNA-Testable Drug Metabolism Deficiencies Reduce Clopidogrel Benefit.**

Clopidogrel (*Plavix*®) is widely prescribed for the management of myocardial infarction and acute coronary syndrome, and to prevent thrombosis following PCI intervention. Clopidogrel functions as an inhibitor of platelet adhesion. A pro-drug, Clopidogrel requires first, for therapeutic effect, its activation to the functional metabolite, a thiol derivative of Clopidogrel. The cytochrome P450 (CYP450) CYP2C19 isoenzyme is required for Clopidogrel conversion to its active metabolite.

Common DNA polymorphisms in the *CYP2C19* gene can reduce isoenzyme activity and decrease Clopidogrel conversion to its active metabolite. *CYP2C19* variants result in increased frequency of myocardial infarcts and decreased 5-year survival rates. The *CLOPIDOGREL HILOmet System* is revolutionary for clinical practice. By means of DNA Typing, the innate Clopidogrel metabolic capacity of the patient can be predicted and diagnosed simply from a blood sample.

DNA-Guided Clopidogrel Therapy

Patients with certain *CYP2C19* polymorphisms have decreased active metabolite levels and are prone to myocardial infarction and increased morbidity. *CYP2C19* DNA Typing can identify patients with these drug metabolism deficiencies, allowing consideration of alternative therapies, including Prasugrel (*Effient*®).

Proton Pump Inhibitors (*PPIs*), such as esomeprazole (*Nexium*®), omeprazole (*Prilosec*®), and lansoprazole (*Prevacid*®), are frequently co-prescribed for GERD and peptic ulcers in Clopidogrel patients. These PPIs are functional inhibitors of *CYP2C19* and decrease Clopidogrel conversion, which is undesirable in patients already deficient in drug metabolism.

Technical Information

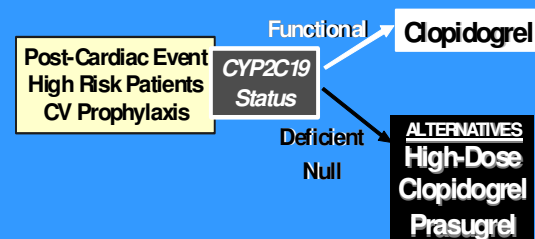
The *CLOPIDOGREL HILOmet System* determines an individual's innate Clopidogrel metabolic capacity by DNA Typing simultaneously the *CYP2C19* gene for 7 variants. The report to the physician includes DNA Typing results and recommended Clopidogrel management based on published guidelines.

Ordering the DNA Test for Clopidogrel

Order forms are available at www.genomas.net/LPH. The *CLOPIDOGREL HILOmet System* is available through Clinical Laboratory Partners (CLP), test code 70001. A listing of CLP Patient Service Centers can be found at www.clpct.com or 800-286-9800.



DNA-Guided Clopidogrel Therapy Personalized CYP2C19 Decision Support



LABORATORY OF PERSONALIZED HEALTH



Division of Genomas, Inc.

HILOmet DNA Typing is performed at the Genomas Laboratory of Personalized Health (LPH), located at Hartford Hospital. CT Dept. of Public Health license # CL-0644. Centers for Medicare and Medicaid Services certification # 07D1036625.

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