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GENE VARIANT ASSOCIATED WITH DIMINISHED ANITPLATELET EFFECT OF CLOPIDOGREL

*Study Supports Relationship between CYP2C19*2 and Drug Non-Responsiveness in Patients the Year Following PCI Procedure*

Orlando, FL – Patients with the CYP2C19*2 genotype had more ischemic events in the one year following percutaneous coronary intervention (PCI) (than whom? AF), according to research presented during the i2 Summit at the American College of Cardiology’s 58th annual scientific session.

As a result of some patients’ non-responsiveness to clopidogrel, a study was undertaken to link that non-responsiveness to the genetic variability of the Cytochrome P450 gene, or CYP2C19. The relation of the CYP2C19*2 variant to platelet function was measured through ADP-induced platelet aggregation and one-year cardiovascular outcomes in 227 patients using clopidogrel following traditional post-PCI procedures used to treat coronary heart disease. It was determined that those patients with the CYP2C19*2 genotype did in fact have more ischemic events in the one year following PCI.

The CYP2C19*2 variant is present in about 30 percent of the general United States population.

“This knowledge may enable physicians for the first time to improve individual antiplatelet management by a diagnostic approach utilizing platelet function or genetic testing,” said Paul A. Gurbel, M.D., lead author from the University of Maryland School of Medicine in Baltimore, Maryland. Patients with high platelet reactivity already on clopidogrel therapy may be offered alternative P2Y₁₂ inhibitors that are either not prodrugs or a thienopyridine not highly dependent on CYP2C19 for metabolic activation. Alternatively, prior to institution of clopidogrel therapy, genetic testing may also lead to more selective use of these alternative agents.”

Dr. Gurbel will present the study “Influence of CYP2C19 Polymorphism on Antiplatelet Effects of Clopidogrel and Long-Term Recurrent Ischemic Event Occurrence” on Saturday, March 28, at 12:45 p.m. in Chapin Theater Room W320.

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The American of Cardiology’s Innovation in Intervention: i2 Summit 2009 features the latest in interventional science and is the leading forum and exposition for interventional cardiology. A platform for the world’s leading interventional cardiologists to share knowledge, discuss new ideas and discover new innovations, the i2 Summit 2009, in partnership with the Cardiovascular Research Foundation, is being held in conjunction with ACC.09, the American College of Cardiology’s 58th annual scientific meeting. The American College of Cardiology (www.acc.org) works to influence health care policy and represents the majority of board certified cardiovascular care specialists through education, research, promotion, and the development and application of standards and guidelines.