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## **RESEARCHERS PRESENT NEW WAY TO RAPIDLY RULE OUT ACUTE MYOCARDIAL INFARCTION**

*Study Shows New Method May Save Time and Money during Possible AMI Diagnosis*

**Orlando, FL** – The Incremental Value of Copeptin for Rapid Rule Out of Acute Myocardial Infarction study examines a promising new method for doctors to conclusively ensure in a timely and accurate manner that a patient is not having a heart attack, according to research presented at the American College of Cardiology’s 58<sup>th</sup> Annual Scientific Session. ACC.09 is the premier cardiovascular medical meeting, connecting cardiologists and cardiovascular specialists to the latest and most innovative findings in cardiovascular science.

If a patient suffering chest pains tested negative at admission for both troponin T and copeptin, which was the case in two-thirds of all patients studied, then there was a 99.4 percent probability that the patient was not having an acute myocardial infarction (AMI) or heart attack, the study found. Only those in the remaining minority of patients who were positive for either marker or both would need to stay in the emergency room for monitoring and retesting a few hours later.

“It can take between four to six hours from the first chest pain for the troponin test to become positive in the blood and to dismiss myocardial infarction as the cause of the chest pains,” said Tobias Reichlin, M.D., Department of Internal Medicine, University Hospital Basel, Switzerland. “Therefore, if the initial test in the emergency room shows negative, then there is no security that the patient is not having a heart attack and he/she will need to stay in the emergency room being monitored on an ECG-machine and retested four to six hours later.”

By looking at the copeptin levels in the blood as a marker of acute endogenous stress, Dr. Reichlin and his team of investigators sought to determine the incremental value of copeptin for rapid rule out of AMI. Since the onset of chest pain associated with AMI is an enormous stress for the patient, copeptin levels were highest in patients presenting very early after the onset of symptoms.

Troponin tests have been used with great success for the past 15 years and have markedly improved the diagnosis of AMI. However, chest pain is very nonspecific and more than 80 percent of patients with chest pain ultimately suffer from conditions other than AMI. Therefore, the time needed for rule out of AMI largely determines resource use in the emergency department.

While troponin tests are extremely powerful for rule in the diagnosis of AMI, rapid rule out of myocardial infarction in the emergency room is a major unmet need in medicine. The problem with this is the timeframe needed to safely rule out myocardial infarction.

“If we can determine that it is absolutely not AMI earlier and send home the majority of the patients, we can save time, money and ease the mind of everyone involved,” Dr. Reichlin said. “By combining two important signals of our body, troponin T for heart damage and copeptin for acute endogenous stress, we were able to markedly improve the early diagnosis of acute myocardial infarction using two simple blood tests.”

The Incremental Value of Copeptin for Rapid Rule Out of Acute Myocardial Infarction was evaluated in a multicenter study designed to improve the daily practice of treating patients who exhibit symptoms suggestive of AMI and meet the needs of the doctor, patient and the economy.

The study, which began in April 2006, looked at levels of copepetin at presentation in 756 consecutive emergency room patients with symptoms suggestive of AMI.

*Dr. Reichlin will present “The Incremental Value of Copeptin for Rapid Rule Out of Acute Myocardial Infarction” on Monday, March 30 at 11:21 a.m. in Hall A2.*

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The American College of Cardiology ([www.acc.org](http://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. ACC.09 is the largest cardiovascular meeting, bringing together cardiologists and cardiovascular specialists to share the newest discoveries in treatment and prevention, while helping the ACC achieve its mission to address and improve issues in cardiovascular medicine.