



INSTITUTES FOR HEALTH SCIENCES  
WHERE GREAT MINDS & MEDICINE MEET

June 17, 2010

## **New Hamner-UNC Study Predicts Risk For Adverse Drug Reactions** *Research Suggests Urine Tests May Identify Susceptible Individuals*

RESEARCH TRIANGLE PARK, N.C. – The Hamner Institutes for Health Sciences ([www.thehamner.org](http://www.thehamner.org)), an independent, nonprofit organization that offers an open, collaborative and cross-disciplinary approach to translational biomedical research, has announced that researchers at the University of North Carolina, Chapel Hill and the Hamner-UNC Institute for Drug Safety Sciences have developed a new method to predict who is at risk for liver injury due to adverse drug reactions. In a study published in this month's issue of *Clinical Pharmacology and Therapeutics*, researchers demonstrate that urine tests might identify the susceptible individuals based on samples obtained from healthy adult volunteers who were given acetaminophen.

One of the most serious side effects that drugs can cause is liver injury. The situation is complicated because a drug can be safe for most patients who take it, yet cause serious liver injury in a small number of patients. While it is not currently possible to identify which patients will develop the liver injury before it occurs, the new study suggests that urine tests might identify the susceptible individuals before the liver is injured.

“Severe adverse drug reactions typically occur weeks to months after starting treatment with the offending drug,” said Dr. Paul Watkins, professor of medicine at University of North Carolina-Chapel Hill and an investigator in the study. “The ability to predict who will develop these reactions has long eluded the research community. This approach, which is called ‘metabolomics,’ has the potential to make many drugs much safer.”

Researchers at the University of North Carolina, Chapel Hill and the Hamner-UNC Institute for Drug Safety Sciences repetitively administered the pain reliever acetaminophen to healthy adult volunteers. After about one week of dosing, blood testing revealed that some of the volunteers developed mild and reversible liver injury.

Urine samples obtained daily before and during dosing were analyzed by a technique called high-resolution magnetic resonance spectroscopy. The researchers found that within one or two days of treatment, specific patterns of urine metabolites could predict who would subsequently develop the mild liver injury.

### **ABOUT THE HAMNER INSTITUTES FOR HEALTH SCIENCES:**

The Hamner Institutes for Health Sciences is strategically located on a 56-acre campus in the heart of Research Triangle Park, N.C. As a cross-disciplinary nonprofit organization, The Hamner Institutes acts as a catalyst to facilitate life sciences technology development among North Carolina universities, while serving as a gateway to establish research collaborations with the bio/pharmaceutical industry and countries in Europe and Asia. The Hamner Institutes also has an Accelerator to support emerging companies and a new Institute for Translational Medicine to enhance its research in oncology, diabetes, and respiratory diseases. For more information, please visit [www.thehamner.org](http://www.thehamner.org).

**Hamner Media Contact:**

Ryal Curtis

MMI Public Relations

(919) 233-6600

[ryal@mmipublicrelations.com](mailto:ryal@mmipublicrelations.com)

[www.twitter.com/MMIPR](https://www.twitter.com/MMIPR)

[www.mmipublicrelations.com](http://www.mmipublicrelations.com)

*(end)*