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The Hamner: Better Liver Function Tests On The Horizon
*Discovery Could Revolutionize Detection And Treatment
Of A Wide Variety Of Liver Diseases*

RESEARCH TRIANGLE PARK, N.C. – The Hamner Institutes for Health Sciences (www.thehamner.org), an independent, nonprofit organization that offers an open, collaborative and cross-disciplinary approach to translational biomedical research, has announced that recent studies at The Hamner have provided a new method to assess the health of the liver, a vital organ that can be injured by a variety of diseases, alcohol, and certain drugs. The blood tests physicians currently use to monitor liver health are not always accurate. Even when these tests are abnormal, they often do not indicate the cause of the liver problem. Research reported in the May issue of *Hepatology* indicates that there may be a new way to analyze blood to view a window into the health of the liver. Small particles produced by the liver and circulating in the blood contain information that may be used to better detect liver injury and could provide unique information to diagnose the cause of the injury. The research was based on observations originally made by scientists at the drug company Pfizer, which has licensed patent rights for the technology to the Hamner Institutes for Health Sciences.

The study can be found at: <http://www3.interscience.wiley.com/journal/123271400/abstract>.

"This discovery could revolutionize the way physicians detect and even treat a wide variety of liver diseases," said Dr. Paul Watkins, professor of medicine and hepatologist at University of North Carolina-Chapel Hill, and one of the authors of the study.

"We may be on the threshold of intercepting and learning to read messages that injured liver cells are sending out to recruit aid from other sources to help overcome the injury, and perhaps move to biomarkers that really predict what will happen rather than those that just detect what has already occurred," said John R. Senior, M.D., associate director for science, Center for Drug Evaluation and Research, Food and Drug Administration, Silver Spring, Md.

"The technology and the underlying cellular mechanisms that release these vesicles holds significant promise as a broad-based platform for biomarker development for drug-induced liver injury as well as other diseases," said Dr. Russell Thomas, senior investigator at The Hamner Institutes and the senior author of the study.

Studies in rats at the Hamner Institutes for Health Sciences found that during liver injury, blood contains small particles derived from the liver that can be isolated and analyzed. These particles contain much of the information that, until now, could only be obtained through needle biopsy of the liver, a process that is costly, inconvenient and occasionally dangerous.

By comparing blood-borne particles obtained from rats treated with two different liver toxins, the investigators could see large differences in the information contained in the particles. This study suggests that it may be possible to use this approach not only to better detect liver injury, but also to diagnose the cause of the 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.

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