Liver Disease Linked to Drug Metabolism, Research Indicates

Researchers at the University of Arizona College of Pharmacy have discovered that nonalcoholic steatohepatitis (NASH), an increasingly common but often undiagnosed liver disease, could have significant medical implications for people with type 2 diabetes. John Clarke, PhD, research associate, and Nathan Cherrington, PhD, professor, both of the college's Department of Pharmacology and Toxicology, recently published a study in the journal *Diabetes* showing that a mouse model of obesity, diabetes and NASH retained the anti-diabetic drug metformin longer than a control group of healthy mice.

The study, "Mechanism of Altered Metformin Distribution in Nonalcoholic Steatohepatitis," found that NASH can change the way that drugs are eliminated from the body, potentially leading to toxic levels of metformin being retained in the body.

"This study, in addition to several of our other recent studies, shows that NASH, either alone or in combination with genetic differences in drug transporters, can have a profound effect on drug exposure," Dr. Clarke says. Read more

UA Sarver Heart Center Scientists Earn NIH Grant
The Gregorio Lab in the University of Arizona Sarver Heart Center’s Molecular and Cardiovascular Research Program (MCRP) was awarded $1.77 million from the National Institutes of Health (NIH) for a study called “Deciphering the Role of Lmod2 in Thin Filament Length Regulation and Dilated Cardiomyopathy” (NIH Grant 1R01HL123078).

“This award demonstrates the value of Sarver Heart Center’s Investigator Awards Program, which provides seed funding for promising research ideas,” said Carol C. Gregorio, PhD, head of the UA College of Medicine – Tucson Department of Cellular and Molecular Medicine, director of the MCRP and co-director of the UA Sarver Heart Center. She is the principal investigator on the NIH grant. Read more

Tucson News Now

Health Experts Team Up to Prevent 'Medjacking'

It may sound like a science fiction novel, but medical devices could someday be the target of hackers. Although it hasn't happened anywhere but in a laboratory, experts now are working to prevent what they call "medjacking" before it starts.

As medical devices, both inside and outside human bodies, become more sophisticated and able to wirelessly communicate with other devices, it is possible someone could accidentally or purposefully hack the device. Representatives of government, industry, academics and medicine are working to develop standards to prevent any potential problems. One example of a potential "medjack" could be through an insulin pump.

"For instance, give someone very high blood sugar, which is very dangerous. Or, even more dangerous, you can give someone a big bolus of insulin and that could kill them," said podiatric surgeon David Armstrong, DPM, MD, PhD, professor, University of Arizona Department of Surgery, who is joining forces with the U.S. Department of Homeland Security, the U.S. National Security Council, NASA and other government agencies and industry leaders to create strategies to keep the world safe from medjacking. Read more

KTAR.com

UA Professors Develop Defense Against Mosquito-Borne Virus
With summer comes pesky bugs such as mosquitoes, ticks and scorpions and the viruses they may carry. To combat one of these dangerous viruses, two UA professors used math to create a defense against the mosquito-borne chikungunya virus in a U.S. Department of Defense competition. The UA team of Heidi Brown, PhD, MPH, assistant professor of epidemiology at the UA Mel and Enid Zuckerman College of Public Health, and Joceline Lega, PhD, UA professor of mathematics, beat out 38 other institutions and walked away with a $150,000 grand prize for their work in predicting the virus. The CHIKV Challenge was sponsored by the Defense Advanced Research Projects Agency (DARPA), which commissions research on behalf of the U.S. Department of Defense.

KJZZ

How Physicians Deal With Unexpected Medical Emergencies In Public Places

For non-physicians, the question “Is there a doctor in the house?” may not mean much. But for those who would answer “yes,” it means they’re working to help someone with some kind of medical emergency, often in improvised settings.

To get a sense of what that's like, we welcome Jacque Chadwick, MD, a family physician and vice dean of academic affairs at the University of Arizona College of Medicine – Phoenix. She referenced knowing when to stop and help and knowing when those already at the scene are better equipped to deal with a situation.

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