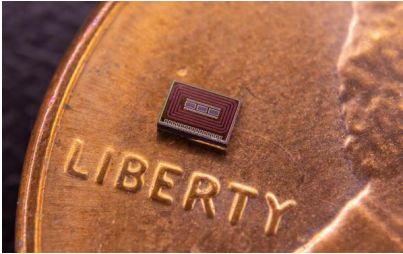


Implantable alcohol-monitoring chip communicates through RF backscatter: Page 2 of 2

April 12, 2018 // By Julien Happich



In a paper titled "A Sub-1 μ W Multiparameter Injectable BioMote for Continuous Alcohol Monitoring" presented at the Custom Integrated Circuits Conference (CICC) in San Diego, researchers from the University of California San Diego shared the details about an ultra-low power implantable biosensor.

"The ultimate goal of this work is to develop a routine, unobtrusive alcohol and drug monitoring device for patients in substance abuse treatment programs," explained Drew Hall, an electrical engineering professor at the UC San Diego Jacobs School of Engineering who led the project. The idea of such an implantable chip is to remove the need for obtrusive breathalyzers or lengthy and costly blood tests, it could be administered in a clinic without surgery. The chip has been tested in vitro, in mixtures of ethanol in diluted human serum underneath layers of pig skin. Next, the researchers plan to test the chip in live animals.

It is only a proof-of-concept, but the researchers have already filed a provisional patent on this technology. Hall envisions that multiple sensors on a chip could be functionalized to detect different substances, making it possible to offer long-term, personalized medical monitoring.

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