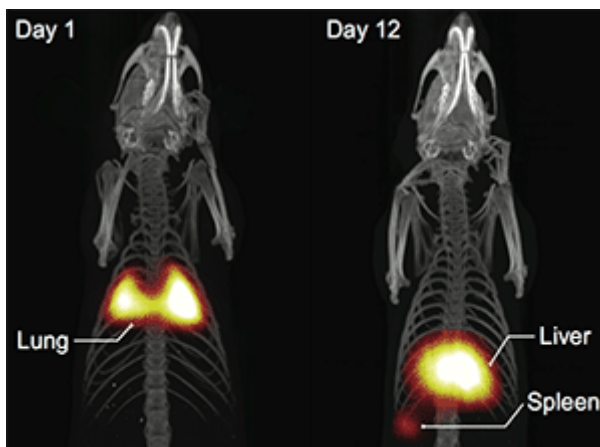


What you see is what you've got

Magnetic Particle Imaging – Conolly Lab builds the next big thing in medical imaging



Bioengineering & EECS professor Steven Conolly and his lab are the world leaders in development of a new nanoparticle-based medical imaging procedure, Magnetic Particle Imaging (MPI).

Over ten years into development at Berkeley, the team has recently produced groundbreaking new images and spun the technology out into a startup company, Magnetic Insight.

MPI uses superparamagnetic iron oxide nanoparticles (SPIOs), basically pieces of rust 10 to 30 nanometers in size, as a tracer. They respond very strongly to a magnetic field, allowing researchers to safely detect a small mass deep inside the body.

MPI images are brighter where there are greater concentrations of SPIOs, producing a truly quantitative imaging method. Mixed with other compounds, the



Welcome Professor Streets

Dr. Aaron Streets will be joining the faculty this summer. Dr. Streets received his Ph.D. in applied physics from Stanford University, and has recently been working on advanced imaging technologies for microfluidic platforms.

MTM team improves kidney transplant success

A Master of Translational Medicine student team has developed an inexpensive, easy-to-use

tracer can be targeted to collect at a specific location of interest like a tumor.

Because MPI uses no ionizing radiation in the scanner or tracer it is extremely safe, even for pregnant women and patients with chronic kidney disease. The SPIO tracer is well tolerated and metabolized by the liver and the spleen.

"MPI combines all of these advantages into one technique," said Conolly. "It's quantitative, it's very sensitive, it has no depth limitations, the signal is not affected by any type of tissue, and you can look at it over a really long period of time, over months."

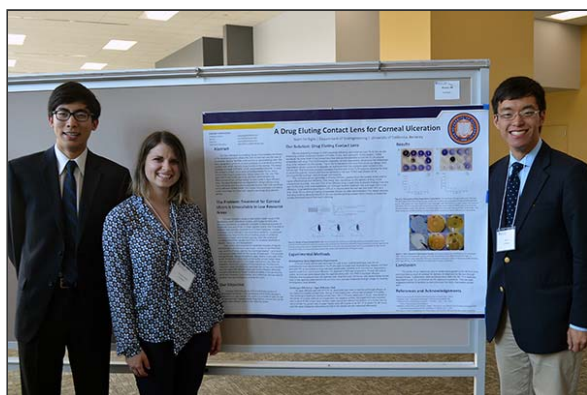


3D MPI scan of breast cancer tumor in rat, 6 hours after unlabeled SPIO injection.

[Read more>](#)

Undergraduate capstone teams compete

Capstone team Amy Lyden and Neha Kumar presented "SurgiSun: A Surgical Light for the Developing World" and made it to the semifinals of the Bay Area Global Health Innovation Challenge, competing against graduate and postdoc-level innovation teams.



test to monitor kidney transplant rejection. Michael Nasr, Tyler Schmeckpeper and Josh Yang are working with UCSF's Sarwal Lab and the Department of Surgery to create a urine test that measures levels of damaged kidney DNA.

In addition to forming a company called KIT (Kidney Injury Test) to commercialize the product, they were invited to attend the Clinton Global Initiative University, and were semi-finalists in OneStart Americas, part of the world's largest life sciences startup accelerator.

[Read more>](#)

Congratulations 2016 Fellows!



Andrew Bremer (Lloyd Scholar), Stacey Lee (Lloyd Scholar), Judy Savitskaya (Lewis Scholar), Ben Adler (Craven Scholar), Sally Winkler (Brodie Scholar) are all recipients of donor-funded departmental fellowships. Independent funding allows them to work on pioneering research not yet funded by faculty grants. Thank you to our generous donors!

Plus:

The ForSight capstone team of Amanda Haack, Zane Liu, Ian Lin, and Ashu Shrestha flew to Texas to compete at the Rice 360° Sixth Annual Undergraduate Global Health Technologies Design Competition.

Dueber Lab runner-up for Breakthrough of the Year!

John Dueber's lab, led by BioE PhD William DeLoache, was a runner-up for Science magazine's 2015 Breakthrough of the Year, for creating an engineered yeast that can convert sugar into the makings of opioid painkillers.

[Read more >](#)



Visit



Contact



Follow



Alumni



Twitter

Professor Michael Yartsev named a 2016 Searle Scholar,

Profs Seung-Wuk Lee and Teresa Head-Gordon named AIMBE Fellows,

BioE students Amy Lyden and Amanda Haack are recipients of 2016 Whitaker International Fellowships,

and our UC Berkeley – UCSF Graduate Program in Bioengineering is now [ranked 6th best in the nation!](#)

All this and more at Bioeng.Berkeley.edu



Copyright © 2016 UC Berkeley Bioengineering, All rights reserved.

[unsubscribe from this list](#)
[update subscription preferences](#)

Our mailing address is:
UC Berkeley Bioengineering
306 Stanley Hall MC 1762
UC Berkeley
Berkeley, CA 94720

[Add us to your address book](#)