

The Innovators

These Bay Area residents use their personal and professional acumen to change lives, improve business and alter our communities.

By Michael McCarthy

Dr. Shuvo Roy

Founder
The Kidney Project, UCSF
School of Pharmacy Microsites
pharm.ucsf.edu



Dr. Shuvo Roy, founder of The Kidney Project, wants to disrupt the \$35 billion kidney treatment industry.

The world is about to learn what happens when an engineer takes a Silicon Valley approach to a major health issue. Dr. Shuvo Roy is working on making an implantable bioartificial kidney with The Kidney Project. Its goal is to dramatically disrupt the \$35 billion kidney treatment industry, where roughly half a million patients a year rely on dialysis. Roy's kidney prototype is the size of a smartphone and constructed from semiconductor silicon wafers—combining a hemofilter and bioreactor to replicate many functions of healthy kidneys.

“Innovation means using my engineering training to create new technology that helps patients in dire need,” says Roy. “Kidney disease has not seen significant medical innovation in almost 50 years, which makes my work developing an implantable artificial kidney with The Kidney

Project so crucial. When I was describing our work to patients during the early days of The Kidney Project, one refrain I heard over and over was, ‘Don’t let the perfect be the enemy of the good.’”

Roy says the secret of the success of The Kidney Project is that it brings together a multidisciplinary group—engineers, scientists, clinicians and patients—all working together on a singular mission. While it's still too early for the organization to receive industry support or venture capital, Roy notes that it relies upon philanthropic support to scale the device up to clinical-grade prototypes. “We’ve already achieved a major milestone: a proof-of-concept device that filters blood and creates urine, powered not by batteries but by blood pressure. The Kidney Project offers philanthropists a chance to do something amazing in the world.”