Texas A&M Planning To Create Medical School for Physician Engineers At Houston Methodist Hospital Program Will Produce "Physicianeers" Who Will Radically Change the Way That Health Care Is Delivered

Texas A&M University is planning to create an innovative engineering medical school at Houston Methodist Hospital to educate a new kind of doctor, pending appropriate approvals, who will invent transformational technology for health care.

Fifty physician engineers would begin their studies in Fall 2017 at the new Texas A&M University Engineering Medicine School (EnMed) at Houston Methodist Hospital. EnMed would be an integrated educational and research medical school with a focus on innovation and entrepreneurship and a part of the Texas A&M College of Medicine’s MD program and the College of Engineering. EnMed would initially hire 25 faculty members and utilize 75,000 square feet of instructional and research space in the Texas Medical Center.

The medicine of tomorrow will not be practiced in the way that it is today. Medicine is not just about biology, it requires technology development. This school would not only train doctors, but allow them to invent new products and take their inventions to the marketplace. EnMed would expand the health care technology market at the Texas Medical Center. The potential economic impact to the region would be huge.

Responsive to the rapid advances in technology, this new type of medical education would prepare professionals with the clinical skills to diagnose symptoms and treat patients, along with the engineering mindset to solve problems, invent new technologies and rapidly move these innovative ideas to practice in patient care.

An innovative translational research program in medical technology at Houston Methodist Research Institute would also be part of EnMed.

"Everything we do should be translational, with the end goal of bringing new solutions to our patients in a timely fashion," said Mauro Ferrari, Ph.D., president and CEO of the Houston Methodist Research Institute. "I have every confidence that our joint program will create the engineering-based ideas necessary to cure the most challenging diseases. EnMed would blend translational research and commercialization opportunities with an innovative medical education model.

The presence of a hands-on innovation center combined with an office of technology commercialization is another example of Texas A&M creating dynamic solutions to the great global challenges we face in health care today. This interdisciplinary learning environment would lead to research and discoveries that would impact the state, nation and the world, but most importantly, would create new transformational educational opportunities for students.

And this focus, said Texas A&M Engineering Vice Chancellor and Dean of Engineering M. Katherine Banks, is what would make this school unlike any other. "This is a paradigm shift. The major health care challenges of the future will not only depend on bioengineering, but also require mechanical, chemical, electrical, and computer engineers," she said. "There are other programs that link medicine with bioengineering, but this is different. All students in EnMed will be expected to invent something transformational before they graduate. These innovators, or "physicianeers", will radically change the way that health care is delivered."

OFFICE OF RESEARCH DEVELOPMENT AND EDUCATION (ORDE)

Do you have a research project you’ve been contemplating? A great idea, but no preliminary data? Many agencies offer pilot project or seed grant funding for just these purposes. ORDE has updated the Pilot Project Funding e-Book, providing information about funding agencies across the many disciplines represented at the University of Colorado Denver | Anschutz Medical Campuses. Details for each sponsor include eligibility, funding levels, award duration and a link to the sponsor's website. To download your own copy, go to http://www.ucdenver.edu/research/orde/Pages/PilotProject.aspx
RESEARCH CORNER

Whether for food, fighting, fleeing or fun, all animals engage in some form of physical activity. One goal of the research in Ben Greenwood's laboratory is to characterize how physical activity impacts behavior, and to identify the neurobiological mechanisms that underlie the behavioral effects of exercise. Research focuses primarily on the impact of exercise on behaviors relating to depression, anxiety and fear. The Greenwood laboratory has recently observed that rats allowed a single, brief session of exercise are more likely to overcome their fear of a traumatic experience. This observation could have important clinical relevance for the treatment of anxiety and trauma-related disorders in humans. Current research is aimed at understanding the role of the brain’s reward system in the fear-reducing effects of acute exercise. The laboratory is manipulating activity of the reward system in rodents using viral-mediated delivery of Designer Receptors Exclusively Activated by Designer Drugs (DREADDs); a technique which gives the experimenter unparalleled control over the activity of specific neural circuits in behaving animals. Other ongoing projects include identification of the signals by which the experience of exercise is communicated to the brain to result in exercise-induced changes in neural circuit function and behavior; delineation of the neural circuitry involved in the rewarding effects of exercise; and identification of the mechanisms by which factors such as the neurotransmitter dopamine and the psychedelic drug ecstasy reduce memories of traumatic experiences. The hope is that identification of the mechanisms by which exercise impacts behavior will reveal novel targets for the treatment of mental health disorders, as well as encourage people to exercise.

Ben received his BA, MS and PhD from the University of Colorado Boulder with expertise in Neuroscience and Integrative Physiology. He is currently an Assistant Professor in the Department of Psychology at CUDenver.

ENVIRONMENTAL HEALTH & SAFETY (EHS)

Safety Fair

Join us on Wednesday, September 21, 2016 from 10 a.m to 2 p.m. for the 5th Annual Safety Fair Presented by Environmental Health & Safety! The fair will be at the Richard D. Krugman MD Conference Hall located on the 2nd Floor of RC2. The Safety Fair emphasizes and promotes workplace safety and compliance, safety at home, and recreational safety. Come chat with EHS and various vendors about ways to keep yourself safe. Prizes and refreshments will be included!

Prizes

A new video from NIH’s Center for Scientific Review at http://public.csr.nih.gov/Pages/default.aspx compiles insights from peer reviewers, study section chairs, and NIH staff, to help guide you in planning and writing a competitive grant application. The CSR video is part of CSR’s Insiders’s Guide to Peer Review for Applicants page: http://public.csr.nih.gov/aboutcsr/NewsAndPublications/Publications/Pages/InsidersGuide.aspx

Note: You will need to cut/paste the above url’s into your browser address window.