



Advancing the vision: An experiment in rethinking the nonprofit biomedical research model

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ABOUT THE LECTURE

Biomedical research has produced many of the discoveries that underpin modern medicine, but turning those findings into real treatments—and maintaining the research enterprise behind them—requires new approaches. In this free Front Row lecture, Scripps Research President and CEO Pete Schultz described how the institute is building a nonprofit model that brings basic science and translational research together to move promising ideas toward medicines more effectively. He highlighted advances spanning aging, artificial intelligence (AI) and global health while also making the case for a more sustainable way to support innovative science.

TOP TAKEAWAY POINTS

- Scripps Research is an independent institute housing more than 100 active faculty, 400 graduate students and 300 postdoctoral fellows. Yet despite its relatively small size, the institute has contributed to major scientific achievements, leading to six Nobel Prizes and 18 FDA-approved drugs and vaccines. Its drug discovery arm, Calibr-Skaggs, has advanced 14 programs into clinical development across areas including cancer, infectious disease and regenerative medicine.
- Schultz highlighted that aging research at the institute focuses not only on slowing disease progression, but also on repairing damage and preserving quality of life. One example is CLF065, an engineered peptide designed to help mend the gut barrier in chronic intestinal diseases like Crohn's. Similar regenerative approaches are being explored to repair damage in the heart, lung, retina and other organs by directing the body's own stem cells.
- Prevention is another central theme at the institute. Schultz highlighted a brain-targeted NRF2 activator designed to protect against oxidative stress, which contributes to tissue damage after a stroke as well as in heart and neurodegenerative disease. He also described an oral alternative to injectable GLP-1-based therapies to combat obesity. Beyond drugs, Schultz pointed to combining AI with wearable devices to track signals such as heart rate and sleep in real time. The goal is to detect changes linked to disease early, when intervention may be more effective.
- Schultz noted that AI allows scientists to analyze biological complexity at an unprecedented scale. To train predictive models, Scripps Research is assembling large datasets, including roughly 2 million antibody sequences and detailed molecular dynamics simulations for about 20,000 proteins. These efforts are being applied to areas like drug repurposing, vaccine design and therapeutic protein engineering. In neuroscience, novel techniques can analyze thousands of genes simultaneously across the brain, offering a more comprehensive view of how diseases develop and progress.
- Global health and pandemic preparedness remain critical priorities at Scripps Research. Schultz emphasized that many of the world's most pressing health threats demand better tools. He highlighted efforts to shorten tuberculosis treatment from 6-9 months to 3 months or less, develop long-acting injectables that could prevent malaria while improving treatment adherence, design universal vaccines for fast-mutating viruses, and create antiviral strategies for future pandemic threats such as H5N1.
- Nonprofit biomedical research needs a financial framework that reinvests scientific success back into future discovery. Schultz said federal funding doesn't cover the full cost of operating a research institute, and it rarely supports high-risk, high-reward projects. The answer is a more diversified model that combines government support and philanthropy with revenue generated by translating discoveries into medicines. Successful drug programs can produce milestone payments and royalties that are reinvested into research, creating a self-reinforcing system that fuels continued innovation.

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