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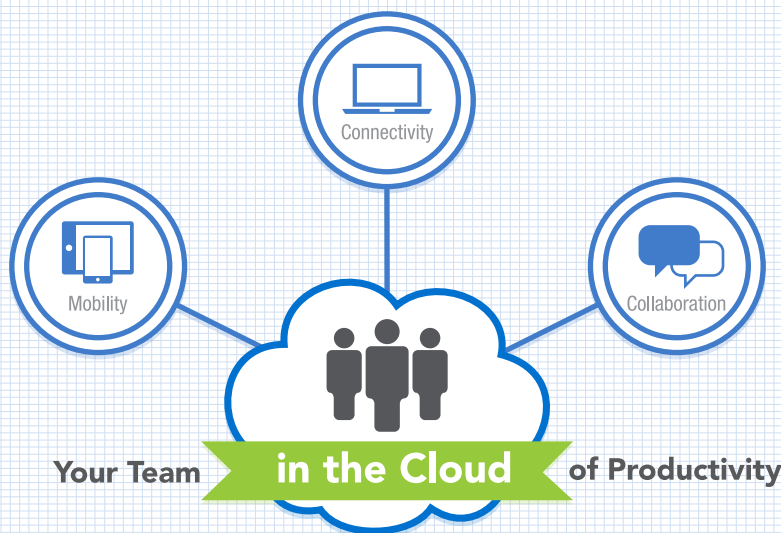
S. David Kimball (left) recruited David Augeri from Big Pharma for Rutgers' new Office of Translational Science.

A Game-Changer for Industry Collaboration in Life Sciences at Rutgers

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Even casual observers of the pharmaceutical industry have seen the dramatic shifts and changes in direction that have occurred in recent years. Those of us who have worked in Big Pharma and biotech have borne witness to these dislocations and many in New Jersey have experienced them firsthand.

At the same time our state has been losing thousands of jobs in pharma, there has been a quiet blossoming of life sciences startups. According to BioNJ, New Jersey's life sciences trade association, there were just 80 biotechs in our state in 1998 and today there are more than 360.

BioNJ President Debbie Hart says: "Biotech startups are becoming increasingly vital contributors to our state's economy. While these companies start out small, they often bloom into very significant businesses."

Most biotechs are founded on scientific discoveries or inventions. Often the intellectual fuel for a startup comes from a university. One of Rutgers' greatest successes is TYRX Inc., a biotech in Monmouth Junction that developed an antibacterial envelope for implantable devices such as pacemakers. The FDA recently approved this technology and Medtronic purchased TYRX for more than \$160 million. TYRX was launched by Joachim Kohn, professor of chemistry and chemical biology at Rutgers, and was sustained by the university during its early years.

With the goal of helping our scientific and engineering faculty create startups in the life sciences, last fall we launched the Office of Translational Science (ots.rutgers.edu). A key reason is the huge leap forward the university made last summer when Rutgers integrated most of the University of Medicine and Dentistry of New Jersey (UMDNJ), creating one of the nation's largest academic medical centers. Among the benefits are expanded research in the life sciences and the addition of many outstanding medical researchers, who are now working alongside colleagues in the basic sciences. Rutgers now boasts \$744 million annually in R&D spending, which ranks among the top 30 U.S. universities, and we've seen significant growth in our intellectual property portfolio. Last year Rutgers received 61 U.S. patents, more than twice the annual average of patents for the university. And our professors' work led

to the creation of 10 startups last year, the most in 18 years.

As a result of the New Jersey Medical and Health Sciences Education Restructuring Act, which became effective last July 1, Rutgers now has two medical schools, a dental school, and other new schools and labs that further diversified the university. The added breadth fosters collaboration, such as interdisciplinary research among medicine, chemistry and chemical biology, engineering and the Ernest Mario School of Pharmacy.

Dr. Chris Molloy, who is Rutgers senior vice president for research and economic development, calls the integration "a game-changing event."

"It's forced us to rethink our systems universitywide, particularly how we work with industry," he said. "As a result, the Office of Translational Science is not encumbered by an entrenched bureaucracy. For that reason, and because the team is composed of scientists from the private sector, I'm expecting great things from them."

OTS provides the venue for the interface between Rutgers and the private sector, building collaboration across the molecular, structural, imaging and biomedical sciences. Our team includes other scientists with extensive pharmaceutical industry experience and accomplishments. Dr. David Augeri is director of the Translational Synthesis Group, and Dr. Edward Yurkow is executive director of the Molecular Imaging Center. Our efforts in working with Rutgers faculty are directed towards building success in their university research, as well assisting local biotech and biomedical companies. For example, we are working with Mito BioPharm, a local startup, on candidate compounds that may provide better methods for treating metabolic diseases such as diabetes and obesity. Also, we have five projects underway with researchers at the Cancer Institute of New Jersey.

We have created the Rutgers Biomedical Research Consortium, comprising the university's biomedical capabilities and outside academic and industrial collaborators. Our unit belongs to the Academic Drug Discovery Consortium (www.addconsortium.org), which includes more than 100 centers, mostly at U.S. universities, including Penn, Stanford and Vanderbilt.

We invite anyone interested to contact us at 848-445-5520 or TranslationalScience@rutgers.edu. ■

S. David Kimball is an associate vice president in the Office of Research and Economic Development (businessportal.rutgers.edu) and research professor of pharmacy. After earning a doctorate from Stony Brook University in 1982, he joined the Squibb Institute for Medical Research. Kimball became a vice president at Lexicon Pharmaceuticals in 2001, then senior VP at PharmacoPeia in 2007. He was chief scientific officer at Hydra Biosciences from 2008 to 2011, when he joined Rutgers. His research includes work on novel treatments in cardiovascular diseases, neuroscience and oncology.

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