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What Drives Brook Byers Crazy & More Lessons On Innovation from the QB3/BayBio Event

Luke Timmerman 6/30/10

[Brook Byers](#) got a little animated last night. Speaking in a packed auditorium that bears his name on UCSF's Mission Bay campus, the famed venture capitalist rhapsodized about the scientific wonders around him, and how the university has created an entrepreneurial culture to translate discoveries into real-world products and businesses.

It was all upbeat until Byers' conversation turned to President Obama, the FDA, and the mainstream media, including the New York Times.

One example of what Byers called his "angst" came just last Sunday. A [story](#) in Sunday's New York Times about the revival of business incubators on university campuses mentioned the usual suspects like MIT and Stanford, and even lesser-known places the University of Utah. It devoted not a word to the California Institute for Quantitative Biosciences (QB3), which has helped spawned more than two dozen startups over the past few years in what's becoming a new hub for biotech in [San Francisco's Mission Bay district](#).

"This sort of thing has been going on here for years," Byers said. "It kind of drives me crazy."

As a journalist, my answer is for innovators to tell more of their stories if they really want to raise awareness and build support for their work. Last night, the first-ever cooperative event between QB3 and BayBio, the northern California trade group for life sciences companies, offered plenty of interesting material for the Times or anybody else who's curious to learn more about the tricky business of forming partnerships between academia and private industry. The event was moderated by QB3 director Reg Kelly ([who I profiled recently](#)), and BayBio CEO Gail Maderis (who [wrote an op-ed here](#) recently).

Kelly and Maderis posed some sharp questions to Byers, the partner at Kleiner Perkins Caufield & Byers, as well as UCSF chancellor [Susan Desmond-Hellmann](#), and Uwe Schoenbeck, who oversees external R&D for Pfizer, the world's largest drugmaker. The speakers were asked about how academia and industry can do a better job of working together to come up with valuable drugs, devices, and diagnostics that help patients. This was a candid dialogue about some real challenges in life sciences innovation. I took a ton of notes, and here are some of the highlights.

Brook Byers on how UCSF is doing at translating basic science into the business world:

“There has to be an entrepreneurial culture. It has to be considered OK on campus to do this thing, to collaborate with industry. Twenty years ago, there was some hesitancy. That’s gone now. You’d be surprised though how it still happens in many places.”

Byers on the biggest opportunities he sees in the future of biology:

Byers singled out what he called “multi-scale biology” in which scientists will gather reams of data from DNA, RNA, methylation patterns, and cell processes, and get it all with extreme precision and real-time speed. These technologies will allow physicians to more accurately predict whether a given drug or device is likely to help an individual patient.

“How many companies can come out of that?” Byers asked himself. “Thousands.”

Byers on what’s happening in D.C. politics and its impact on the life sciences:

Byers pointed to an example of an antibiotic company developing a treatment for deadly MRSA, which ran a great trial, and had a great outcome. Yet when it asked the FDA what it thought, the agency said “why don’t you do another trial?” The agency’s requirements for approvals appear to be continually going up, particularly for new medical devices, Byers said. Although he described himself as a “fan” of the FDA, and a supporter of budget increases to enable it to hire more great scientists, he was downright bearish on what the agency’s requirements have done to the biotech industry.

“The attitude is the worst I’ve seen in my career,” Byers said.

Combine that with talk of increasing capital gains taxes in Washington, and Byers said he’s not happy with President Obama. “I helped get him elected, and I’m very frustrated,” Byers said.

Toward the end, Byers joked that “I got my angst out” on the macro issues, but that he’s still very optimistic about the innovation happening in the life sciences industry.

Susan Desmond-Hellmann on how innovation usually gets transferred between academia and industry, and how it could improve:

“Both want access to innovation,” Desmond-Hellmann said. “We need to be able to bring people together in more effective ways.” Scientists do this naturally, usually on a one-to-one level when they meet at a posterboard at a conference. But there are problems with this traditional model. “It’s not scalable. It relies too much on good luck, and too much on proximity.” The two parties should start thinking more creatively about how to use social media “to bring people together around those who are looking for innovation, and those who have it.”

Desmond-Hellmann on the major obstacles that get in the way of good academic-industry collaboration:

“The job in industry is to continuously narrow down the degrees of freedom,” Desmond-Hellmann said. What this means is that a drug developer starts a clinical trial with a large number of unknowns and

variables, and continually tries to reduce the uncertainty and establish factual information around a drug's safety and effectiveness profile that will enable it to become a marketed product. An academic's job is the polar opposite—to continually broaden the degrees of freedom, by asking a question in such a way that it unleashes many more interesting questions. "It's an eternal quest, and it's about a curiosity for knowledge," Desmond-Hellmann said.

This cultural gap "can be bridged," Desmond-Hellmann said, "but it's a pretty big impediment."

Desmond-Hellmann on whether she worries about conflicts of interest getting in the way:

"I do worry. It's a huge issue for us," she said. Then again, the university needs to consider its mission of increasing knowledge, training new scientists and physicians, and improving patient care. If the university is serious about improving patient care, it needs to collaborate with industry, which means that conflict of interest issues are something the institution needs to manage.

Desmond-Hellmann also challenged the notion that accepting money from private sources is an inherent conflict of interest. Money from industry, on its own, doesn't necessarily interfere with the university's mission. Other motivations—power, titles, prizes, publications, promotions—that matter to academics can each have their own effect on the institution's mission.

"We need to broaden what we consider conflicts of interest," Desmond-Hellmann said. "We have to figure them out so patients can benefit from our discoveries."

Uwe Schoenbeck on the forces driving more interest at Big Pharma in university collaboration:

"The cost of developing new drugs is close to unbearable. We have to change the way we do things," Schoenbeck said. That includes academia, the FDA, and Big Pharma. Getting more electronic health records is one place where this can start, he said. If you go almost anywhere in the U.S. or China to an automatic teller machine, you can get cash in minutes. Yet if you want to find out what the most recent tests a patient has undergone, even in some of the best medical centers in the U.S., "it's a nightmare," Schoenbeck said. "That has to change."