Q&A

Tony Shelton (Cornell University): Can you give an example of one of those stories?

Crowell: I’ll give you one from my university. A professor in chemistry, winner of the Presidential Green Chemist Award, has done a lot of work in environmentally friendly manufacturing processes. He has an invention that uses super-critical CO₂ as an environmentally friendly cleaning agent that was first commercialized through Hangars cleaners, which is a franchise dry-cleaning chain that uses this patented process and does not use perchloroethylene. It hasn’t been a terribly successful business model, it’s not a venture-capital play and it hasn’t created lots of jobs. But it is getting an environmentally friendly process out there. Another great example is from East Carolina University, a smaller regional university in our state with a good family-medicine-oriented medical school. Professors in speech pathology developed a novel anti-stuttering device that was featured on the Today show. This device is amazing in its ability to reduce stuttering in people for whom nothing else has worked. This invention hasn’t generated a lot of money for East Carolina but it has had tremendous impact on the lives of a large number of people.

I encourage you to go to AUTM.net. You can order copies or you can search the database online. It will grow over time and I think it will be a helpful tool for many of you.

Steve Pueppke (Michigan State University): I agree with you that the major criterion of success shouldn’t always be dollars, but how do you argue that this isn’t the best measure of tech-transfer success?

Crowell: You keep telling stories such as those in the Better World Report. And you look at places that are up-and-comers in tech transfer—such as UK universities that are turning out more companies and more products. What are they doing differently? Their tech-transfer offices are funded by the government. The problem with our model is that many of us have set our offices up with the expectation that they become self-supporting, which places us in a vicious cycle. My office gets 20% of what we make. My chancellor says he agrees that it’s not about money, but when I ask for more positions for my office he asks what were our revenues last year. So, it’s a tough one. I don’t have any magic solutions but people are working on it. Stay tuned.

Milt Zaitlin (Cornell University): One of my observations is that tech-transfer offices often don’t have the expertise that they need and are not willing to go out and get it.

Crowell: I agree. The level of expertise and agility varies widely as you would imagine. I would not agree that it’s true across the board, but it is true in many cases. Many of us—even those who have good understanding of what’s patentable and what should be patented—probably have patented more than we should have. Fear that we are going to miss something drives a lot of that. Again, what should the mission statement for
your tech-transfer office be? Is it there to generate money and make sure that you don't miss one? Or is it there to enhance the research environment to get knowledge assets out to help people and adopt a philosophy that you only patent when that is the best way to achieve that objective? In the pharmaceutical world you would never not patent something that is fundamentally important, whereas in the IP world it's quite common to find pathways to the market that don't require patents. And as I said earlier, many of us adopted or developed our practices around the pharma model. But we are trying to address these issues. A speaker today said that we've got to stop maintaining patents that didn't go anywhere and that's also very true.

**Audience Member:** Do you have any idea of how much the technology transfer coming out of universities is going to the state and to companies?

**Crowell:** I can give you a couple, but they are not great numbers. There haven’t been longitudinal studies on that. When I was at NC State we did one of the most entrepreneurial things I’ve ever seen any university do. We took $10 million out of the university’s endowment over 3 years, and created a venture fund. We used that fund to invest in fifteen companies and over a 4-year period those fifteen attracted almost $200 million in follow-on funding, created about 400 jobs and twelve of the fifteen located on NC State's research campus. So, irrespective of the eventual return on investment, the economic development success spoke volumes about the value of this type of activity. Furthermore, we tracked how many of those jobs went to NC State graduates of 5 years or less duration; we were looking at brain drain. So we had some wonderful research going on. The VC people, at the end of the day, want to know what’s the financial return and that story is not out yet. It’s going to come in soon. The fund was from 1998 to 2000. Some of the companies are starting to cash out, so I hear they are going to actually make some money on it to boot. There's not a lot of good numbers longitudinally. At UNC Chapel Hill we’ve done thirty-four start-ups in the past 5 years. We have a research budget of almost $600 million a year. I think some of that was pent-up demand, some of it was just a new sort of can-do approach and a new “lets get the deals done and out of here,” and a new mandate from me to the staff saying, “I don’t care if you leave a dollar on the table—I want you to do a good deal but I’d rather have deals get done then get hung up on squeezing every dollar, every share of stock.” Somebody might come in and criticize the economic portion of our deals, but I think they would at least be impressed with the deal-flow.

**Audience member:** Do offices such as yours administer in terms of whether something will be patented or not? Do you become gatekeepers to what research should be done? If research is not going to be patentable, is advice given to drop it although it may have tremendous potential for public good?

**Crowell:** We try to make sure that more is discussed than patentability. Our assumption is that anything that is disclosed to our office is patentable. We presume that our faculty are so good at what they do and are so out front in their fields that if they come forward
and say, “I’ve got this invention I think is patentable,” we generally agree that it probably is. The question is: “Should it be patented?” And that’s where we try to look at business and market and application and issues of the type you are alluding to, and try to make a decision that has no implications in terms of the quality of the science. We simply look at our patent budget as a venture capitalist would. My university spends $2.5 million a year filing patents. It’s unbelievable how expensive this is, and my view is we ought to be just as picky as venture capitalists who turn down at least ten to twenty projects for every one they take. I don’t know if that answers your question, but we try not to play that gatekeeper role. We try to make sure that it’s at least done objectively and not subjectively. We may find something in the patent literature that kills it and which then sends a company away that otherwise would have funded the research, but that’s going to happen anyway. That’s good due diligence and good in the long-term for our partners.