CHEMICAL HERITAGE FOUNDATION

PETER DRAKE

Life Sciences Foundation

Transcript of a Research Interview
Conducted by

Brian Dick

Via telephone

on

7 November 2012

(With Subsequent Corrections and Additions)

CHEMICAL HERITAGE FOUNDATION
Center for Oral History
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INTERVIEWEE

Peter Drake was born in St. Louis, Missouri. His father was the head of manufacturing for Beech Aircraft before he became one of the founders of McDonnell Aircraft. Drake attended Bowdoin College in Brunswick, Maine, where he majored in biology and Russian. He then obtained his PhD from Bryn Mawr College, with his thesis in neuroplasticity. In 1980, Drake joined the Case Western Reserve Medical School and took a summer program on business for science PhDs at the Wharton School of the University of Pennsylvania. While pursuing his PhD, Drake was exposed to the biotech industry both through his mentor Lou Fernandez at Monsanto and by reading about the Chakrabarty patent in the *New York Times.* Drake began interviewing on Wall Street and eventually accepted a position at Kidder Peabody as an analyst. While he had a background in science, Drake had to learn the specific sciences of each biotech company he worked with, which included Genetech, Centocor, Cetus Corporation, Biogen, Genzyme, Amgen, and Immunex. Throughout his time at Kidder Peabody, Drake worked extensively with biotech CEOs and eventually made partner in 1986. One year later, Drake and his team at Kidder Peabody formed Vector Securities. At Vector, Drake worked as a biotech analyst and director of research, though he eventually switched to just analysis. In 1993, Drake, along with Arnold Snider and Theodore Beghorst, formed Deerfield Management, a health care investment firm. The company initially raised forty million dollars and closed to new investors in 1994 after reaching two hundred and fifty million dollars. Vector was later sold to Prudential, who allowed the Vector team to still maintain the firm just under a new name, Prudential Vector Health Care Group. Drake left Vector five years later in 2000.

INTERVIEWER

Brian Dick received his PhD in sociology from the University of California, Davis. Before coming to the Institute he was a research associate at the Life Sciences Foundation. His research interests include the history of agricultural biotechnology, the emergence of the biotech industry, and the Human Genome Project.

ABOUT THIS TRANSCRIPT

Staff of the Life Sciences Foundation conducted this interview, which became a part of our collections upon the merger of the Chemical Heritage Foundation and the Life Sciences Foundation into the Science History Institute in 2018. The Center for Oral History at the Science History Institute edited and formatted this transcript to match our style guide, but as noted, Science History Institute staff members did not conduct the interview.

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INTERVIEWEE: **Peter Drake**

INTERVIEWER: **Brian Dick**

LOCATION: **Via telephone**

DATE: **7 November 2012**

DICK: […] Oh, not a problem. I was curious. Just before we continue, is it okay that I record our conversation?

DRAKE: Oh, no, absolutely.

DICK: Wonderful. Wonderful. Well, now, I've read through—you wrote a chapter in the book *Alternative Careers in Science*, which gave me, sort of, an outline in terms of your biography. But I was wondering if you'd be okay if we just went back and, you know, did a few of the biographical questions here, and fill in—

DRAKE: Sure.

DICK: —just a few questions that I had.

DRAKE: Sure. Not a problem.

DICK: Great. Great. So you were born in Southern Missouri. Is that correct? Or what city within Missouri?

DRAKE: I was actually—I was actually born in St. Louis.

DICK: St. Louis. Okay.

DRAKE: And my exposure to the biotech industry really came from a business mentor of mine, a fellow by the name of Lou Fernandez. Lou Fernandez was a chemist who became the chairman of the board of Monsanto. And I—while I was getting my PhD, Lou was an important advisor of mine that told me that if I had an interest in merging business and science, that I

should seriously consider being a biotech analyst. At the time, he was on the business advisory board of Biogen, which had gone public in 1980, ’81. And so he understood the convergence of the biotech industry with the need to finance the industry. And so **<T: 10 min>** it was his strong advice that, after I finished my postdoc, that I consider, you know, moving to Wall Street, which I did.

DICK: Now I've read that you used to play tennis with him when you were in high school?

DRAKE: Yeah. It's crazy. I mean, I literally remember—I knew the letter that I wrote to him, and remember, you have to understand that there were no emails back then, and there were no cell phones back then. So everything—communications happened either on the phone, which I didn't think was going to be appropriate, or via a personal letter, which I knew his secretary would screen. So I made sure that the first sentence of my letter called attention to the fact that he and I knew each other from playing tennis together at a country club that he and my father belonged to in St. Louis.

And he called me, or his secretary called me. I spent a day with him, which was an extraordinarily generous thing for him. Monsanto had just hired a fellow by the name of Howard Schneiderman. Howard was the first head of R&D that had come from academia. Monsanto actually, in 1980, had the vision that they would in fifteen years become a biotech company. It took them twenty. But I spent a considerable amount of time with Dr. Schneiderman, in large part because he had been the chairman of the department at Case Western, where I was going to go as a postdoc.

So, you know, they basically offered me a job working at Monsanto as assistant to the chairman, but Lou said, “If I were you,” he said, “we're not going to be a biotech company for fifteen years. If I were you, I'd go to Wall Street.” [Laughter] And I can assure you, every time I saw him until he passed away, I was reverential in my thanks to him.

DICK: And you're saying you met him at the country club that your father was a member. Now—

DRAKE: Yes.

DICK: —I find it—you say that he was one of the founders of McDonnell Aircraft Corporation.

DRAKE: My father was.

DICK: Yeah. Yeah. But you say he was a farm boy with a high school education. How did it—you know, how did he come to founding this company?

DRAKE: You're talking about my father?

DICK: Yes. Yes.

DRAKE: He got a call from JS McDonnell in 1938, and my father, at the time, was head of manufacturing for Beech Aircraft in Wichita, Kansas. And JS, as he was affectionately called, wanted to start an aircraft company in St. Louis. And they asked my father to join the board and to be one of the founding employees. His badge number was three, believe it or not. JS's was one. And my father moved his family from Wichita, Kansas, to St. Louis, and we—and retired from the company when he was sixty-five, and that was the mandatory retirement. Otherwise, I'm sure he would have continued to work.

DICK: [Laughter] And so that basically brings you to St. Louis. You're in connection with—Monsanto is also there in St. Louis. And here, I'm just going through—a little bit through the biographical details here. I want to, you know, get us up to the 1980s, 1990s. But you enter Bowdoin College in Maine. Now it's here in the—you say that you move from wanting to into med school to just studying pure science as more of an intellectual passion. And I notice that you ended up majoring in biology and Russian. I was curious about why the Russian.

DRAKE: I had taken Russian for five years at **<T: 15 min>** St. Louis Country Day School. And I just—I really enjoyed the language. And so it was a—it was more a passion of mine than it was something that I was ever going to use necessarily in my life.

DICK: I see. I see. So you begin seeing—towards the end of your—or towards your senior year, that, you know, molecular biology, neurobiology, they're at the point of undergoing revolutions. You end up at grad school at Bryn Mawr College.

DRAKE: Yeah.

DICK: And you say that you sort of spent the summers working at the marine biology laboratory doing experiments for your PhD thesis. What was your PhD thesis on?

DRAKE: It was on neuroplasticity and the underlying chemical changes that happen during neuroplasticity.

DICK: Was there any particular organism that you were using, or the—

DRAKE: Yeah. My thesis advisor had worked in Eric Kandel's lab, who as you may know won the Nobel Prize a few years ago, and so we worked on *Aplysia californica*, which is a large mollusk, a snail, actually, that has a giant, well-documented central nervous system.

DICK: Oh. Let's see. So you're—now this is the time I think, in the late seventies here, 1980s, you begin learning about the Chakrabarty patent—

DRAKE: Yes.

DICK: —the possibility—I guess, you know, going back to that time period, what was your—you say you were reading *The New York Times* on this.

DRAKE: Yeah. I remember it. The Sunday *New York Times*. It was the only day I took off from my thesis work. I was sitting on a beach, and I read about the Chakrabarty patent, and I realized that, oh, my gosh, the—once you can establish strong intellectual property for patents on in this case a new oil-eating organism, but obviously, if you can get a patent on a natural product, or on a natural organism, you are going to have enormous opportunity to apply that in other ways. And so it was apparent to me that the biological sciences were about to explode.

DICK: And when did you—I know that the—you joined the Case Western Reserve Medical School in 1980. What was it—after you read about that in *The New York Times*, did you begin, sort of, was it at that time you began pursuing how do I get a handle on this? How do I go about I guess supporting this industrial applications?

DRAKE: I [inaudible] watch. I talked to a lot of venture capitalists. I continued to talk to Dr. Fernandez. And in 1983, I attended a program that was set up basically to teach PhDs about business that the Wharton School of Business initiated at the University of Pennsylvania. So I attended that program, which was a summer program that taught me finance, accounting, marketing, just the basics of what I would call an undergraduate business experience. It wasn't really a—it was not a—it was so novel. It would be like getting an executive MBA now, but that really didn't exist back then.

So I went to that program, sort of, for a summer, six days a week, **<T: 20 min>** and then—and in the fall of 1983, I started to interview on Wall Street, where I found another wonderful mentor in the form of a buy side analyst and portfolio manager by the name of Art Michlin, one of the very early buy side guys. He was at JP Morgan, asset management, and he took me under his arm, and—took me under his wings, and taught me about Wall Street, and advised me as I went through the interviewing process. And that's how I ultimately decided to join Kidder, Peabody.

DICK: Interesting. How did you meet Art? Or get in contact—

DRAKE: I met Art through—I met Art through a colleague of mine at Wharton, a scientist by the name of Jack Shepherd, who I ended up hiring at Kidder, Peabody a couple of years later. He was department chair of genetics at the University of Minnesota and was doing at the time a sabbatical at Smith, Kline & French Laboratories, which is a predecessor to what is now Glaxo.

DICK: And now was there any—I know you're—between ’80 and ’83 you're at Case Western. You're working in the laboratory of Raymond Lazik. Now I know this is right at the time where the commercial applications are coming out. We have in ’76 Herbert Boyer with Rob—with Bob Swanson founding Genentech. There was still some—you know, still relatively I think rare or—well, I guess this would be the period where scientists are beginning to get into industry, but was there any conflict in terms of staying in academia? Or was it sort of really—it's time to go into these industrial applications?

DRAKE: Yeah, well, that's a very good question. I mean, you have to appreciate the degree to which the world has changed since then. But there's still [inaudible] up to speed. I mean, Ray Lastik fully understood my vision. He supported it. And without his support, I don't think I could have done it. He was a really, really, really forward thinker. He was a MacArthur Foundation recipient, so he had a prodigious brain, and understood that not everybody that worked for him was going to end up being a professor. And Ray was—I mean, I will say it, that he—while I went to Wharton that summer, he kept me on the payroll. Kept me on the payroll, and carried my medical insurance, so—

DICK: Wow.

DRAKE: —I can assure you, I could not have afforded to take three months off and not get paid, even though I was getting paid—are you ready for this?

DICK: Yes.

DRAKE: Thirteen three-eighty. Thirteen thousand three hundred and eighty dollars. That is my Rosebud.

DICK: And this is—what was your official position at Case Western with—

DRAKE: I was a postdoc in Ray's lab. It had originally been called the department of anatomy, and then it—and it morphed into the department of anatomy and molecular biology.

DICK: Okay. Okay. So you're getting support from Ray Lazik. He understands your vision, very supportive. Jack Shepherd gets you into contact with Art Michlin, who goes over to industry, and you decide to join Kidder, Peabody & Company. Can you just tell me a little bit about just the process of interviewing, the people you met—

DRAKE: Yeah. I just—again, the world was changed. So I was the first scientist that had ever worked on Wall Street. As a biotech analyst. **<T: 25 min>** And so you might imagine that a bunch of—at the time—let me take a step back. At the time, Wall Street was a—what I would call—it was a place that if you didn't have a particular very specific academic pedigree, your chances of becoming an investment banker or an analyst were very low. And that pedigree included a named institution with a degree in finance. And those named institutions were primarily Ivy League institutions. So sending a resume off to the director of research, a fellow by the name of George Boyd, what I was told after the fact was that because my cover letter was so insightful, and my resume included working—even though it was not an MBA, it was called a CBA, a certificate of business management, and they had been interviewing folks for over a year.

So I actually interviewed at three places and got three offers, and chose Kidder, because it was still a private company. It was a private partnership. And it was a private partnership where if you were a research analyst, you could make partner. One of the other funds that I applied to was Lehman Brothers, and Lehman Brothers, although a private partnership, only had one analyst that was a partner, and he was the director of research.

DICK: *Hmm*. So there'd be no proper—

DRAKE: And I will also tell you, again, within the historic context of the world, which has changed a lot, Lehman Brothers, as was the case with Goldman Sachs, was a firm dominated by Jewish partners. And being that I wasn't Jewish, I was at an extreme disadvantage to making

partner. Kidder, Peabody, on the other hand, was a Roman Catholic firm, and being that I was a Roman Catholic, I thought that I had a—I wasn't disadvantaging myself in any way.

DICK: I see. Now you said there were two other—Lehman Brothers. What was the other firm that—

DRAKE: It was Dean Witter, which was then called Dean Witter Reynolds, and now part of Morgan Stanley. And Kidder, Peabody. Those were the three firms that I interviewed with.

DICK: I see.

DRAKE: I got job offers from all three, and chose to work for Kidder. It was, at the time, the strongest research team on Wall Street, led by a fellow by the name of Arnie Snider, who was the drug analyst, who features importantly in—both in my life at the time, but also subsequent to that, because he and I cofounded Deerfield Management, which is a—which was the first sector hedge fund. It was a health care hedge fund that we formed in 1993 together.

DICK: I see. Now tell me a little bit about Arnie. Now he was sort of guiding you along in this process? I know that you were given—or at least for your chapter, some—quite a bit of leeway to conduct the investments, but you were getting some help from Arnie at this time?

DRAKE: Well, I mean, I worked for Arnie, but Kidder was the kind of place where they'd put—they gave you a lot of freedom to establish your industry coverage and craft. The kind of companies that you followed within the industry, based on your creative insights, so that they were not in any way dictatorial. But having Arnie sit in the office next to me **<T: 30 min>** was a real godsend, because he was a great stock picker, a legendary stock picker, and he very much encouraged my—and he encouraged and taught me a lot about stock picking. But you need to appreciate that when I joined Kidder in October of 1983, nobody knew how to value biotech companies. So that was really one of the first things that I set out to do.

I created the framework that Wall Street uses today to value biotech companies. It didn't exist at the time. There were metrics that were used by analysts on the sell side and the buy side that were kind of laughable. You know, the ratio of PhDs to market capitalization, the ratio of cash to market capitalization. And I laid out a framework whereby you actually modeled out who wins and who loses in each therapeutic category and each drug category, and discounted those future earnings back to the present, and therefore, you could differentiate between Genentech and Centocor and Cetus and Biogen. It simply was a discounted future earnings model that we coined a term for it called product asset valuation. And that product asset

valuation report became a—well, it landed me on the cover of *Barron's*, so it was a pretty legendary report.

DICK: Interesting. So you're really—you're coming up with this—and obviously a major difficulty with these companies that have products that, you know, are years away, or don't even have products, you know, they have ideas, technology platforms, perhaps a patent—

DRAKE: No, they—you need to appreciate that—take alpha interferon, for example. There were several companies working on alpha interferon. There were—and Cetus was working on beta interferon. So there were all of these different companies with overlapping or confusing intellectual property, with products that required somebody calling out who's going to win and who's going to lose and what are the applications going to be, and how big is the potential market, and who's going to divvy up the market share on that particular product?

DICK: I see. I mean, that's—no, it's really interesting, sort of, breaking that down. What were some of the—I know that you were—I guess, just give me a better idea of what you were doing as a biotech analyst, now that you've developed this framework—

DRAKE: Well, I—again, I was a neurobiologist, right?

DICK: [Yes].

DRAKE: So I had to teach myself cardiology, because Genentech was working on tissue plasminogen activator. I had to teach myself infectious disease. I had to teach myself internal medicine. I had to teach myself autoimmune diseases. It was a—so I spent a lot of time visiting companies. I spent a lot of time attending medical meetings. I spent a lot of time reading medical textbooks. And I would say that process of learning and gaining insight, specifically predictive insight into what was going to work and what wasn't going to work, **<T: 35 min>** was something that you don't get in year one. You get it over time. I spent the vast majority of my time on the road attending meetings, and visiting companies.

DICK: I see. Do you have any interesting stories or anecdotes of some of those meetings on—you know, especially—

DRAKE: Oh, yeah. Of course. Of course. I can tell you that in 1984 and 1985, there were practically fisticuffs among academic researchers in the card—in the cardiology area over what actually formed—what actually caused a heart attack. And it was Genentech's premise, correct

at the time, but it was Genentech's premise that the cause of a heart attack is a blood clot that forms in the coronary artery of an afflicted patient, and that if you introduced an agent such as tissue plasminogen activator that [inaudible] the clot within three hours of the onset of chest pains, that you could revive a patient that had had a heart attack. And I will tell you that when TPA was approved in 1987, prior to that, there was no therapy to treat a heart attack.

I mean, if you think about the armamentarium of compounds, devices, specifically stents, drug coated stents, drug eluting stents, other thrombolytic agents, aspirin, you know, all of those products that address a clotting mechanism, none of that existed prior to TPAs approval in 1987, in November of '87.

DICK: So now you were—so Genentech then would be one of the companies that you would be going and talking to, and—

DRAKE: Yes. Yes. I wrote a report in 1984 entitled—maybe it was '84, entitled "All the Way with TPA." [Laughter]

DRAKE: So, I mean, it was—you know, again, the Wall Street community needed to be educated, which is what we were doing as analysts, and they needed to be—you needed to provide the analytic basis of your conclusions, based on the science. So it was kind of natural that you'd have an MD or a PhD working on it, although, as I said, I was the first PhD to join a Wall Street firm.

DICK: Now were there other companies that you were working with at—during this period, at Kidder?

DRAKE: Yeah. My early coverage included Genentech, Centocor, Cetus Corporation. So I had to learn a lot of oncology. Biogen, Genzyme, Amgen, Immunex. Those were my core—those were the core companies that I followed in 1984 and beyond. So I knew all of those CEOs quite well. I knew all the heads of research at those corporations. There was no model at the time for who should run one of those companies. So Biogen in 1984 was run by a fellow by the name of Wally Gilbert, who was a Nobel Prize laureate, the scientific founder of Biogen. It turns out, you know, he didn't—he was quite **<T: 40 min>** inexperienced in the area of running a company, and that was kind of emblematically shown when Biogen had their first analyst meeting at their headquarters in Cambridge, and they had a huge ice sculpture with Biogen written on it, only nobody had planned for what happened when the ice melted. [Laughter]

So everybody [inaudible] in the morning, and they give me all these trinkets. I still have those trinkets, by the way. They're giving a Biogen mug, and they're giving a plastic Lucite with alpha interferon in it. It was called Intron at the time. And a couple of other things. And, you

know, Wally Gilbert is pontificating in their—in kind of an academic hall that they had, a lecture hall. And everybody got up and the Biogen ice sculpture had melted, 50 percent of it had melted, and there was water all over the floor. Wally was no longer at the company a year later. I think the board realized that it required a lot of business acumen.

On the other hand, Hubert Schoemaker, who was a scientist, and one of the cofounders, with a guy by the name of Michael Wall, of Centocor, was one of the best businessmen the industry has ever seen. Likewise, George Rathmann, a PhD who worked at Abbott Labs, was probably the best CEO the industry had seen. And Bob Swanson, who was the founder and CEO of Genentech, who was a venture capitalist, so he didn't know any science, per se. He was a—he'd been a banker at Citicorp and turned to the biotech industry as a venture capital founder. He was an incredibly gifted businessman.

But there were the—you know, there were the goofballs as well, and Wally was a bona fide goofball as a CEO.

DICK: Being very good at the science, but the business aspects were problematic.

DRAKE: Yes. Yeah. And Biogen was, frankly, saved by Jim Vincent, who came in after the board had relinquished Dr. Gilbert of his job, and Jim saved Biogen, and built Biogen.

DICK: What were some of the, you know, these qualities or insight—people like Jim Vincent, Schoemaker, Rathmann? What are these things that they're getting right, where they're really able to do extremely well on the business side. Are there any, sort of, generalities that they embodied that allowed them to succeed?

DRAKE: Yes. They were very focused on a couple of key products. They capitalized their firms through a series of equity financings that allowed them to afford the losses that they would incur if they developed these products. And they were incredible risk managers. George Rathmann bet Amgen on EPO. He bet the whole company on erythropoietin, and he was right. And then subsequent to that, when Genetics Institute claimed that the patent that Genetics Institute had was superior to Amgen's, and challenged them in court.

Genetics Institute won two separate patent litigation **<T: 45 min>** battles, and ultimately lost at the district court level, in Northern California. Maybe it was the district court in Washington, DC. I mean, it got all the way up to the highest court under, that is, the Supreme Court. And George, through his prodigious intellect and his extraordinary competitive tenor, just by the force of those two issues convinced the appeals court to side with Amgen. And I remember arguing with George to just split the baby, and he would have none of it. He thought Genetics Institute had stolen the patents for EPO.

DICK: Yeah. Yeah. You know, he, sort of, bet Amgen on EPO. I guess, sort of going back to the moment where that's happening, was that a really risky decision? Was it something where it—

DRAKE: Yeah. Yeah. I mean, Amgen is a sixty-five billion dollar market capitalization company now. It was a two hundred million dollar market capitalization at the time. And had he been wrong, it would have gone to zero. That's pretty big.

DICK: Yeah. Very much so. I guess as an analyst, would you have supported that decision back then, or—

DRAKE: It wasn't up to me to support it or not. I mean, my job was to figure out if Amgen would prevail, and I actually wrote a huge report on the Amgen versus the Genetics Institute patents. So, I mean, you have to make that call.

You know, I mentioned—I forgot to mention another name, and that is Henri Termeer was, when I met him in 1985, he had come out of Baxter and was the chief executive officer of Genzyme. And Genzyme literally was created and it grew simply because of Henri Termeer. And there's another issue that all these guys had. All of them were incredibly competitive. Vincent, Swanson, Termeer, Hubert Schoemaker, they were just—they were gigantic competitors. They made things happen because of their competitive nature.

DICK: And do you think this was something that say other biotech companies that weren't doing so well, would that be something that oftentimes their CEOs would sometimes be scientists, less experienced, lack some of the, you know, not only competitive drive, but some of these other traits needed to—

DRAKE: Yeah.

DICK: —succeed?

DRAKE: Yeah. Yeah. If you don't think CEOs matter, then you don't understand business. CEOs matter, period. You don't have a good CEO, you're not going to have a good company, I don't care whether you're selling widgets or biotech products. It's all the CEO.

And so one of the fascinating jobs that I had, and **<T: 50 min>** probably the most fun part of my job, was getting to know these guys, because they were incredibly giant men that

were the CEOs of the industry. I mean, there's a company called Idexx Labs, okay, that was founded by a fellow by the name of David Shaw. And Jim Vincent introduced me to Idexx Labs when I was attending the CEO conference that Brook Byers put on in 1988. It was the first CEO conference that Brook had done. And they invited me because I was a really at the time well-known analyst.

And I came out to that CEO conference, and I basically sat like a fly on the wall and watched all these guys interact. But coming out of that meeting, Jim Vincent asked me over brunch one day with his then wife Betsy, he said, "I sit on the board of this animal health care company that I really want you to see." And I hated animal health. Animal health was one of the—animal and plant science were two of the most unsuccessful early business ventures within the biotech industry. And all I thought was, oh, my gosh, this is going to be a complete and utter waste of my time.

And then David Shaw flew out to our offices at Vector in early 1989, maybe it was late '88, because I was introduced to—Jim told me about the company in October of '88. So David Shaw came to Vector with one of his cofounders, Erwin Workman, in November of 1988. And it's the only meeting that I ever attended in the thousands that I did in my career, where David Shaw started to talk, and I put my pen down and was just blown away by the power of David's strategy, by the force of his personality, and by his charisma, and Idexx is an enormously successful company because of Erwin Workman and David Shaw.

So it—what you're hearing from me is, kind of, a repeating theme, which is if you don't have a good CEO, it ain't going to work, and if you don't have a distinctive technology that allows truly novel products to be developed, it ain't going to work. And all of these guys were swimming in a pretty rich milieu of technology. But it was the strength of their personalities and the power of their vision and the soundness of their judgment that made every one of those companies successful.

I will tell you that Wayne Hockmeyer, the founder and CEO of MedImmune, is a guy that I would—I mean, if he told me to jump off a building, I'd jump. [Laughter] I'm serious. I'm serious. I mean, Wayne Hockmeyer was a guy that spent his—he was at the Walter Reed Army Hospital as an infectious disease expert, but when he was in Vietnam, he was one of the guys that crawled in the hole, looking for the bad guys. Okay? He—

DICK: So he had some serious experiences.

DRAKE: He had the—**<T: 55 min>** he was brave, tough, and visionary. MedImmune was sold to AstraZeneca for fifteen billion dollars. It was, without Wayne Hockmeyer, I mean, that company wouldn't have gone anywhere. And I will tell you, and I remember telling—when I came out to first visit MedImmune, just after they were a public company, Wayne's secretary picked me up at the train station and drove me out to their headquarters in Gaithersburg. And after I spent a day with Wayne and his team, she said, "Well, tell me, Dr. Drake, what do you

think?" And I said, "I think you ought to get as many options in this company as you possibly can, because you will be—you as Wayne's secretary will become quite wealthy." [Laughter]

DRAKE: And let me tell you, she made millions of dollars as Wayne's secretary.

DICK: Wow. Wow.

DRAKE: There were some of these companies, you could go visit, and you'd just—at least I did—you just knew that they were going to work. Likewise, there were companies that you would visit and you knew that they would not succeed, because of their lack of leadership. Cetus was a prime example. There was a guy by the name of Bob Fildes who was the CEO of Cetus. And he was not a leader. He was a bully. He was a—I mean, he had a really good team around him, but CEOs can really screw things up as well. And Cetus was screwed up by Bob Fildes. We sold PCR technology of Cetus to—or we represented Roche in the purchase of PCR. They bought that for three-hundred million dollars. And Cetus at the time had a market capitalization of six-hundred million dollars. Do you have any idea what PCR was worth when Roche got finished with that?

DICK: I'm sure it hit the billions, right?

DRAKE: Billions and billions. Billions and billions. Not just a billion. Integers of billions.

DICK: And that was a large—a problem with the leadership at Cetus, that they could have gotten a much better deal.

DRAKE: Yeah. Yeah. So, you know, you either know or will come across a fellow by the name of Hollins Renton. Hollins left Cetus and became the head of Onyx Pharmaceuticals. I mean, Hollins Renton was—you just knew that he was that good at Cetus, but he worked for a bad guy. And so Cetus didn't succeed. And when Chiron ultimately purchased the therapeutic part of Cetus, after PCR had been spun off, Hollins went and became an enormously successful CEO in his own right.

DICK: And that was on—with Onyx, with the—

DRAKE: That's right. So those are—I mean, that's the kind of stuff that I made a point of getting to know really, really, really well, I got to know these CEOs, because to me, you know,

it was all about the CEO. And you could pick the winners from the losers within each of these organizations by who the CEO was.

DICK: That's very interesting, in terms of the—yeah, the importance of this leadership component of the CEOs. I wanted to ask, too, in—let's see. You become a partner at Kidder in 1986, and then 1988, you cofound Vector Securities. I was wondering if you could tell me, how did that come about in terms of moving from Kidder into—

DRAKE: Well, that's the—I was at—just so you know, the way you made partner at Kidder **<T: 60 min>** was first you were promoted to assistant vice president, then you were promoted to vice president, and if, as a vice president, you distinguished yourself, you then—you were promoted to partner. I was the first and only employee that ever went from AVP to partner in the history of Kidder, and at the time, they were a partnership that dated back to the 1920s. And the way I did that was Drexel Burnham Lambert, otherwise known as Drexel, a firm that had come from nowhere to the most powerful investment bank on Wall Street based on their pioneering work in the creation of the junk bond market, realized that they needed to differentiate themselves. They needed to build other teams within the organization, because they were basically a bond shop, and a junk bond shop.

And they hired the entire health care and technology team from Kidder, Peabody, and I was the only guy that stayed behind. In 1986, I brought in three pieces of business that—to Kidder. I brought in Amgen, where we were the lead banker. I brought in Immunex, where we were the lead banker. We actually had road shows for both of those companies happening concurrently. I also brought in the lead manager role for Genzyme in their IPO. So those three transactions were quite notable for the firm. And when Drexel came knocking and hired everybody around me, I went to the director of research and said, “Listen, I don't want to leave, but, you know, this is what I'm making now. This is what Drexel is offering me. And I do have a fiduciary responsibility to my family.”

And they said, “Well, what do you want?” I said, “Well, you know, I'd like you to match the offer, extend it for two years, and make me a partner.”

DICK: And they went for it.

DRAKE: They did. And then the chairman of Kidder at the time, a fellow by the name of Al Gordon, Mr. Gordon came to me and said, “Okay, now that we've lost all these people, I want you to write a white paper on what we need to do to build the organization back, and if there are any people that you think we need to include in the group, or, you know, hire, let me know.” And so my white paper documented how we lost the team, how we should reorganize the banking and research efforts, and that we needed to create a health—a dedicated health care investment banking team. And it had to have its own dedicated technology people, because by

that time, my research responsibilities had grown so immensely, and I was the number one ranked II analyst, institutional investor analyst, in 1986.

And I had to focus much more exclusively on research, rather than this kind of hybrid model of research and banking. So what we did was we made Ted Berghorst, who was a banker that I had worked with on a transaction in 1984 together, Berghorst came in as the head of health care **<T: 65 min>** investment banking. We hired an M&A guy out of DuPont by the name of Jim Foght. And we brought in Jack Shepherd from the University of Minnesota.

And so that was the team that worked together. So at the time, I was running the health care research group. Arnie Snider had been promoted to the head of stock selection. So I ran the health care research group. Berghorst ran health care banking. Foght was in the team to do strategic alliance advisory work. And Shepherd was doing technology assessment. And we worked together as a team in ’86 and ’87, and after the crash in ’87, when everybody thought the world was going to come to an end, we decided to go out and form Vector, which we did in March of 1988.

And we did it in a way that was extremely respectful to our partners. We loved Kidder. But GE was purchased by—Kidder was purchased by General Electric in 1987, and they wanted—they were more focused on large capital transactions, and we were focused on trying to help companies, small companies in the health care arena, raise money and to further their R&D activities.

So we left to form the first investment banking boutique that was focused on health care, called Vector Securities. So when we did that, out of respect for our partners at Kidder, we were working at Kidder on six transactions, and what we did was we told Kidder that no—we'll leave. We will finish these transactions at Vector. You put your name on all the tombstones, so that you get the credit. And we'll split the money 50/50.

DICK: And that—

DRAKE: Everybody won. You know, we weren't pricks. We served our clients well. That was that, you know? In the old days, that's what you did. You didn't focus on yourself. You focused on what was best for your clients. So we honored Kidder. They got to put their name on all those transactions. And as a small firm, we were profitable in year one because of the transactions that we brought with us from Kidder. And got no official credit for it.

DICK: Of course.

DRAKE: I mean, it didn't really matter to us. I mean, tombstones cost at the time about twenty-five-thousand dollars for a quarter page ad in *The Wall Street Journal*. I mean, we didn't really give a shit whose name appeared on anything.

DICK: Now were you doing sort of similar things here? You were running the research department as the director of—or director of research at Vector now?

DRAKE: Yeah, I was the biotech analyst and director of research. So I built the research team. Over the years, it became a very large organization. And so I didn't want to manage. I wanted to continue to be a biotech analyst. So I hired—remember [inaudible] when I told you that Drexel hired the whole team out of Kidder, and they thought they had hired me as well. The guy that I was going to work for at Drexel, the director of research at Drexel, was a fellow by the name of Arthur Kirsch, and so when we decided or when I decided that I did not want to be a full-time manager, but rather, I wanted to do full-time research, we hired Arthur Kirsch to come in as a partner and a fellow board member. There had only been three board members and three principal owners of Vector, Ted, Jim, and me. **<T: 70 min>** We brought Arthur in as a board member and an equity owner in the firm, and I ended up working for Arthur.

So my—you know, I've worn a lot of different hats, but the core love of my life was doing equity research in biotech. But, you know, along the way, we formed Vector Fund Management, which was a health care venture capital firm that we had two funds for, and Arnie and Ted Berghorst and I cofounded Deerfield Management, which is still—well, now it's probably the most successful freestanding health care hedge fund that we formed in 1993 and is still existing today.

DICK: Now that was—you were—Arnie was involved in that also, you were saying?

DRAKE: Yeah, well, Arnie is just a kind of—to give you the chronology, so Arnie got promoted to head of stock selection. I became head of health care research. I left in ’88. He left the firm in late ’88 and went to work for Tiger Management. He went to work for Julian Robertson.

And it had become apparent to me that Arnie was—could be recruited out of Tiger to start his own shop. And so I went to an analyst meeting in 1993, in October of 1993, at Immunex, and I told Arnie, I said, “Listen, I've got this idea to form a dedicated health care hedge fund, long, short. Will you consider running it? We don't want it to—we don't want Vector's name involved, because it would be very confusing to our institutional clients.” We all—Vector was headquartered in Deerfield, Illinois, so we decided to call it Deerfield Management.

And literally from the analyst meeting, from our—the first time I pitched the idea to Arnie in October of 1993 in Seattle, by December of that year, we had all of our documents done. We had raised forty-million dollars and Deerfield Management opened its doors officially on January 2 of 1994 with Arnie and a team that we had put together that were running it—you know, this dedicated health care hedge fund.

By end of 1994, we had told institutional investors, mostly endowments, that we would stop raising capital once we got to two-hundred-fifty million dollars. And so we closed the fund to new investors at the end of calendar year 1994. And the rest is history. I mean, it's a multi-billion-dollar hedge fund today.

DICK: Well that—we're starting to head here towards—one thing—we discussed it a little bit briefly, and I was wondering if we could go into a little more detail, and that's the Genentech-Roche deal, which I really appreciate getting, you know, sort of a different perspective than frankly I've been—we've been able to get from other resources. How long had Vector been working with Roche, or when did that relationship begin to develop?

DRAKE: Well, what we did, Brian, was the **<T: 75 min>** idea of putting Genentech and Roche together was a fairly straightforward one for me, and here was the logic. TPA, as it turned out, was not a billion-dollar drug. Genentech did not have any international footprint. They were—their stock had pretty much cratered in '88. And so they were capital constrained. There were a lot of other competing technologies that were being foisted upon TPA. And yet they had a truly enormous pipeline of technology.

So we looked around the world. We knew from work that we had done at Kidder and at Vector that the likely buyers of Genentech would not be a US-based pharma company. The US-based pharma companies were run by guys that, you know, met the numbers. And the acquisition of Genentech would carry with it a substantial write down over years from an accounting standpoint of goodwill. And the European companies are allowed to write off goodwill in one year, and not amortize it. So we knew it had to be a European company.

And I can't divulge everything that we knew about Roche, but Roche was really the only player that had the commitment to research, had a US operation, had substantial financial capabilities, and most importantly, had probably the most creative chief financial officer in the industry, a fellow by the name of Henri Meier. So we cold called, believe it or not, we cold called Henri Meier, and said that we had an idea. It was a proprietary idea that we wanted to pitch to him and his colleagues on the executive committee. And we literally put together a pitch book that—it involved a layering. So this is what you get with the acquisition. Right? And we called out scientists that they would get, and products that they would get. And it was basically a laminate that folded Genentech into Roche.

Now I will tell you parenthetically that Roche had, in the previous year, tried to buy via a hostile deal a company called Sterling Pharmaceutical, and they were unsuccessful in that

hostile bid, and Roche was very, very, very sensitive to not doing a hostile deal. They wanted it to be friendly. And it was actually Henri's idea, Henri Meier's idea, to buy a controlling interest, but to leave a minority share of Genentech that would trade on the US exchange. They actually bought 10 percent of the company via infusing new cash into the organization, and then 50 percent of the remaining outstanding shares. So Genentech shareholders were left with **<T: 80 min>** a tradeable stock, a significantly improved balance sheet because of this capital infusion that Roche initiated, an international footprint, and just an enormous opportunity for a friendly transaction. And that is ultimately what happened.

What I can tell you along the way is that Roche ended up hiring—or Genentech ended up hiring Wasserstein Perella to do their tender defense, and Roche hired Fred Frank at Lehman Brothers to lead that transaction. That didn't happen for a considerable amount of time after we pitched the deal in December of 1988 to Roche. And although our name does not appear in any way in the proxy statement, I can assure you that we had a sidebar agreement with Roche to—that allowed us to work on transactions on their behalf that paid us in kind. Again, would that have been a marquis deal for us to have our name on it? Yes. Was it one of the more creative ideas I ever had? Yes. Was it a disappointment for us? Yes. But at the end of the day, we got paid in other ways, in transactions that we would never have had a shot of being hired on. So, you know, it—you [inaudible] investment banking, you don't have too many opportunities to create something out of nothing and then have a proprietary position in it.

I'm going to have to go to a meeting about a half an hour. But save that idea, because I don't know if you know, but Vector Securities developed, did the first one, and then we named a transaction called PIPEs. Bob Stefan, a banker in our shop, and I named the security that is now known as PIPEs.

DICK: Really?

DRAKE: We did the first one in 1989 for a company called Clinical Technology Associates, Inc. It morphed into a company called Emisphere. But we did the first PIPE deal, and when we finished that transaction, I literally went to my banking partners and said, "You realize we've got to name this thing?" And they went, why? And I said, "Because once you name something, you can go out and market it. Right?" It's a lot like—I learned that with product asset valuation. It wasn't necessarily a novel concept. I was the first analyst to do it, and because I called it something, it took on a panache. Okay? It took on an air of its own.

So what we did was we sat around the conference room at Vector, and said, well, what is it? Well, it's a private investment. Okay. A private investment. In a what? In a public entity. Okay. It's a private investment in a public entity. I said, "Shit, it's a PIPE." [Laughter] And I will tell you that the reason that we were able to do PIPE deals for several years before anybody else on the street did them was they were very difficult to close. And our lawyer, a fellow by the name of Tannenbaum, from Strook [&] Strook & Lavan, he figured out how to get PIPE deals to close. And we formed an exclusive partnership with Jim Tannenbaum, where every PIPE deal

<T: 85 min> we did, he had to be the lawyer, and he would not work on behalf of any other bank on PIPE transactions. So we knew that we controlled the intellectual property around that transaction. And it wasn't until some of our documents years after we had been doing them successfully, it wasn't until later that those documents became—I mean, they—somehow our documents got out in the public domain, and then other banks figured out how to do them. But we had—from 1989, when we did the deal for Clinical Technology Associates, Inc., 'till I think Montgomery tried to do a PIPE deal in '95 or '96, we owned that market. And we took full advantage of it. We priced them. We did them off of our desk. We never had a co-manager. We always worked with Jim Tannenbaum. And nobody could figure out how to do them.

DICK: That's really interesting, that—just—

DRAKE: Yeah, really interesting, when you think about, you know, how big the PIPE market ultimately became.

DICK: What was—did any particular thing that Jim Tannenbaum was able to do that allowed these to close?

DRAKE: Yeah, he figured—he had figured out how to close the deals. They're very, very—and money gets put into escrow. They're very, very difficult transactions to figure out how to close, and he figured out how to close them. Plus, he could explain it to lawyers on the buy side, how to do these transactions, because they don't—when a regular way deal closes, it prices, and that mutual fund can then mark that position to market. Right? Day one, which they're required to do from a regulatory standpoint. You can't do that with a PIPE. Because they actually close in a very, kind of, obtuse way, and you can't mark those positions to market on day one. And Jim could explain that and get the buy side comfortable with it.

DICK: I see. No, that's really fascinating.

DRAKE: Again, I mean, Bob Kerry did a whole bunch of PIPE deals in his career. In fact, he was the banker of record on the first one ever done in biotech, which was Clinical Technology Associates, Inc.

DICK: Right. Yeah. I really want to ask him about that. Did he—when did Bob Kerry come on to Vector Securities?

DRAKE: Bob was the first non-founding employee that we hired, and we hired Bob in 1988. He'd been at Lehman Brothers in Chicago.

DICK: Yeah. I definitely—

DRAKE: And then Bob intro—and then Bob introduced us to Van Stouter, with whom he works now, and Stouter ran our—he built our institutional sales force.

DICK: He built your what?

DRAKE: Our institutional sales force at Vector. Yeah. So, I mean, it's a really very, very—I mean, Bob was a great guy. I'm sure you—

DICK: Yeah. Yeah.

DRAKE: I mean, he's a one of a kind. He's a really, really, really great guy.

DICK: Great. Well, I know that your meeting is coming up here quickly, so I'll try to wrap things up by, sort of, just looking ahead. The Vector Securities, there was a wave of consolidation in the investment banking industry in ’98 and ’99. How does Prudential Securities come in, and—

DRAKE: Well, so here's what we did. I'm very—my first assistant at Kidder, Peabody was a guy by the name of Mark Simon. And I don't know if you've come across Simon, but Simon worked for me, and then he went to Harvard Business School, and he came out of Harvard Business School, and we were looking for a medical device analyst. I tried to hire him for that. And he really wanted to be a biotech analyst. So he moved out to San Francisco, where **<T: 90 min>** he worked for Robertson Stephens. He worked for Sandy Robertson. And Mark is somebody you have to talk to, because if I was one of the, you know, original biotech analysts on the Street, and he went to work for me, he was the first—he was there from ground zero.

So he worked for Robbie Stephens. He became a partner in Robbie Stephens. He was a biotech analyst. And he called me, and told me that Robbie Stephens—he called me on a Friday afternoon, and he said, “Listen, we're selling the firm. I just want to thank you for everything you've done for me. You'll see that on Monday morning there's going to be a major transaction.” Robbie Stephens was a private company.

But at that time, Vector had grown in its reputation to the point that a lot of analysts that I was hiring and training were getting picked off for a lot of money by the [inaudible] firms. I lost [inaudible]. I lost a number of guys that we had hired and trained, and I put a lot of investment into people management, and the development of their style in analytics. And frankly, when that happened, when we were losing, you know, an analyst every six months, and Mark Simon had told me about this transaction, I went to my partners, and I said, "Listen, we've got to sell the firm."

And so Montgomery got purchased, Robbie Stephens got purchased, and we went out and sought a partner that would do two things. We wanted and needed a large trading platform. We wanted and needed a big name firm that would provide us with a lot of capital, because we were doing larger and larger transactions from an underwriting standpoint. We were lead managing deals. So, you know, the financial—your balance sheet has to support doing multiple deals at once.

But what we didn't want to do was sell the whole firm and not be committed to the future success of the firm. So what we did in the—what we found with Prudential was we had a financial and trading partner that believed in our vision, and that is that we would create what was called a firm within a firm. So there were guys that worked for Prudential Securities, carried Prudential Securities cards, okay? But in this case, their entire health care team, bankers and research people, reported to us. And we ran a division called Prudential Vector Health Care Group.

And our shareholders got paid out when they bought the firm, but then they also got their pro rata ownership in the profits of the firm. So we ran our own P&L, and we got 45 percent of the profits in Prudential Vector Health Care Group. And it also allowed us to pick their best analysts and their best bankers, and let the other ones find other opportunities. And that kept us working frankly together cohesively, and probably even more effectively, because the economics, once we were part of a really large organization, our—you know, the number of deals that we were doing expanded exponentially, **<T: 95 min>** even though, as I said, they didn't—you know, I mean, they had a dedicated trading team. They had a dedicated—so there was—they built within the Prudential Vector Health Care Group, we had our own dedicated trading desk that was headquartered in New York on the Pru[dential] desk. We used their sales force, but we had a specialty sales force that would transact in health care names. And all I can say is that if we were doing thirty million [dollars] in revenues in calendar year '98, when we sold the firm to them—the transaction actually closed in July of '99—but in the year 2000, we had more than tripled our revenue base, which means we had significantly more than tripled our profit. And our shareholders got 45 percent of those profits.

So I can tell you, I worked harder after we sold Vector than I did before we sold Vector. And I was working pretty damned hard before then. You know, it was a wonderful alignment of our business and theirs. And in fact, at the end of calendar year 2000, Prudential's entire health care—Prudential's entire investment bank made money because—based solely on our profits. In other words, every other industry investment banking group at Prudential other than Prudential Vector Health Care Group was losing money. The overall bank made money because of us. And

at the end of 2000, the Prudential board decided—I mean, just as you would do. They looked at all those numbers and said, “Holy shit. Everybody's—we're losing money in this business.” [Inaudible]. “We're losing business in this, if it weren't for these health care guys. So why don't we get out of that business?" And that was a decision they made at the end of calendar year 2000.

But we had a five year earn out. You know, the share of profits that I mentioned to you. And so they were obliged to pay us a second time based on the projected profits in Prudential Vector Health Care Group for the ensuing four years. So our shareholders actually got paid out twice. Once on a down stroke, and then once on the buyout of the earn out.

DICK: Wow. They—good deal to be one of your shareholders. That's—

DRAKE: Yes. Yeah. Yeah. Yes. And if I can provide some perspective in my opinion, since then, and this really speaks to how the market's have changed and the competitive dynamics have changed, we would have gone, had we been a standalone Vector Securities, we would have gone bankrupt three times after that.

DICK: Wow. And that's just not having the resources that could—

DRAKE: No, we would have gone—our model was very much a model based on analysts strategically playing a role in our new business efforts. So analysts basically told the bankers where the opportunities were. And that became illegal under the Spitzer Rule.

DICK: Is this the—

DRAKE: [inaudible]—

DICK: —that Chinese wall sort of thing within organizations?

DRAKE: Yeah. Yeah. So that's right. So it was a little more onerous than Chinese wall. I mean, Chinese wall is designed to shelter inside information. But this was—the Spitzer deal was really ill-conceived. So we would have gone—that one would have busted us. **<T: 100 min>** And then, you know, the dearth of deals would have busted us. And then the current market environment. I mean, there hasn't been—there have not been IPOs and have not been secondary offerings the way there were. I mean, we view [inaudible] discussion with the following somewhat unfortunate observation that I had. And that is that you will never see another

Amgen, you'll never see another Genentech, you'll never see another Biogen or Idec. You won't see any of those.

It's a capital game. You realize that? The only reason that the United States succeeded in developing its biotech assets is that we had a dedicated venture capital community that would put up money to form these companies, and then it had—we had a institutional retail marketplace that provided the billions and billions and billions and billions and billions and billions—we raised, effectively raised seven billion dollars for the industry in public transactions, and a billion [dollars] in private transactions, okay? So that's the access to capital now, it's—the venture guys have all left the business, and the public markets have materially changed, such that you'll never see another one of those big companies. And I say this as an insider now, because I sit on the boards of a lot of public health care companies. You'll never see another—you'll never see another one of those companies.

DICK: Interesting. Because the capital is just not—no longer there, for the—

DRAKE: The capital is no longer there. And so [inaudible] capital, you're going to have a biotech industry that's going to do what it's done in Japan and in Europe. Monoclonal antibodies were discovered in—at the MRC in London, and yet they were all these companies were formed here in the United States. And why is that? Well, because of our capital markets. You take the capital market issue away, and it's game over.

DICK: Wow. Well, I think that's an extremely important insight, and I may, you know, want to call you in the future here to catch up on that, and to discuss some of the things that you've been up to since you left Prudential. I know that we aren't going to have enough time here to discuss any of those companies. I had one last question. I'm also in charge of the archives that we're beginning to build here from the biotech industry, and if we could make copies of or scan any of the pitch papers, for example, that were put together for the Roche-Genentech deal, or any of those Biogen trinkets that might be laying around, we'd really like to take a look at them, to scan, digitize them, and make them available. And of course depending on whether or not such items can be made available. Obviously, you can let us know those levels of accessibility. Do I still have you there, Peter? Hello? [Phone ringing]

DRAKE: Brian, I'm walking into—can you hear me?

DICK: Yes. Yes.

DRAKE: Send me either a text or an email when you can talk again tomorrow.

DICK: That sounds great. Again, thank you so much for your time, and looking forward **<T: 105 min>** to chatting with you in the future.

DRAKE: Appreciate it. Likewise.

DICK: Okay. Bye bye.

[END OF AUDIO, FILE 1.1]

[END OF INTERVIEW]