Mr. Timothy J. Wollaeger, Tim, is a Managing Director at Sanderling Ventures. Mr. Wollaeger joined Sanderling Ventures in 2002 as a Managing Director and opened San Diego’s office. Mr. Wollaeger is the Chairman and Chief Executive Officer at Harkness Pharmaceuticals. He has been the Chairman of the Board since January 1996 and Chief Executive Officer since May 1999 and a Member of Compensation, Nominating, and Corporate Governance Committees of Digirad Corp. Mr. Wollaeger has more than 30 years of experience in the medical products and biotechnology fields in both corporate management and venture capital. Prior to that, he was the Founder and General Partner at the Kingsbury Associates and Kingsbury Capital Partners, L.P., Kingsbury Capital Partners I, L.P., Kingsbury Capital Partners II, L.P., and Kingsbury Capital Partners III, L.P. Mr. Wollaeger founded Kingsbury Capital Partners, L.P in 1994. Mr. Wollaeger also served as the President and Chief Executive Officer at Smith Laboratories, Inc., from 1989 to May 1990 and a Founding General Partner at Biovest Associates, from October 1986 to September 1993. At Biovest, Mr. Wollaeger helped found Pyxis, Biosite, Amylin Pharmaceuticals (NASDAQ: AMLN), and Vical (NASDAQ: VICL). Previously, he had joined Hybritech, Inc. in 1983 and was its Vice President and Chief Financial Officer until Hybritech was acquired by Eli Lilly & Co. (NYSE: LLY) in 1986. Mr. Wollaeger was the Vice President and General Manager at Baxter International, responsible for the company’s operations in Mexico. He began his Life Science career at the firm as a Manager of Operations Analysis. He has been a Director of Chimerix, Inc., since 2002. Mr. Wollaeger serves on the Board of Directors of Alteer, Asteres, Triage Wireless, CalciMedica, and REN. He serves as the Chairman of the Board of Directors for Sotera Wireless, Inc. and Asteres Inc. Mr. Wollaeger has been a Director at Biosite Inc. since 1988 and was its Chairman of the Board from 1988 to October 22, 2004. He serves as a Director of Celtrix Pharmaceuticals, Inc.; Raytel Medical Corporation; Senomyx Inc. since May 1999; and several privately held medical products companies. Mr. Wollaeger has been a Director of Aurora Biosciences Corp. since March 1996. He served as a Director of Phamis Inc. since February 1994. Mr. Wollaeger founded Columbia Hospital in 1990 and was a Senior Vice President and a Director from May 1990 to
December 1993. He was named E&Y San Diego’s Entrepreneur of the Year in 1995 and Corporate Director of the Year in 2001. Mr. Wollaeger served as an officer in the U.S. Navy for three years. He holds an MBA from The Stanford Graduate School of Business in 1971 and a BA in Economics from Yale University in 1966.

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INTERVIEWEE: Tim Wollaeger

INTERVIEWER: Mark Jones, PhD

DATE: May 2, 1997

JONES: Let me start with just a few follow-ups about Hybritech. You were brought in to take over Jungwirth's job? What was that situation like?

WOLLAEGER: Well, it was harder on him than it was on me. I had very little time with him, but I think Jim was more of an accounting type financial person, and the company was looking for more management...

JONES: A strategic planner?

WOLLAEGER: Yeah, so he found another job and left. I'm not even sure if he was told I was coming in, and he was supposed to find another job, or if he was going to run accounting and I was going to be part of the upper management team. I don't really either know or remember.

JONES: At Baxter, you were doing a lot of stuff with manufacturing, but at Hybritech you never really got into the manufacturing operation?

WOLLAEGER: Well, I think -- without trying to glorify this too much -- I tried to be part of general management. What did I do in manufacturing? I had something to do with some of the facilities locations that we had, and when we started making the ICON pregnancy test, which instead of being a couple of drops of chemicals in a bottle, required plastic and membranes and assembly, and all that, I went with Taylor and we picked out... together we interviewed people in Tijuana as a maquiladora person, and I think the company relied on my
understanding of ‘this Mexican guy will get it done, this one won’t.’ So, I helped locate that and stuff.

JONES: A number of you came from Baxter -- you, Ted Greene, and I’m not sure when Kim Blickenstaff came in...

WOLLAEGER: He came in almost right after I did. David Kabakoff was at Baxter. Bill Crean was from Baxter.

JONES: Did you apply a lot of Baxter techniques at Hybritech? You know, if a problem pops up, ‘how do we deal with this? Well, we did it this way at Baxter...?’

WOLLAEGER: Baxter was such a strong company when all of us were there in the ’70s, and the CEO was a fantastic guy named Bill Graham. You just knew that every year, you were going to have 20% growth in revenues and earnings, and basically, he wanted executives that the clerical people thought were nice guys, and I think he also didn’t like union activities or anything like that. He didn’t want you to treat people in ways that would cause them to be in union activities. So, I’m not sure -- we didn’t have 20% growth in earnings per share and we were never...but I think that all of us were students of Bill Graham, and great admirers of him, so I think in terms of, you know, ‘nothing’s impossible,’ you just set your goals and get it done. I mean Graham was just a dynamo, an absolute dynamo. You know, the kind of guy who would say, ‘Well, what do you think we ought to do about this problem?’, and he’d say, ‘Why don’t we call the CFO...’ -- I mean, I worked for Graham, right under him for three years, and he’d sort of say, ‘Figure out this problem on currency, but before we get into it, let’s call General Motors and IBM, and ask them what they’re doing.’ And we’d call them, and more often than not they’d say, ‘God, we never even thought of that problem. What are you doing?’ We’d tell them and they’d say, ‘That’s a great solution.’ So, he was ahead of things, and there was none of this,
'Oh, that's a big problem for us to tackle, let's wait.' Graham was just 'boom, boom.' I think
there was a lot of that attitude at Hybritech.

JONES: Did you do a lot of that -- calling around to other companies -- because this is a very
new thing. Everything you do at Hybritech is new...?

WOLLAEGER: Sure, I think we relied on...you always rely on, 'well, how did R&D get anything
done at Baxter,' or 'how was the sales force set up?,' and 'what kind of people did you hire?'
And Kleiner-Perkins had a lot of other companies, and sometimes we’d call up other Kleiner-
Perkins companies that were ahead of us to see what they were doing, yeah. Genentech, and
maybe CareMark, Home Health Care of America -- same company -- they changed their name.
They were a home, total parental nutrition and IV therapy company, also Kleiner-Perkins, and
also a bunch of former Baxter guys, up in Orange County.

JONES: Right. At Hybritech, how hard did you people work? How many hours did you put in
typically? Was it pretty intense?

WOLLAEGER: I don't know. I never know how to answer questions like that, when people ask me,
'Have I worked hard?' I don't know. You're having fun, time passes, and stuff. I don't think it was the
kind of company where everybody just sort of said...I mean I know a couple of companies where, just
to make it...they work Saturday mornings, just to make sure that everybody...and you never fly on a
work day. You know, if you're going to New York, you never fly on a Monday, you fly on a Sunday. I
don't think we were quite that way. But, especially for the technical people...I had never really dealt
with a technical group of people before. Experiments don't necessarily get done in a nine-to-five
type thing. I'm thinking, actually, about one of my children who worked there during the summer,
and he drove up there and was working on something, and I woke up at three o'clock in the morning
and he wasn't home, he was about sixteen, summer job, and I thought, 'Geez, where's Michael?' So, I
phoned Michael, didn't get an answer at his lab desk, and I started worrying that he had exploded

Interview conducted by Mark Jones, PhD, on May 2, 1997
something or...so, I got into my car and drove out there, and he was practicing his stick-shift driving
up and down on a hill in the parking lot, waiting for his experiment to get done. And there was a lot
of stuff like that where, because of the way experiments got done, the technical people worked long,
odd hours. I’m not sure that they worked more hours than us, but they were there at all kinds of
funny times. So, yeah, I think people worked hard. I’ll give you my example of that. I showed you, I
think, the last time you were here, that map of where I flew? OK, I was on the road for five solid
months. There were people in the company who would say, ‘My God, how can you stand doing this?’
I’d be in Atlanta, and someone would say, ‘There’s a group that wants to have dinner with you in
Seattle.’ I’d fly to Seattle, and they’d say, ‘There’s someone in Dallas who wants to meet you.’ And I’d
fly down to Dallas, and the only sleep I was really getting was on airplanes. So, was I working hard?
Yeah, I think by most standards, I was working real hard. Was I having fun? Yeah, I was having fun.
It was the closest I’ll ever be to being a rock star. You know, I had my concerts everyday, and had to
go from town to town.

JONES: Working with the technical people, setting up these labs -- it’s different. R&D at
Hybritech is different than R&D at Baxter, right?

WOLLAEGER: Sure. I didn’t even know R&D existed at Baxter. Yeah. I think one of the things
that was different in terms of the R&D is, we located the company over here because we were
recruiting people out of academic positions. And I think that by being closer, they could sort
of drive by and feel like they were still at the university a little bit, or at Scripps, and they
could go to the libraries, and stuff like that, and their motivations were different.

JONES: What do you think their motivations were?

WOLLAEGER: Well, I don’t think you could have gone to the average person at Baxter, and
asked, ‘What are you here for?’, and have them say, ‘Because I want stock appreciation.’ You
know, they were there to make a living. And people left the university to come to Hybritech
because they thought that the labs were better, and they could have greater freedom in terms of what they were doing, they didn't have to write as many papers, they didn't have to worry about applying for grants. All they had to do was science. I remember having a discussion with a high-level person once where we brought him in -- in a series of meetings with different people -- but this one particular person, I offered him some stock options, and he said to me, ‘Oh, you financial guys, you think you’re going to give me these stock options and make me happy. If you really want to make me happy, what I’d rather have you do is give a microscope to UCSD in my name. I said, ‘If you’ll give me your stock options, I’ll buy the microscope.’ I could have done that, but you have to sit there and say to them, you know, ‘This is real money. If things work out, this could mean a lot to you, you’ve got to see some value in that.’ Now, whether they did or not, I don’t know. Probably when it became real and they could buy stuff it did, but I think along in the process, they were there because the labs were better.

JONES: The last time I talked to you, you told me that people were generating new ideas for new technologies or paths of research, and you're job, at some point, was to say no, how did they respond to that?

WOLLAEGER: Well, you have to start getting into personalities a little bit on this. I mean Ted Greene is not a confrontational manager. David Hale is not a confrontational manger. You know, whenever it was time to fire somebody, they'd rearrange the organization so the person would work for me, and then I'd have to fire them. I don't know why I was the bad guy, but that was the role I had there. So, I think that Ted and David, they may not agree with this at all, but I think they felt that you had these scientists, and you didn't want to stomp on their creativity. So, they never said no to them. And they'd always have to come to me, and I'd always have to say, ‘Well, we'd love to do it, but there's a budgetary constraint,’ or something like that, to try and say, you know, ‘That's a great idea, that really big guys understand, but I'm
just a bean counter, and I don’t understand why this would be better than that. Sorry, I’m just going to have to tell you no.’

JONES: Do you remember any particular projects?

WOLLAEGER: Yeah. I can remember -- and I think this is almost Clintonesque type management by David Hale -- I remember Joanne Martinis, who was head of cell biology. I can’t remember the numbers exactly, but she had like thirty people in her group, and she put together this plan and she wanted ten or thirteen more people. She was making basically raw materials that would then work their way through the process. Well, we had a library of these things that we were trying to turn into products, and she came in and had put this budget together, and she wanted very large increases, and expensive people. You needed lab space and all this kind of stuff. And I put all this together and I came to David, and I said, ‘OK, here’s how the budget comes together, and we can’t do everything, and I think we’re going to have to take this out, and we’re going to have to take this out, including the thirteen people that Joanne Martinis gets -- she can’t have any. We don’t need that anymore -- new cells at this point.’ And he said, ‘OK, I’ll get together with her and tell her we can’t do it.’ And I’m sitting in my office and Joanne comes out of David’s office, and passes mine, which is the next one, and kind of goes, ‘I got it.’ And I said, ‘Got what?’ She said, ‘David’s going to let me enlarge my department.’ I walked into David’s office and I said, ‘David!’ And he said, ‘Well, why don’t you get together with her and talk to her about it.’

JONES: OK, after Lilly bought the company, and it became clear that you guys were on your way out eventually -- you were the first to leave, right?

WOLLAEGER: Well, Ted and I left the same day.

JONES: Had you talked with Ted about doing Biovest before?

WOLLAEGER: No.
JONES: Well, what did you then? You left Hybritech, what did you do the next day?

WOLLAEGER: I had been -- I think I told you my little story about how I had been let go and stuff, didn’t I?

JONES: I don’t think you did.

WOLLAEGER: Well, after the merger, Ted was probably told, you know, we want you to write some big strategic plan, but David Hale’s going to run day-to-day operations, and you can be some kind of advisor to the top management of Lilly. Whether he knew he was leaving at that time, I’ve never gotten him to tell me that. I’m not sure I’ve ever asked him. But anyway, Lilly invited me to a seminar in Indiana, not at their headquarters, but at a little resort. It was for fifty people that they thought were sort of the up and comers of the next wave of top management. And I was, let’s see, that was in 1986, so I was forty-two years old, and it was sort of that age level of people. And I think there was one other person there from Advanced Cardiovascular Systems that they’d also acquired. And the two of us were the only people there who had been at Lilly less than eighteen years. And it was a very unusual thing for me, having come from a small company, but they basically stood up in front of us ahead of time and said, ‘We want this to be a free-wheeling eight day seminar,’ in Brown County, Indiana, and, ‘You’re not being evaluated; there will be nobody here from senior management looking over your shoulder. It’s just you fifty,’ with some young lady who played sort of hostess to us. But everyday was going to be run by a different professor from Indiana or Purdue or Northwestern or Chicago. So, the first day we had a game, you know, ‘I want everybody to think freely to come up with an answer to this problem. Take two hours, submit it in writing, we’ll have lunch, and then we’ll come back and discuss them.’

JONES: Was this a business problem?
WOLLAEGER: Oh, this first one was... No, they were trying to get us to think about how things could be different in the future, so this first one was actually, 'Give us a description of a different kind of human being physically, in terms of height, and size, and this kind of thing,' and we had to come up with a sport for them to play. And forty-nine people came back with ideas like baseball with different size bats, you know, to fit these different sized people, and I came up with this game where people rolled down inclined planes and did all this kind of stuff, it was quite elaborate.

JONES: An extreme sport.

WOLLAEGER: Yeah, an extreme sport for people who were two feet tall and five feet wide. And the guy came in and said, None of these things were very exciting, except for one, Tim Wollaeger's here.’ So, I went up and presented my game. And basically, the same thing happened on the second and the third day. I didn't think I’d done anything to show-off particularly, except the fourth day, we had a presentation. Groups of seven had to give presentations, and we were the last ones to go, and there were clocks or something you could win if you had the best presentation. By the time you go eighth or ninth, you know, who’s going to be listening, and do you really think you're going to come up with something that no one else has had? So, I proposed that we do ours in song. I wrote the song and did most of the singing, and the next day they came in and touched me on the shoulder, the Vanna White hostess came in and tapped me on the shoulder and said, ‘Could you come with me, please?’ I got hauled into a suite and there was the head of personnel and a lawyer, and they told me that Lilly subscribed to a team oriented management style, and they didn’t like the way I was dominating their seminar, and they basically fired me, which was odd, because I had a three-year employment agreement in which they had pressured me, five months before, to sign. So, anyway, I came back from this seminar -- they didn’t really fire me, they said they were going to try to find something else for me, or...
something like that -- I came back, and it was pretty obvious to my secretary -- I had gone
for a week’s vacation, when I got back, my secretary knew that I’d been fired -- I was the
only one that didn’t know. And then, I worked them pretty hard on it and got a nice
financial deal, and then they basically, in probably Lilly’s way they view the world, and
themselves as good guys, they said, ‘Now that we’ve worked this out with you, rather than
us hassling with Ted Greene, we want him to leave on September 30th, too, would you out-
process him?’ So, I sort of got to out-process Ted, and then we both left the same day. So
then, I had this sort of month that I was in limbo. And it was an odd time in my life, because
we had, you know, sold this company for a lot, and I had been, I think, pretty influential,
and had done most of the hours of work on the merger, not the most important points, but
in terms of hours I had, and so there were lots of people calling me about jobs. So I took a
tour -- I went to San Francisco, and I went to Pittsburgh, and I went to New York City, and a
couple of places in New Jersey, things set up by executive search people with investment
banking firms, things like that; they wanted to talk to me about maybe having me come to
work for them. In the meantime, Ted had two things happening while I was gone for about
two weeks doing this. One of the people I had gone to see had been Henry Hillman in
Pittsburgh, who had been our biggest shareholder, and Henry had just sold his third of
Hybritech, and he had another company that he had just sold, and he said that he had eight
hundred million in cash that he needed to get reemployed, and maybe I could come to work
there in Pittsburgh, and help him figure out what to do with it. He had a whole staff or
people, a building, but, you know...So, I went and saw some other things and then came
back to Pittsburgh, and he said, ‘Before we decide anything, why don’t you go back to
California and talk to Ted.’ In the meantime, while I had been doing my thing, he’d come out
to California, and Ted had, in the meantime, been invited by Stanford University, which was
also a shareholder of ours, to come up and consult with them about some professors who
had come up with some idea, what to do with it. These were the founders of Neurex. I can’t
remember their names. Anyway, so he did that, and then he came down and had dinner with Henry Hillman in Los Angeles, and Ted relayed this thing to him, and Henry said, 'Gee, why don’t you do more of that, and then you could put some money behind these companies, as you help these universities roll this stuff out, and if you'll put up some money, Ted, I’ll put up some money and maybe Stanford will even put up some money, and we’ll figure out how to do this. And I’d like you to have Tim Wollaeger join you in doing this.' And I think Henry had pretty good faith in me, that Ted was pretty visionary and I was sort of nuts and bolts, and got things done in a timely manner. So I got back from this trip and called Ted, or Ted called me, and he said, 'Henry wanted me to talk to you.' So, we got together, and he said, 'I think we can get together five million dollars from Henry, and myself, and Stanford, and Sutter Hill Ventures,' and the idea would be that we’d hang around as the only two unemployed, experienced biotech executives in the world, and hang around the university here and Stanford and see if we could find some other ideas, start these companies, and then Sutter Hill and Hillman would back them, and then we’d get a carried interest on the amount we’re doing, and it wasn’t traditional venture capital because most of the time, you know, people raise a hundred million dollars and they get 2% or something for managing it, but we had only five million dollars, and 2% wouldn’t have been enough to even pay us.

JONES: So, Ted actually put some of his own money in?

WOLLAEGER: Ted put a lot of money in. He put a million dollars in.

JONES: And you didn’t?

WOLLAEGER: I didn’t have that kind of money. I put sixty thousand dollars in.

JONES: So, how did you go about trying to find people and technologies?
WOLLAEGER: Well, I must admit, this is where my memory starts to get hazy. I mean, what we basically did was, Ted lives in Rancho Santa Fe, Fairbanks Ranch, and I live in La Jolla, and we sort of drove toward each other and said, ‘Gee, Carmel Valley Road is about halfway.’ So, we found an office on High Bluff Drive, moved in there, and the first thing Ted did, in memory... first of all, we had these people at Stanford, so we tried to put money into Neurex, and the attitude of Stanford was, ‘No, we already know about that one. Find something else.’ So, we sort of squealed a bit, and ended up putting $200,000 or something like that into Neurex, so it wasn’t a real big deal, and Ted went on the board there. And then, we sort of did two different things, and it’d be interesting to see how Ted perceived it. To me, what Ted did, is he sort of said, ‘I think that if we could get an immunologist and a biologist and some other discipline together, and created the right environment, they’d come up with something.’ And he did a bunch of journal reading, and he came up with a list of leaders in each of these disciplines. And then he’d go out and he’d meet with, say, an immunologist, and say, ‘What if I can get this biologist working with us?’ And he’d hear things like, ‘Oh, that guy’s a son-of-a-bitch who tried to steal a project from me when we were at Harvard,’ or something, ‘I’ll never work with him again.’ So, he did this modeling until he came up with three people who would work together, and created Cytel. He had the idea and went out and brought a group of people together, including Howard Grey, out of Denver. And what I did is, I sort of hung around the halls of UCSD, and my first company began when our patent attorney at Hybritech, a guy named Larry Respess, came to me and said he had a guy named Karl Hostetler, who had done some work in sustained release calcitonin for osteoporosis, and he was helping him file patents because the university didn’t think it was interesting enough, and he asked me if I would look at it and think about starting a company. I liked Karl and thought he was creative, and he educated me on osteoporosis and the big markets for calcitonin in Europe and Japan, but it wasn’t doing much in the U.S. because, basically, the body cleared it, and I thought, ‘Gee, that makes sense,’ and so we started Vical. And we included his lab partner
because of some ethical challenges from the university, and this guy, Doug Richman, was working on viruses, so Vical was viruses and calcitonin, Vical -- or it was Viva California, I asked Karl the other day which it was and he couldn’t remember, but we probably came up with the name for both reasons. And then you know, I was out looking at things, people find out you have money and they ask you to look at things, and I got a call from a guy I knew at Baxter, who was up in Ventura County, and he had an idea for a company, and we agreed to drive toward each other, and asked Ernst & Winnie, I guess, at the time, pre-Ernst & Young, whether I could use a conference room in Orange County. They’d been our auditors at Hybritech. And I went in and met with this guy, I don’t even remember what the idea was anymore, but I didn’t like it, and then I went in to thank Ralph Saban, the partner there, who I had talked to, and he said, ‘I wonder if you’d do me a favor. We have a young lady in our office who is sort of editing our brochures to make sure the auditors and the tax and the consultant people have a uniformity to what they’re saying. She’s not highly skilled and not very sophisticated’ -- she’d been a nun until recently -- ‘and her father is a retired doctor who’s a tinkerer, and she’s trying to help him raise money for an idea, and I’m sure it’s not sophisticated enough for you, but I’d appreciate it if you’d give her ten minutes of your time, and give her some advice.’ And she gave me Pyxis. And that’s how Pyxis got started. And the thing that got me going on that was that she was very sincere and very emotional about how important this was. And I asked, ‘Does your father have any privileges anyplace.’ And she said, ‘Yeah, Long Beach Memorial.’ And I went up the next day because I just liked her, sort of, I liked her emotion about it. And we sat in Long Beach Memorial for about six, eight hours and watched drugs move out of the warehouse, to the pharmacy, to the nurse floor. And I didn’t say, ‘Wow, this box they had put together is neat.’ I just said, ‘Man, this is a problem. They have found a problem.’ And I thought maybe this was a problem we could fix, and that’s how we started Pyxis, and then the next one to come along was Amylin. Do you want to know how Amylin got started?
WOLLAEGGER: A guy, a doctor, named Garth Cooper, from New Zealand, had applied to Oxford for a scholarship that they give every other year, to work on his Ph.D. And the winning proposal that he submitted was, they had discovered these things called amyloid deposits back around -- Ted will kill me if I miss it -- but I think the year was about 1904, it might have been 1902. And he wanted to come and use modern separation techniques to take a look at amyloid deposits. He was an endocrinologist, and his interest in that was, he had done a number of autopsies on Type-II diabetics that had died, and found these deposits to be very heavy amongst them. And people had historically thought that it was some sort of a waxy, waste material, and he just wanted to take a look at it. So, he went to Oxford and used separation techniques and found out that it was a protein that had somehow, you know, dehydrated or compacted or something, and thought he was onto something. And he went down the hall to the head of the medical school, and I think his name was Weatherall -- Ted will know the history of this -- and when Ted was looking for the people for Cytel, he had been to Oxford and had tried to get Weatherall to say whether, you know, Joe Blow was a real good chemist for whatever he was doing. So, Cooper came in and said, 'What do you think I ought to do about this?' And Weatherall told him, 'Oh, I know this guy from San Diego who tries to start companies around stuff like this -- why don't you call Ted Greene?' And Garth Cooper phoned us from Oxford and said, 'If I pay my own ticket, can I fly over and meet with you on Saturday?' He flew over on a Friday and met with Ted all weekend. I came in on Monday and Ted introduced me to him, and said, 'Here's his idea. What do you think?' And I said, 'Gee, sounds neat, let's go for it.' And that's how Amylin got started. That's five, right?

JONES: Yeah.

WOLLAEGGER: The sixth one was, Kim Blickenstaff had worked for me for basically his whole career, and he came over to see me at Biovest and said, you know, 'Lilly has picked me out as some star of
the future,’ that kind of type thing. And Lilly did a great job of diversifying the experiences of their management, and he said, ‘They want to move me to London to work in Human Resources for a couple of years,’ and Gunars Valkirs, who had invented the ICON... Did I tell you the ICON story?

JONES: No.

WOLLAEGER: Well, let me come back to Biovest. Again, this is one of the things that sort of happens in companies, and it’s maybe a reason for just concentrating on drafting good people, too. We had had a pregnancy test that was in a test tube and it turned blue, and it took about an hour and forty-five minutes to do it. It was doing quite well because it was non-radioactive and very sensitive. And then I think Hoffman-LaRoche, or Roche, knocked it off, and made it about fifteen minutes faster than ours, and it didn’t hurt us too bad, but our growth was slowing down. So, we had a management meeting with R&D and said, ‘We’ve got to figure out a way to make our test faster than Hoffman-LaRoche’s.’ And I think that everybody there thought that we could probably find some way of juicing up the chemistry and, you know, get our test down to an hour and fifteen minutes, or something like that. And Gunars Valkirs had been with the company a relatively short time. In fact, I didn’t recognize him when he came to see me. And he was a physicist -- I don’t know why we had him or anything, but anyway, he came in and he sort of went down our executive office hallway, and came in and saw me, and he had this glass tube about that long, with a membrane in one thing, and a pump, and he told me that he’d been able to suspend these antibodies in a membrane and keep them alive, and then by sucking the specimen through this membrane that had turned over so quickly, that he could get it to develop a blue spot in under four minutes. And I thought this was...I mean, just immediately I thought, ‘Man, that’s neat,’ but, maybe this is ego, but I think the rest of the management team thought, ‘We’re never going to do something like that.’ So, David Hale said to me, which probably was telling and appropriate, he said, ‘Tim, you always like to stick your nose in everybody’s business,’ which I probably did, having been a

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general manager before finance, ‘why don’t you go ahead, if you think this is a project, go
ahead and take it on as a project.’ So, Gunars Valkirs, Cole Owen, who worked for me in sort of
licensing and business development, and I sat down to do this project. And it was right in the
middle of this financing thing where I was flying around. Well, we thought that I was going to
do that for two weeks and I’d be back. All of sudden, I got out on this five month deal and
Blickenstaff was a financial analyst working for me. I called him and said, ‘Kim, I can’t make
the Icon meeting. Would you go ahead and take the meeting and see what people want?’ And
Kim took that group, and Bugler joined the group and Rick Anderson joined the group, both
R&D people, and they went, in five months, from Gunars showing me the glass tube, to having
an FDA approved product on the market. And it was completely different than anything we
had; that’s why we had to go to Tijuana. We didn’t have enough room or people to assemble it
all. Our strategy was, we priced it very high, thought that we would skim the market, and we
predicted that after it sort of reached maturity, we’d be shipping about a hundred thousand
units a month, and we shipped a million units the third month. It was just blow-up, an
absolute blow-up.

**JONES:** Was this the best-selling product that Hybritech had?

**WOLLAEGER:** Until the PSA test came out, which we were doing clinical trials on at the time,
but didn’t get approved until after Lilly. It didn’t get FDA clearance until then, but when we
sold the company to Lilly, it was our best selling product. It probably accounted for about a
third of our revenues. It was just a marvelous product. Blickenstaff then moved into sales
with it -- well, R&D management, and then into sales management. And he would take the
product out -- There’s a place in Houston, the Texas Medical center which has a number of
hospitals, and he said that word spread so quickly, that as he was trying to move around to
show people this test, people were stopping him in the elevators, and they’d get out and they’d
run it on top of the Xerox machine. Have you ever seen an ICON test?
JONES: No.

WOLLAEGER: Well, it's sort of a test tube. I mean the thing looked like a little eye cup. You put four drops of urine on it, and in four minutes it would turn blue if you were pregnant. It was magic, it was absolute magic.

JONES: Can you still get these things?

WOLLAEGER: Well, you know, all the tests out in the drug stores and stuff that turn blue, that's all that same technology. They out-licensed it to other people. But it was just mind-blowing at the time. You'd go to the hospital and they'd have this machine that would do the test for a lot cheaper than our three dollar test, but if you're a lab tech are you going to go through all this crap, or are you going to drop a couple drops of urine and go, 'Oh, yep.' And really what had happened, and this is where the excitement was, we had looked at the market, you know, here's a pregnancy test, we can come in and replace it, but what we didn't anticipate was, all of a sudden, in a doctor's office, instead of having the woman come in, take a bottle home, take first pass urine in the morning, bring it back, send it to a lab, get the results back -- this thing was so sensitive that you didn't have to have first pass urine, and people would come in, and the receptionist would say, you know, 'tinkle on this thing,' she'd walk in to the doctor, and the doctor would say, 'You're pregnant.' So, you cut three days out of this process, and then people would come into emergency rooms and if you were of child-bearing age, a woman, they'd say, 'Do you think you're pregnant?' And they'd say, 'No.' And they'd X-ray them. Now, give them an ICON -- boom! And the shipments were just flying out the door. And then a guy, I think at the University of Wisconsin-Milwaukee, learned that if you took the whole thing and filled it up to the top, which was, you know, a couple ounces of urine, and went through it, if a woman had an ectopic pregnancy, it would light up. And he wrote papers on it, and you know, that was a new market. It was just marvelous.

JONES: Did you have problems scaling this up?
WOLLAEGER: Oh man, sure, I mean we had a period of time in that third month where we shipped a million units, where my secretary threw out her back working on the night shift making those, because people would come into work, you’d go over to the plant -- and we didn’t have an assembly process -- everybody would take a tray from the cafeteria and get a bunch of parts and sit there and put them together. It was marvelous. I love messes like that. And then Taylor did a nice job putting it all together, getting it automated, and then we’d cut out all the parts up here and had it assembled in Mexico, and brought it back here for final packaging. So anyway, Blickenstaff then shows up and says, you know, ’I’m going to go to London, and they want Gunars to do something else’ -- and I think they sent Ken back to Indiana or something to do something. And he said, ’We’d really like to do something together.’ And I said, ’What would that be?’ And he said, ’I don’t know, but we’d like to do something together.’ And so, probably unlike most venture capital deals, he asked me if would give them enough money to pay themselves for four months while they tried to think of something to do. And we started off by calling it Grandma’s Diagnostics, and they rented - - Vical was over in the General Atomics Building, and there was a loft over there labs, four hundred square feet -- so we put the four of them, a wooden desk, and I think Blickenstaff had a rocking chair -- that’s why we called it Grandma’s Diagnostics -- and they sat there, ‘We’re thinking about what to do.’ Do you know Blickenstaff at all?

JONES: No.

WOLLAEGER: Well, he’s a very funny, sarcastic kind of guy, if you get him in the right mood. So at Grandma’s Diagnostics, Kim was sitting there in his rocking chair trying to figure out what to do, and they came up with the idea of, you know, ICON had been great, can we make some more color tests? But we can’t do it in large molecules because then Lilly will get upset that we stole the idea. Well, what about small molecules? Can you make monoclonal...
antibodies for small molecules? Gunars says, 'Yes, I think I’ve figured out a way to do it.’ And
that’s how we started the company. So, those were the six, five of them here.

JONES: And now they've all gone public, right?

WOLLAEGE: Yeah. Cytel was first, then Amylin, then Pyxis, then Vical and Biosite, and
Neurex, I can’t remember. Neurex was sometime before Biosite.

JONES: Now, for instance, Vical -- you’re over at UCSD, talking to people -- how did you
evaluate the science that they had there? I assume that they knew it was ready to
commercialize?

WOLLAEGE: Well, we failed on our technology. We did. I don’t know, without sounding
too flippant about it, I didn’t evaluate the technology. How did I know? I didn’t know
anything about technology.

JONES: What did you base the decision on?

WOLLAEGE: I liked Karl, and I had to have some thing to do. I mean, it was one of these
things, you’re sitting there, Ted and I decided to do this in October, here it is May, I haven’t
done anything, how long am I going to go before I can do something? And Karl showed me that
calcitonin was a big market. I said, ‘OK.’ Respess said, ‘This is pretty neat, I think this’ll be
patentable.’ Karl was a nice guy, I had to find something to do, ‘Hey OK, fine, we’ll start this.’
The thing is, I didn’t start anything -- I think Pyxis and Vical started within three days of each
other, I just found both deals, I don’t know. I may have said this to you before, I think that an
awful lot of people in venture capital spend a lot of time studying what investment they’re
making. Once they make that investment, the amount of time that they really worry about
that company, I mean really work on it, is small. Like I asked Kim Blickenstaff here at our last
Biosite board meeting, and I just went through a couple of directors, I said, this person, this
person, ‘Besides the board meetings, how many hours do you think these two people have put in on the company, since they put their money in? And he said, ‘Zero.’ And I said, ‘I agree.’ Me, I don’t put much time in before I put my money in. Then I start putting my time in. And maybe it comes from the fact that my background has been as sort of a turnaround person, a troubleshooter, and stuff, and I sort of figure, good guy, good market, the technology's decent, OK, we’ll start, and we’ll probably have some bumps in the road, but we’ll figure something out, and so far, I’ve been right in that way.

JONES: So, when you’re putting these companies together from scratch, what’s the first thing you do?

WOLLAEGER: Call my lawyer and say, ‘I’ve got this guy. He’s going to get UCSD to make sure that we get the patent rights, and we’re going to…’ OK, with Vical, we got Tom Sparks to draw up papers, file them, the university gave us the rights to these patents, and we agreed to pay the university, I can’t remember, some small number like $50,000, into Karl’s lab, so he could continue doing work there that we would pay for, and the university would take a tithe out of that to pay for, you know, general administrative expenses. And it was, you know, ‘why don’t we get going?’ And we thought that the calcitonin product would fit in with -- do you want me to go into this? I’ll tell you exactly what happened with Vical.

JONES: Sure.

WOLLAEGER: We’re starting there with calcitonin, and Karl and I traveled to see Eli Lilly, Sandoz, I can’t remember, a couple of other companies, and everybody we talked to said, ‘Calcitonin doesn’t really work because the body clears it too quickly.’ And we said, ‘We know that, but we’ve found a way to change that.’ And they’d respond, ‘No, calcitonin doesn’t work because the body clears it too quickly.’ We couldn’t really get people to take an interest in what we were doing. And you sort of get caught up in this thing, ‘Boy, we called Eli Lilly, and they’re willing to let us fly there at our expense,
and they’ll meet with us.’ And you think, ‘Wow, they’re interested.’ Well, you know, they don’t care.

It’s like, ‘Sure, fly out, we’ll spend a couple of hours with you to find out if it’s a good idea.’ And we were just missing. I mean, people just were not interested. And you’d sit there and you’d think,

‘Hmm, what am I going to do?’ And then you have to rely on, I don’t know, serendipity, or whatever, and at the same time, once we got these patents from the university, a guy who had been in Karl’s lab with him five years before filed some sort of grievance with the university saying that Karl had once borrowed, you know, a beaker of something from him, and had done an experiment that had led to this, and that therefore, he should get part of it. So, we got hauled in front of some sort of ethics committee or something at the university and agreed to give the guy ten thousand shares of stock in the company, and settled it, and we went away. And I said to Karl, ‘Oh, Karl,’ I said, ‘if we’re going to get in trouble like this -- who’s in your lab now?’ And he said, ‘Doug Richman.’ So, I said, ‘Let’s give Doug ten thousand shares, too.’ ‘Here Doug, ten thousand shares, sign that you have nothing to bitch about.’ And after we’re striking out here on this calcitonin thing, we had a meeting of our scientific advisors, which was Karl and Doug, and they had a friend at Scripps named, oh God, if I saw him on the street and didn’t know his name, I’d be embarrassed. Well, I’ll think of it -- Dennis Carson. So, the three of us sat down one morning and said, ‘What are we going to do? No one’s buying this stuff?’ And I said to Doug, ‘By the way, what do you do in your lab?’ And he said, ‘Well, I’m working on this product for Burroughs-Wellcome called AZT which is going to be an AIDS drug,’ and blah, blah, blah, and it’s got certain toxicity problems, and this kind of stuff. So we sat there that day and wondered, what if we take Karl’s lipid container for the calcitonin and put AZT in it, and see where it goes? And we tried that, and they fell apart. So, I said, ‘What’s plentiful?’ I didn’t say -- they said, ‘What’s plentiful and easy to hook on?’ They stuck a phosphate on it. It made the molecule bigger, it stuck inside the thing, it delivered and went to macrophages, and Doug had had a theory that that was where the disease started. And it was an inactive drug, it went inside the macrophages and the phosphate broke off and it started working, so it became a pro-drug. So, we called up Burroughs-Wellcome in the Research Triangle and told them we had a pro-drug macrophage oriented spin-off.

Interview conducted by Mark Jones, PhD, on May 2, 1997
of AZT, and asked them if they'd like to see it. So, we got on a plane and flew down to Research Triangle Park, went in to Dave Barry, who was head of Burroughs-Wellcome in the U.S., and it was the worst goddamn presentation I'd ever seen in my life. Karl and Doug, being university people -- you know, I'm sort of used to things being neat and stuff -- they sort of put the projector down, don't even move the books, put it down on the thing where it's crooked, take a picture off the wall, sort of crooked like this, and they start showing these black & white slides of gels and data, and I think, 'Oh, God! This is just godawful.' And Dave Barry got to the end of it and said, 'This is the best outside project that has ever been brought to us. This is terrific. What kind of money are you looking for?'' And we said, 'Five million dollars.' And he said, 'Done deal. When can you get a contract to us?' It was eleven o'clock, and I said, 'Give me a PC and we'll go type it up.' He said, 'OK,' and put us in a conference room and Doug Richman and Karl Hostetler and I -- I think I did the typing, and I'm not very good -- wrote up this outline, this term sheet, for this deal, walked back in, gave it to Dave Barry, he signed it, we signed it, and he gave us a check for about, I can't remember, $250,000 or $500,000. He said, 'It will take us a little while to get this through the legal department, but let's get going.' He gave us 10% down, I think, something like that.

JONES: What did they get?

WOLLAEGER: We were going to formulate this pro-drug of AZT -- and this was when the Feds hadn't approved it for being, you know, it was toxic, and they were worried about when you gave it to people -- so we had this form of AZT that was going to be a kinder and gentler AZT, and they were going to pay for all the development and we were going to get an 8% royalty. So, we had five million bucks and no employees. You know, five million dollars was forever. I put five hundred thousand dollars in the company, and Karl and I had spent some of it traveling around and getting the patents, and stuff like that. We came back here, rented some labs from General Atomics, and got going on the project. And then we sat down one day, the same group, and said, 'Now this is moving along,' and it was really looking good...
and we needed a formulations expert, and we sat down and said, ‘Who would ever,’ and these guys all know each other from PhD. Programs and Fellowships and stuff, and everybody would give me a list of five people that they thought would be good people to go after, if we could get them, and one guy was on everybody’s list, a guy named Phil Felgner, and they all said, ‘Oh, he’s great, but he’s up at Syntex.’ Well, I called him up and told him that I was the Chairman of the Board of a company called Vical down here, and I wanted to talk to him about the company, and he said, ‘Fine. Why don’t you come up on Friday and we’ll have lunch at the Syntex cafeteria.’ And I said, ‘No, Phil, you don’t understand. I’m going to try to steal you away from Syntex. I don’t want to talk to you at Syntex.’ So, I went up and picked Phil up. We rendezvoused at the flagpole -- I saw him the other day, he told me that we rendezvoused at the flagpole -- and I took him out to lunch. And he’s a really sort of mild-mannered, scientific guy, and he was madder than hell, just madder than hell.

And I kind of went, ‘What it is? You’re upset today.’ And he said, ‘Well, I developed this product for an in vitro DNA delivery system called lipofectin and we just got FDA approval on it this week, and I just had a big meeting, thinking it was going to be my moment of triumph, and the president of the company said, ‘Oh, this will only be a hundred million dollar product. It’s not really worth spending the marketing time on it. Let’s outlicense this to one of these little firms and let them do it. And Phil, by the way, we’re going to move you into an administrative job, since you’re doing, you know, dumb little things like this.’ Well, he was fit to be tied, and he’d been downgraded, and all this kind of stuff, and of course, I went, ‘We’d love to be the people to license that. Do you think you could help us get that?’ And he said, ‘Yeah, maybe I could.’ I said, ‘Well, why don’t you come down Monday, meet the rest of the people in the company’ -- we had a tenth anniversary party the other day and I was telling this story -- and Phil did the worst job of negotiating I’d ever seen in my life. He showed up on Monday morning and said, ‘I sure hope I get this job because I put a sign up in front of my house in Palo Alto and sold it on Saturday.’ So Phil came in, and he said that

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what he was really interested in, his PhD work had been dealing in DNA and delivery of DNA
and the one thing he wanted us to do was to sponsor some research with his PhD mentor,
who had moved from Michigan State to Wisconsin, a guy named Wolf, and would we give
him, I don’t know if it was thirty thousand dollars for three years, or what, but anyway, a
relatively small amount of money, and it wasn’t all up front. It was part of this deal, you
know, ‘Pay me this, and let Wolf do these projects for me that we had written up….’ And we
cleared it, you know, made sure that it was stuff he had done for his PhD and wasn’t stuff he
had for Syntex, and all this kind of stuff. So we agreed to do it, and that became the Naked
DNA, and when that worked we dropped, and then Burroughs-Welcome came to us and said,
‘This is really working well, but the FDA has approved AZT, and now, a year later, has
allowed us to prescribe it earlier, and the marketing department doesn’t think there’s going
to be enough room for both. We know you’re counting on the five million. Keep it, but stop
the work.’ And we took the money and started doing Phil Felgner’s stuff. So we went form
calcitonin to lipid viral to Naked DNA.

JONES: What about Pyxis?

WOLLAEGER: Well, I think my thought pattern on that was, after spending the day at Long Beach
Memorial, I said, ‘Boy, this is a mess, we ought to be able to fix this.’ And I thought, we’re going to
have all these things like Vical, which may take years and years and years to do, it would be nice to
have something that a) I can understand technically, that I can do some of the things I’m used to
doing rather than running lab people on a day-to-day basis, so, ‘Let’s do it.’ Ron Taylor always likes
to kid me that when I recruited him to be the CEO of it that I was such a visionary that in my letter to
him offering him the job, I said that I didn’t think that it would ever be that big, but that it would be
quick and that we could probably, over a five year period, run it’s sales up to fifteen million dollars
and sell it for fifty million, and he could own 10% of the company, and make five million bucks.
JONES: How did the success of Pyxis affect the kind of deals that Kingsbury does?

WOLLAEGER: Probably a combination of things. I think that so many other biotech companies -- I mean, you go from 1987, where Hybritech is about the only biotech company in town, and then we go and start Vical, Amylin, Cytel, and other people start, Agouron, and Immune Response, and Gensia, and Genta and Gen-Probe, and all this stuff -- and you finally go, how much money and much interest can there be in this stuff, and people can’t differentiate, so you start to think that maybe a lot of the good ideas have been thought of, and let’s wait for them to play through. I’ve never had that kind of technical strength to sort of say, well, I really like receptor technology, but I don’t like recombinant DNA. I mean, I wouldn’t know how to do any of them. So, the market seemed tired of those things, they take a long time, I’m getting older, you know, it takes so much money, and you know, I’d had success in medical products, both at Baxter, and the ICON, in reality, was a medical product. It was neat, the marketing wasn’t, you know, there are these antibodies, and these things, and receptors, and all this sort of stuff. It was put some tinkle on it, and it turns blue. And I understand that. I think most people do. And also, you know, when I came back into this with Kingsbury, most of my money is from Columbia Hospital, and my initial idea was, well, if Columbia would be customer and buy this stuff from us, then the company’s successful. Now, I went through a period of time where I thought I’m never going to get Columbia to buy this, because it’s gotten so big, I can’t penetrate it. It’s like talking to Bill Clinton about would the army like to buy light bulbs from me. You know, it’s hard to get from Clinton down to the guy who buys light bulbs, but I’ve had some recent things happen at Columbia in the last month that make me feel that they’ve finally hired some people on the other side that are supposed to learn what I’m doing and figure out how to work them into hospitals. Boy, would that make my life a lot easier. We’ll see whether that works.
JONES: You started focusing on these kinds of companies, and Ted didn’t. I read somewhere that you said that Biovest turned into your companies and Ted’s companies. And then there were the problems with the venture capitalists. You became disillusioned with the venture capital business...

WOLLAEGER: Well, yeah. You can look back at the Biovest experience in two ways. One was, wasn’t Henry generous to step up and give us this opportunity when we made no effort. He just sort of handed it to us, and said ‘Go out and do it.’ On the other hand, man, if we’d been smart about it, we’d have gone out and raised a lot more money, and we could have backed Pyxis and gotten paid on a much larger investment. There are certain people who think that, you know, I’m a multi-zillionaire because I did Pyxis, when, in reality, I mean it wasn’t a bad deal, but I didn’t make all that much on Pyxis because, you know, we only put in a million dollars. Henry made a follow-on investment of five. He made a hundred million. Ted and I got our share, and of course, that went to Hillman again, and the carried interest was divided between Ted and I, not evenly, because Ted was the rainmaker at that time. So, you think back that I founded a billion dollar company -- how much money should I have made on it? There are probably a lot of people would say I didn’t negotiate a very good deal for myself on that. But I don’t know. It leads to everything and else, and so...

JONES: I’ve read some statements that you and Ted made about taking these companies to later stage financing and they really got squeezed.
WOLLAEGER: I think the thing that we didn't understand, besides that initial thing [the Hillman deal] -- I sort of had the opinion, and maybe I was reading this is, that I'd say, 'OK, Pyxis needs more money, we put in the million dollars we have. Henry, Stanford, Sutter Hill -- a million dollars from each of us and then we'll go on. And it wasn't that way. Their response to us was -- Sutter Hill's was 'Well, come up and give a presentation and we'll look at it like we look at any other deal.' They liked Ted's deals; they didn't like my deals. I don't know, because they'd been on the Board where Ted was the CEO and I was the chief financial officer. Who is this young guy? Something like that, and they didn't like my deals. They didn't invest in my companies. They passed: 'We pass.' They told me that Pyxis was the stupidest idea they'd ever seen. They passed. So, I've got them passing, Henry Hillman said, well, 'You find another investor who's new, and if they'll come in at a certain price then I'll match them.' I'm sitting here thinking that I've got buddies, and I don't have anybody. So, you're sitting out there, and Ted would probably say, 'Tim wasn't a very good promoter, wasn't positive enough about his companies,' or, you know, whatever it was. And I would say, you know, I didn't have the aura. You know, people would say, 'Oooh, Ted, you're the guy who made four hundred million dollars for everybody at Hybritech, you're a great guy. Tim, what are you? You were his accountant or something, right? And now you've got this idea for this drug dispenser with this nun and this doctor? That's crapola, and you're going from calcitonin to anti-virals to gene therapy, so what's that one? And Blickenstaff's trying to make monoclonal antibodies for small molecules, no one's ever successfully done that. You know, I had a helluva time trying to raise money. So, to me, the way I would look at it is, if we had raised a lot more money rather than taking Henry's, and then letting him put his money in with no fee -- we never got paid for anything that Henry put his money in. You know, you could look at it like he was very nice to let us do that or, boy, did he cut a good deal for himself. He got us working for a hundred thousand dollars a year. When I could have been making a lot more money than that, and he put all the money in and made all
the money, and I got more than I was used to, but I should have had more somewhere in the middle of all that. So, I think the way I would look at what happened with Biovest is whether it was lack of background, lack of aura, because I hadn't done anything like this before, lack of ability to promote or communicate effectively, whatever it was, I wasn't very good. In fact, I was awful at bringing other people into my companies, where Ted would get on the phone and say, 'Me, Ted Greene, I'm going to give you six days to jump on this opportunity. You can put up to two million dollars into Cytel, it's Friday, I'll need your answer in a week, or else you're out.' And people would send him checks. And he'd say, 'Tim, why don't you raise money for these companies? It's easy.' It wasn't easy for me. It was easy for him. And I think it was a combination of things -- he had been head of Hybritech, he's more promotionally oriented than I am, he's a more enthusiastic communicator than I am about things. I'm probably more stuck with, you know, 'What do we really know yet?' And he'd say, 'We've cured cancer, we've cured diabetes, we've cured this and that.' And he'd say, 'It's just a matter of time. Put some money in and you're going to make tons.' And people would say, 'OK, Ted. Take it.' And I would kind of say, 'OK, we've got this box, we don't know that much about it yet, but here's the market we're addressing,' and people weren't very excited about it. So, you're in a situation where Ted is saying, 'You can't raise a dime for people to take a ride on a rollercoaster, and all I do is pick up a phone and express it correctly, and people send in their checks.' And I would say, 'Ted, I don't have the same aura that you have, and I can't do it that way. I'm going to need to some help.' And when Sutter Hill won't invest in my companies, and they already have money in them because of our partnership, and in effect, they're throwing their money away if they won't invest, and I go to other people, and they say, 'Well, what's Sutter Hill doing?' And I'd say, well, 'They said it sucked, and they're not putting money in.' I can't get anyplace. It caused a little bit of tension on a day-today basis. And what happened because we became vulnerable this way -- I mean, Ted was not vulnerable because he was able to do it -- I became vulnerable because I

*Interview conducted by Mark Jones, PhD, on May 2, 1997*
couldn't get people to put their money in. So, all of sudden, you're sitting there, and you have no
more money in Biovest. Pyxis is running out of money, and you say, 'How would you like to
invest in Pyxis.' And these people would now say, 'Well, we now have management in place,
right? So, you're not running the company.' 'No.' 'Do you have customers?' 'No.' 'Do you do
anything for the company that's really 'wow'?' 'No.' 'OK, we'll put in a million dollars, but we
want ninety percent and the hell with you. We're going to do it at a penny a share, wipe you out,
and then we'll do a reverse stock split and give new options to the management so they'll stick
around, so the only person we'll lose is you, because you don't have any money.' And that's
what these cram financings were, and people did this to me at both Pyxis and Vical, and I got
very close to a fistfight with one person on our board over the Pyxis thing because he came in
and said, 'We'll do the next round at a buck fifty, but we don't need the money until July, so we'll
do it at the July meeting.' He came into the July meeting and wanted to put in twice as much
money at a dime a share. I was on one side of the table, and the next moment, I was on the other
side pushing him against the wall, and he was a guy who played football in college. I don't know
how I did it, how I got around the table, but I was just furious, and so, I was having that happen
to me, and then Ted, instead of saying, 'Gee, what can we do to help you? This is my strength,
how can I help you?' He was saying, 'What's wrong with you, you idiot, that you can't do it?'
And I just got to the point where I decided I just wasn't going to do this anymore. Life's too
short. This is just too mean, too cruel. And we didn't lose our positions, because I finally went to
Henry Hillman and said, 'Henry, we're going to lose our fricking position in this thing unless you
write me a check for a million dollars today. I'm sorry. I cannot get these people involved, but
I'm out of money, NEA's going to steal the company from me. I need a million dollars.' And he
said, 'OK,' and wrote me a check for a million dollars. But you know, you're groveling and
begging, and not running a business. Things settled down a little bit after that, and Ted said,
'Why don't we do this again,' because we'd invested the money, and I said, 'I'm not going to do it
unless we have enough money so that we can continue to back our deals over their lifetimes.

So, we went out, and in a matter of weeks, raised thirty million dollars.’ It was easy. We went to call on a couple universities and some other people and raised thirty million dollars, and before we were closing, we were on the East Coast, I guess, raising money, we were going to come back and have a meeting out here, and I went to my son’s graduation from college in ’89, and had some time alone and thought about it, and I went in to talk to Ted, I walked in and said to Ted, ‘Ted, I ain’t doing it, I’m out of here. It’s too miserable.’

JONES: So what happened to the thirty million that you raised?

WOLLAEGER: We gave it back. You should see people’s faces when you do that.

JONES: That’s unusual.

WOLLAEGER: Yes, it is.

JONES: Amylin and Cytel, were there problems with those companies, too? Or did they have plenty of cash?

WOLLAEGER: Plenty of money. Ted would just pick up the phone and say, ‘I’ll let you in on the deal, but you’ve got to get your money here in five days.’

JONES: And he didn’t have to give up...

WOLLAEGER: He did wonderfully. I can’t remember, but with Cytel, he put in half a million dollars at a dollar a share, and then brought in twelve million dollars at six dollars or share, or may be two, one dollar to three dollars. Amylin probably went from one dollar to six. And you know, he did it by phone overnight.

JONES: Was it hard to walk away from these companies?
WOLLAEGER: But I didn’t. What happened was, we had a ten year partnership, this is June of ’89, so we’re only two years into this thing. We’ve got a ten year partnership. We’ve got eight years left, and we had spending money, not a whole lot, but we could have continued to pay ourselves a hundred thousand dollars a year for another couple of years. And, I think Ted and I get along fine now, but was it the kind of thing that next day after I said, ‘I ain't doing it,’ would he have said, ‘Good morning, Tim. How are you?’ No. It wasn’t that way. So, what we decided to do is, he decided that he didn’t like venture capital very much, either, on reflection, or something like that, and that he wanted to go run Amylin. And I, at that time, we weren’t together physically, because I was at Amylin. I was running Amylin. Now, he wouldn’t say I was running Amylin. What it was, Cooper had come from England to here, and Marjorie Sennett was the chief financial officer, and we were building labs and moving in, and we had some temporary headquarters, and we had about six labs, and I was there every day, running that group. Now was I saying, ‘Let’s do this experiment?’ No, but Cooper was a non-industrial scientist, and I said, ‘Garth, we’ve got to give people things to do. Tell me the six experiments that we want people to run.’ Then, we’d bring them in and say, ‘Do these six experiments.’ I would just organize it. Then I’d go, in the new building, ‘Put these benches here, and paint them green.’ And that was my day.

JONES: Did you find, generally, that academics are not good at doing that basic kind of stuff?

WOLLAEGER: Sure. They’re horrible at it. So, Ted said, ‘I want to run Amylin,’ and one day, Ted moved to Amylin and I moved out. You know, it was his company, but I was better at the nuts and bolts of day-to-day organizing, and lab-building. So, we just changed. I sat in our offices and he was at Amylin, which moved from down in Sorrento Valley over to where they are now, and I don’t know what I thought I was going to do. But I spent my time talking to Vical and Pyxis and Biosite, and I’d move around. I did that in July and August, and I got a call from Tom Sparks, who was our attorney at Pillsbury, Madison, and he said, ‘I’m a lawyer for

Interview conducted by Mark Jones, PhD, on May 2, 1997
Immune Response Corporation, and they wanted to go public, and Jim Glavin is the chief executive officer, and he’s also worrying about this stupid little company that lost all its products and had all these legal problems, but he’s the name CEO there, and the bankers won’t take the company public if he’s the name CEO, and it’s a mess. They’ve got thirty-five million dollars in cash and they haven’t done anything for three years. They have no products, they have a hundred and thirty lawsuits against them. And you’re good at fixing this kind of stuff. Do you think you could figure out how to stay at Biovest and come over and take Glavin’s spot? And the objective was not to fix this other company. The idea was to get Glavin out of there, so he could take Immune Response public. So, I came over and looked at, and I didn’t have much of a cash income at that time, and I didn’t have all that kind of money from Hybritech, so I met with the Board of Directors over there, and they told me they’d pay me a thousand dollars a day, including Saturdays and Sundays, to come and run this thing. Well, three hundred sixty-five thousand dollars -- I’d never seen money like that in my life. They gave me a six-month consulting contract at a thousand dollars a day, trying to figure out what to do with this company. So, in six months, they’d pay me a hundred eighty thousand dollars and I could stay at Biovest, and I would make a lot of money, and I turned it into Columbia/HCA, which I had no idea I was doing when I went there.

JONES: Well, how did they get into this cash rich position?

WOLLAEGER: Well, let’s take a little break before we get into that.

[Stop Tape]

WOLLAEGER: All of these things are so intricate aren’t they -- the same people. The name of this company was Smith Laboratories, and they had a Chicago based company, and they’d invented a product called Timopapin for injection, which was basically a meat tenderizer, they hated to say that, but it was a meat tenderizer, where you take a person’s spine, go around it with a crochet-hook
needle, put it in, inject it, and it would dissolve a herniated spinal disk without surgery. It was a
device -- it was considered a device by the FDA. Doctor Smith had invented this, and the irony of it
was, they had licensed it - I knew about it -- they had licensed it to Baxter in the early ’70s. Doctor
Smith had injected some people beyond the protocol allowed by the FDA. I got called in by the head
of Baxter, who said, ’We’re not going to jeopardize our IV solutions business with this kind of nutsy
stuff. I want you to go out and collect all the product, bring it back in, put it in a warehouse, put
chicken wire around it and pour concrete on top of it. It’s done.’ That was in, probably, 1973. So,
here I am in 1989, I go over to Smith Laboratories. Dr. Smith had taken the product, raised venture
capital, went out and got it approved, and this was in 1986 that it was approved, and they took the
company public, did very well with it, and bought a subsidiary out here in San Diego called Sutter
Corporation, which made continuous passive motion devices, which is a thing that you put on
somebody after knee surgery, and it keeps pumping their leg, to put synovial fluid through it to aid
the healing. Then Smith got caught in an absolutely horrid situation. I mean, I feel sorry for him.
They were limiting the sale of this product to doctors that came in and took this training course that
they had. And then business flocked to these doctors and a bunch of doctors who hadn’t taken this
training course went to, I don’t know why, but they went to the Federal Trade Commission, and
complained to the FTC. The FTC ruled that Smith Labs didn’t have the right to license doctors. They
were licensed to be able to buy the product. So afterwards, people bought the product who hadn’t
been trained, and hurt people with it. So people than started suing the doctors, and hospitals, and
the company over these injuries, which ranged anywhere from, ’Gee on a cold day, I feel a little
numbness in my fingertips,’ to this guy died. More the numbness and some paralysis, but a couple of
deaths. So, now they’re starting to fight that, and then Baxter showed up and said, ’Doctor Smith
licensed that product to us in the early ’70s. Thank you very much for getting it FDA approved.’
Baxter took them to court, and got the product. So, here he had a company in ’86, FDA approved, go
public, buy a subsidiary, do great, before he starts selling it to other people, he started getting sued,
and Baxter took the product away. Now, the people had made a big -- I mean it's a depressing situation, and the corporation was still headquartered in Chicago, with a board of directors that communicated mainly by phone -- but I don't really know that, I mean, I wasn't privy to that. And they had a subsidiary here in San Diego that reported back to a Chicago management that didn't exist. And Jim Glavin, who had been a part time venture capitalist, and was running Immune Response Corporation, and had been with the firm for a couple of months before he went to Immune Response, and had put the money into Smith back in Chicago, he was driving back forth between Rancho Bernardo and Kearny Mesa as the CEO of both companies. And so, I went in, and it's the kind of thing I like, I guess. So, what I did was say, 'Hmm, this ought to be neat. I can take this money and invest it in stuff. I can even put the money in Pyxis and Vical and Biosite. I have my source of money. So, I thought I'd that, but the lawyer said, 'No, no. You can't do that because you're not incorporated as an investment firm. You've got to put the money basically all into one thing.' So, I thought maybe we could buy Pyxis, or something like that, move it in. I mean, this was Pyxis before it had any money or any success. But the problem is, you go out and start talking to people about that, and they say, 'Well, OK, let's say you buy Pyxis. Pyxis spends the thirty-five million dollars. Then the hundred and thirty lawsuits come through, and you owe all these victims a billion dollars. Where do we get it?' And it comes right through and Pyxis is gone and maybe even the directors would have to chip in personally because they took this tainted money and invested it where it couldn't go back to the victims, and no one would do anything with me. Neither my own companies, nor anybody else I saw. So, after doing that for a couple months, and just saying, 'This isn't going to work.' You know, it's like getting somebody to buy infected food from you, or something, just because they're hungry, and they don't want it. So I said to myself, 'I've got to sit down and try and figure out what to do with these lawsuits.' And the board's attitude, as far as I could infer -- it wasn't spoken -- was the more we drag our heels on these, the more victim's will die, and people will forget, and we'll hold the money and earn interest on it for a longer period of time, so, just drag your heels. Well, I went out to
Chicago to meet with some people who had historically been with the company, and put their group of lawyers together. A lot of the suits were in Chicago, because that's where the clinical trials were. And I kind of came to the conclusion that, 'I'm not sure they really did anything wrong.' And I was under this six month contract, and I don't want to get to the end of my six months and say, 'What did I do. Well, I got my hundred and eighty thousand dollars and went home.' So, I can't invest the money, I've got to try to clear up these lawsuits. So, I sat with this group of lawyers in Chicago and we put together a strategy that included: When were the people injected? What warnings were sent out to doctors at various points? Who has good lawyers? What kind of jurisdictions do the courts have? What kinds of rulings are made in these courts? What are the different kind of injuries we've had? And we sort of went through this thing, and there were sort of six categories of injuries. We divided everybody up into six categories and said, 'OK, which are in the jurisdictions that we would feel the best about?' And we picked those and said, 'OK, let's go after those six cases, and see if we can settle them? Let's see if we can start setting some precedents.' I think we got five of them settled without going to court, and one we settled going to court, and we got out almost scot-free. And I remembered something from college. I had taken a course to fulfill a requirement on insurance, and we had a lot of product liability insurance, but they were mainly with companies that had gone bankrupt. But I remembered this thing about life insurance companies pay a part of the premium into a fund from the state, so that if you die, and you bought a life insurance policy from a company that goes bankrupt, your family doesn't end up without any money. So, I wondered if they do this with liability insurance. I went and found out, yep, they do. I got the state of Illinois to agree to pay the first hundred and fifty thousand dollars in any settlement. So, I went out and settled a lot of suits for a hundred and forty-nine thousand dollars. And we started knocking them off. We set these precedents, got all these six cases done for under a hundred fifty thousand dollars, and then you go in and say, 'Your injury's like this one. Those people got seventy-five thousand.' I'd offer seventy-five thousand, those people would say, 'No, one hundred and fifty.' I say, 'One hundred and forty,' and
they'd say, ‘Done.’ And I’d call the state of Illinois and say, ‘Send a check for a hundred forty-nine thousand dollars to these people,’ and they’d do it. And we started getting these suits going, enough that you could say, ‘I think we’re going to survive this.’ There are going to be a couple of sticky ones, where a forty-three year old guy with three children died on the operating table and the doctor had been to the training course,’ but most of them, you could say, ‘I think I’m going to survive this.’ And I got a call one morning in December, so I’d been there September, October, November, and we’d gotten that far, and a guy called and said, ‘I was at a wedding in La Jolla, and there was guy there named Richard Rainwater,’ -- Did you watch Louis Rukeyser last night? Do you ever watch Wall Street Week?

JONES: No.

WOLLAEGER: Well, Rainwater was his guest, and this guy said, ‘Do you know who Richard Rainwater is?’ I said, ‘I don’t know him from Adam.’ ‘Well, he went to Stanford Business School with one of the Bass Brothers from Fort Worth, the Bass family who sold the oil business, and Richard went to work for them, they bought Disney and ran the fortune up to a couple billion dollars, and now Richard’s out on his own. And he’s got a friend who’s backed by a couple of hospitals, and they’ve got this idea for a hospital company, and he sounds like a real risk-taker. We wouldn’t touch your money, but why don’t you go see him?’ So, I put the phone down and called Richard Rainwater, and he said, ‘Come on down, Fort Worth, come on down.’ So, I went to see Richard and Richard told me what a big success he’d been, which he is, and how he liked to do these things, and how he had taken HCA private with junk bonds and all this kind of stuff. He been opposed by this lawyer in Dallas, and the lawyer was a really hotshot guy and he had come over to work form him, and they’d put their money together and bought two hospitals in El Paso, and one in Miami, and they had, and he said, ‘Well, that’s all I know, let Rick come in.’ So, Rick Scott came in and gave me his presentation about how he was a securities lawyer, mainly in the hospitals, how these guys were mainly in
their sixties, they didn’t know how to get out of these hospitals, the cities and the banks didn’t know what to do with these hospitals, you don’t foreclose on hospitals, and close them down and sell them for anything. He thought that with thirty-five million bucks, we could buy these other seven hospitals and maybe even more than that, and I told him about all our lawsuits and where we were on them, and he said, ‘All right, we can handle that risk.’ And he said to me, ‘Well, if we took your public company and your money and suits, and combined them with our three hospitals, plus the other seven that we’ve outlined for you that we can buy, what do you think the split ought to be? And I wrote down seventy-five/twenty-five, he wrote down eight/twenty, we tipped our papers over, and we were pretty close. So, we said we’d do seventy-five for him, twenty-five for us, and if they hit certain earnings goals, they could earn up to five percent more. It ended up being seventy-four/twenty-six after a year. So, in one day, we said, ‘OK, let’s do the deal.’ Now the hard put was, I had twelve hundred angry shareholders who didn’t really care what happened to us. So, I spent a lot of time flying around and phoning people to get this vote in, because most of the people’s attitudes was, ‘I bought stock at twenty-six dollars a share, it’s now at one and seven-eighths. I’ve lost almost all my money. I know if I vote for this, you’ll probably make money. So, why should I help you, you son-of-a-bitch. Your company screwed me out of my fifty thousand dollars.’ And I’d say, ‘I wasn’t there. I’m only here trying to...You know, let’s put this behind us and move on, this could turn out to be very good.’ Eventually, I got about ten more votes than I needed to get the deal done. But not many more than that.

JONES: So, this is May of 1990? Three, ten hospitals? How many now?

WOLLAEGER: Three hundred forty, something like that. We had three hospitals when we closed in May of 1990. Did I tell you how I got here from there?

JONES: No.
WOLLAEGER: We onesy-twoed it up to twenty-seven hospitals based on the money I had, plus, you know, with real estate and hospitals, you can borrow money again. So we got up to twenty-seven hospitals from May of 1990 till September '93. So, how many months is that? Buying a hospital every other month or something like that. Rick Scott and Richard Rainwater still own seventy-five percent of the company between the two of them. And the Clintons were going through this health care type scare, I would have called it, and companies like Human, which owned a hundred hospitals, and HCA, which owned a hundred hospitals, but was largely owned by Richard Rainwater. See, he had taken it private. That's how he and Rick Scott met. They had taken it public again, and Richard and the Frisk family of Tennessee owned most of HCA, but it was now public again. They had taken it public, probably in August. And Rick Scott walked in to the head of Humana, who wanted to get rid of their hospitals and concentrate more on the insurance side of their business, and we had a market cap of seven hundred twenty-five million dollars at the time, and he said, 'I'll buy your hospitals from you for four billion and stock.' And they said, 'OK.' So, we printed four billion dollars worth of stock and gave it to them, and that closed on September 5th, and on September 6th, because we knew Rainwater, on September 6th, we were buying HCA, which was another hundred hospitals. So, we went from twenty-seven hospitals to about two hundred twenty-seven hospitals. And my job in those mergers, I was on the board of directors and was a senior vice-president, and I was running this orthopedic rehab business out here, which in our first year accounted for twenty-five percent of our profits, and in 1993, accounted for twenty-three percent of our profits, in spite of the fact that I'd tripled the business. So, part of the deal with Humana and HCA was we had to move our headquarters out of Fort Worth, Texas to either Louisville or Nashville. We went to Louisville first, and then on to Nashville. And the way the story gets rounded out here, my job on the board was to go out and look at all these other little, peripheral businesses that these mergers were getting us involved in, to make sure we
weren't going to get involved in any more lawsuits. I was the lawsuit man. So, we found out that Michael Reese Hospital in Chicago, which was owned by Humana, had some doctors that wanted to start a software company, and the software company was in Seattle, but they owned five percent of the stock. What is this? I went up to meet with these people in Seattle, and we had a dozen of these, I flew around to a dozen of these things -- one I couldn't even find. As I'm doing this, and I'm worrying about what my job is going to be in this multi-billion dollar company running something that has nothing to do with what we do, and I'm in San Diego, and I'm not moving to Louisville, I got a call from a headhunter asking me whether I'd be interested in running Block Medical up in Carlsbad. It's an IV pump company. They were owned by a company called Hillenbrand Industries, which is in Batesville, Indiana. It's a multi-billion dollar international company, largely owned by the Hillenbrand family, still. They started making cots in the Civil War, and now they're the largest provider of hospital beds and caskets in the United States, and they own Block Medical. So, I told the headhunter that I would talk to them about running Block Medical, but only if they would consider buying Sutter Corporation. See, I though I could take my company with me, put it into Block Medical and have a medical company. Well, that just confused the headhunter. He didn't know what to say about it, and I said, 'Well, that's all I'm going to do. I'm not just going to jump out of this thing here in the middle of this.' I had a lot of stock options and stuff. And so, Gus Hillenbrand called me, and said, 'I may come out to San Diego to Block, we're having a meeting out there, why don't we get together for lunch.' So, I had lunch with him and he was interviewing me, you know, 'Where did you go to school, and what did you do at Baxter?' You know, that kind of stuff. And he said, 'Listen, this is enjoyable, but I have to wrap this up because I'm going to go over and see a company here in town that's really fascinating to me.' He said, 'We make specialty locks in our...' I can't remember what he said, Mallory or Malloy lock division, 'and the orders for these things are just going like this.' And I knew who it was, right -- he said,
“you ever hear of a company called Pyxis?” I said, ‘Yeah, I founded it. I was their first
president, and I’m still on the board.’ He said, ‘Huh, that’s interesting.’ He goes off to Pyxis
and I get a call two hours later in my office, and he says, ‘I couldn’t believe this Pyxis. That’s
absolutely fantastic. Can we have dinner together?’ So, I went to have dinner with him and
another guy, Lonnie Smith, he brought along. And he just said, ‘We’re in Batesville, Indiana.
We don’t see stuff like this. If you ever want to do this again, the company and my family will
back you. But we won’t buy Sutter.’ So, I’m out looking at these companies, and Rick Scott
now has relocated to Louisville, Kentucky, in anticipation of taking over the Humana hospitals,
and I come in and make my reports, ‘I’ve looked at these twelve companies, and there’s
nothing dangerous. They’re all pretty mediocre and not professionally run.’ There were one
or two exceptions, but they were also sort of situations where a couple doctors had given five
hundred thousand to them and they were sort of tinkering with things, that kind of stuff. So,
on my way to Louisville, I’d stopped by to see Augie Hillenbrand, told him what I’d done, and
asked him, ‘What would think if we put some money together and bought these twelve little
companies from Columbia to see what we could do with them?’ He said, ‘Let’s do it.’ I went to
Columbia, made my report and then said to Rick, ‘What would you think if I put together some
money and bought these things?’ And I gave him a formula about how I’d value these things,
and he said, ‘That sounds fair.’ Because, I said, ‘Rick, inside this big billion dollar company,
you know, you’re going to write these off eventually, you’re going to lose them and write them
off. You might as well take twelve million dollars for them, and let’s see what we can do.’ And
he said, ‘OK, if you can raise the money, I’ll do it.’ I got in my car, drove across the Ohio River
to Batesville, Indiana, about an hour away, got my check and drove back, and I said, ‘Here I
am.’ He said, ‘Wait a minute. What’s going on here?’ So, I had to go back and tell him my Augie
Hillenbrand story, and he went, ‘Aw, Tim, I think it’s a great idea, but the problem is, if they
really turn out to be successful,’ and he already sort of knew what I could do, because we
bought -- I didn’t tell you this -- after we got the hospital deal done and we did the merger, I
wanted to leave, and he said, ‘No, stay. Help me. I’ve only got twelve people in management.’
And I said, ‘But I’ve got to go out and raise money for Biosite and Pyxis, two companies that
I’m the Chairman of the Board of.’ And he said, ‘Why don’t we go to New York, and we’ll get
these lines of credit set up with the bank. I’ll give you four million. You can put two million
into each company.’ I put two million into Pyxis and two million into Biosite. And we made
millions on the Pyxis deal, so he was already whetted to this idea a little bit. So, what he said
was, ‘If these things turn out to be really good, then my board can turn around and say, you
gave all of that to Wollaeger for twelve million dollars, and he’s the only one that saw? Wasn’t
that a little naive? So, rather than doing that, you keep Hillenbrand’s money, take the
companies for a partnership interest and Hillenbrand and Columbia will be your partners.
And I’ll give you some more money.’ So, I said, ‘OK.’ He gave me twelve million dollars worth
of stock, a ten million dollar check; Augie Hillenbrand gave me a check for seven. I walked out
of Louisville after one day of negotiating, and I had Kingsbury.’

**JONES:** And what happened with these twelve companies?

**WOLLAEGGER:** Well, I raised some money from some other people, so I started with twelve
million in stocks and twenty million in cash. I raised three million from -- you know, a
hundred thousand from Ron Taylor, a hundred thousand from Ted Greene, and got another
three million. OK, so I had thirty-two million dollars in the first month, and then what
happened, see, is when the companies are sold and I get money for them, I hand that back to
the partners. I’ve handed out fifty million dollars in three years, and I still have six companies
left. So, we’re doing well. And let’s see -- Health Data Sciences, a data processing company --
we sold that to someone else. I had about a two million dollar investment, sold it for eleven.
Menlo Care was a little company I had a million dollars in. We sold it to Johnson & Johnson.
Nimbus is the company I couldn’t find. I found out that they sold the technology to J & J, and I
paid a thousand dollars for that company, I've gotten a million dollars in royalties. Famous is another software company, one owned by Michael Reese in Chicago. We took that public; made about ten million dollars on it. Raytel was a company that did MRI Centers. We got rid of nine out of twelve and bought a cardiac monitoring business from some of the Cardiac Pacemaker people, these are the people that sell pacemakers over the telephone. We took that public about eighteen months ago. It's done relatively. It hasn't been a real home run, but put a million in, got three million out, that type of thing. Transcarotic Therapies is a biotech company that we took public in October and I sold my position on April 18th for about five times markup. I had another company that we merged into a company that's now a public biotech company called Nexstar. We did pretty well with that. Not on here, this is my little brochure, are Exos, which I put two million dollars in it, sold for a hundred thousand dollars. Lectus, which made specialty hospital beds. I put in two million dollars in and we declared bankruptcy. Those are the two bummer. So out of the twelve companies that were in that deal, everyone one of them has either been sold, gone public, or gone bankrupt.

**JONES:** And when you first looked at them, there were only a couple of them that looked like they might be going somewhere?

**WOLLAEGGER:** Yeah. We did a pretty good job of fixing some of these things. And then I've invested in a couple of others. You know, I've made investments, I've got, on this list here, four companies that I've bought into and since distributed the stock or sold it, including Pyxis. Now, Pyxis isn't, you know, early on money. When Pyxis' stock got hit, I bought a million dollars worth of stock and let it ride up, and doubled our money and got out. It looks supportive to the outside world, but we had faith that we weren't wrong, so it's not early Pyxis. Some people might look at Kingsbury and say, 'Sure, he made fifty million dollars, but it was Pyxis.' It wasn't. A million dollars of it was Pyxis. And we got some other companies here that are still moving along, and look all right.
JONES: Here in San Diego, there’s DigiRad. Were you involved in hooking Karen Klause up with those people?

WOLLAEGGER: I taught a course at UCSD called ‘How to Start a High-Tech Company,’ and one of my students was working at a company called Aurora technologies that was making an instrument for the Defense Department for Salt II Treaty verification. When the Soviet Union fell apart, the government said, ‘If you can find a professional investor to convert your technology to peacetime, and it’s a decent plan, we’ll give you a million and a half dollars.’ And I was there, said I’d do it, and put the money in, that’s how we started Digirad.

END INTERVIEW
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The San Diego Technology Archive (SDTA), an initiative of the UC San Diego Library, documents the history, formation, and evolution of the companies that formed the San Diego region’s high-tech cluster, beginning in 1965. The SDTA captures the vision, strategic thinking, and recollections of key technology and business founders, entrepreneurs, academics, venture capitalists, early employees, and service providers, many of whom figured prominently in the development of San Diego’s dynamic technology cluster. As these individuals articulate and comment on their contributions, innovations, and entrepreneurial trajectories, a rich living history emerges about the extraordinarily synergistic academic and commercial collaborations that distinguish the San Diego technology community.