

The Bancroft Library

University of California • Berkeley

Program in the History of the Biological Sciences and Biotechnology

Thomas J. Perkins

KLEINER PERKINS, VENTURE CAPITAL, AND THE CHAIRMANSHIP OF GENENTECH,
1976-1995

With Introductions by
Brook Byers
Samuel D. Colella
Reid Dennis
Franklin "Pitch" Johnson
Thomas D. Kiley
C. Richard Kramlich
Floyd Kvamme

Interviews Conducted by
Glenn E. Bugos, Ph.D.
in 2001

Since 1954 the Regional Oral History Office has been interviewing leading participants in or well-placed witnesses to major events in the development of northern California, the West, and the nation. Oral history is a method of collecting historical information through tape-recorded interviews between a narrator with firsthand knowledge of historically significant events and a well-informed interviewer, with the goal of preserving substantive additions to the historical record. The tape recording is transcribed, lightly edited for continuity and clarity, and reviewed by the interviewee. The corrected manuscript is indexed, bound with photographs and illustrative materials, and placed in The Bancroft Library at the University of California, Berkeley, and in other research collections for scholarly use. Because it is primary material, oral history is not intended to present the final, verified, or complete narrative of events. It is a spoken account, offered by the interviewee in response to questioning, and as such it is reflective, partisan, deeply involved, and irreplaceable.

All uses of this manuscript are covered by a legal agreement between The Regents of the University of California and Thomas J. Perkins dated June 2002. The manuscript is thereby made available for research purposes. All literary rights in the manuscript, including the right to publish, are reserved to The Bancroft Library of the University of California, Berkeley. No part of the manuscript may be quoted for publication without the written permission of the Director of The Bancroft Library of the University of California, Berkeley.

Requests for permission to quote for publication should be addressed to the Regional Oral History Office, 486 Bancroft Library, Mail Code 6000, University of California, Berkeley 94720-6000, and should include identification of the specific passages to be quoted, anticipated use of the passages, and identification of the user. The legal agreement with Thomas J. Perkins requires that he be notified of the request and allowed thirty days in which to respond.

It is recommended that this oral history be cited as follows:

Thomas J. Perkins, "Kleiner Perkins, Venture Capital, and the Chairmanship of Genentech, 1976-1995," an oral history conducted in 2001 by Glenn E. Bugos for the Regional Oral History Office, The Bancroft Library, University of California, Berkeley, 2002.

Copy no. 1



Thomas J. Perkins, 2002

photograph courtesy of Goodby Silverstein & Partners

Cataloguing information

Thomas J. Perkins (b. 1932)

Venture Capitalist

Kleiner Perkins, Venture Capital, and the Chairmanship of Genentech, 1976-1995, 2002, xix, 82 pp.

Founding Kleiner & Perkins [later Kleiner Perkins Caufield and Byers] and early investments in Tandem Computers and Genentech; chairmanship of Genentech board of directors and executive committee; hiring Robert Swanson at Kleiner & Perkins and initial dealings with Swanson and Herbert Boyer to found Genentech; K & P investment in Cetus; subcontracting early Genentech research to UCSF, City of Hope, and Caltech; investments in early Genentech products; licensing and manufacturing strategies; clinical trials and dealings with Food and Drug Administration; invention of clinical R&D partnerships and junior common stock; recruiting Genentech's board; Genentech's IPO; Genentech as model for Hybritech, Inc.; Kirk Raab as chief operating officer and relationship with Bob Swanson; licensing agreements with Eli Lilly, KabiVitrum, and others; FIPCO strategy; Hoffmann-La Roche acquisition of Genentech; thoughts on investment bankers; patent infringement litigation; comments on Frederick Frank, James Gower, Fred Middleton, David Packard, Kirk Raab, Robert Swanson, Jimmy Treybig and others.

Introductions by Brook Byers, Senior Partner, Kleiner Perkins Caufield & Byers; Samuel D. Colella, Managing Director, Versant Ventures & Managing Director, Institutional Venture Partners; Reid W. Dennis, Partner Emeritus, Institutional Venture Partners; Franklin "Pitch" Johnson, Senior Partner, Asset Management Associates; Thomas D. Kiley; C. Richard Kramlich, Senior Partner, CMEA Ventures; Floyd Kvamme, Senior Partner, Kleiner Perkins Caufield & Byers.

Interviewed in 2001 by Glenn Bugos for the Program in the History of Biosciences and Biotechnology, Regional Oral History Office, The Bancroft Library, University of California, Berkeley.

TABLE OF CONTENTS--Thomas J. Perkins

BIOTECHNOLOGY SERIES HISTORY by Sally Smith Hughes	i
BIOTECHNOLOGY SERIES LIST	iii
INTRODUCTION by Brook Byers	iv
INTRODUCTION by Samuel D. Colella	v
INTRODUCTION by Reid Dennis	vii
INTRODUCTION by Franklin "Pitch" Johnson	viii
INTRODUCTION by Thomas Kiley	ix
INTRODUCTION by C. Richard Kramlich	xiii
INTRODUCTION by Floyd Kvamme	xiv
INTERVIEW HISTORY by Glenn E. Bugos	xvi
BIOGRAPHICAL INFORMATION	xviii
Perkins at Genentech, from 30,000 Feet	1
First Kleiner & Perkins Partnership	2
Hiring Bob Swanson	3
Kleiner & Perkins Invests in Cetus	3
Swanson and Boyer Found Genentech	4
Initial Financing	4
Risk Reduction in the Business Plan	5
Subcontracting the Research	5
Proof of Concept	6
Additional Investment in Insulin	6
Building Genentech's Scientific Culture	7
Swanson's Early Business Affiliations	7
Patent Rights	8
Early Financial Engineering	9
Clinical R&D Partnerships	10
Junior Common Stock	10
Pre-IPO Equity Structure	11
Quarrel with Swanson on IPO Timing	12
Liquidity As an Issue	12
Kleiner & Perkins: Commitment to Ventures	13
Hybritech	14
Focusing Genentech's Strategic Vision	14
Perkins's Friendship with Swanson	15
Kirk Raab Versus Swanson	16
Roche Acquisition	17

White Squire Fund	18
More on the Genentech IPO	19
Possible Sale to Eli Lilly, Inc.	19
Picking Investment Bankers	20
Recruiting the Genentech Board of Directors	20
Perkins as Chairman	21
License Agreement with Lilly	22
Negotiating Other Licenses	23
Fully Integrated Pharmaceutical Company (FIPCO)	23
Risk Factors for S-1 Registration	25
Hostile Press	25
Food and Drug Administration Approval	26
Growth Hormone Sales Controversy	27
Quiet Period Violation	28
IPO Roadshow	29
Genentech Jolts Wall Street: <i>San Francisco Examiner</i> , 1980	29
Fundraising in the Doldrums	31
Japanese Placement	31
Downward Pressure From Secondary Shares	32
Selling the Clinical R&D Partnerships	33
Chairing a Public Company	34
Independent Biotechnology	34
Roche Acquisition, 1990: Hiring Frederick Frank of Shearson Lehman	36
Maintaining Secrecy to Avoid an Auction	37
Valuation of Genentech, Inc.	37
Deal Points	38
Raab Becomes CEO	38
Roche People and Practices	39
Loma Prieta Earthquake	40
Final Board Meeting on Swanson's Demands	41
Swanson-Raab Conflict	42
Raab's Skills	44
James Gower's Aggressive Forecast	44
Aggressive Patent Protection	45
Suing the FDA	45
Executive Committee of the Board of Directors	46
Letting Swanson Chair	47
Disengagement from the Board	48
Genentech's Move into Cancer Therapies	48
Kleiner & Perkins Moves away from Biotech	49
Venture Capital in Biotechnology	49
Biomedical Devices and the FDA	50
The Promise of Biotech	51
Belief in God the Creator	52
Perkins's Law	52
The Genentech Model	53

APPENDIX	55
A. Genentech, Inc., "Notice of Annual Meeting of Shareholders to Be Held April 30, 1979"	56
B. Genentech, Inc., "Proxy Statement for Annual Meeting of Shareholders, April 9, 1979"	57
C. Harvard Business School Bulletin, October 1982, "1957: to and from the 25 th Reunion"	69
D. Genentech, Inc., "Thomas J. Perkins, Member, Board of Directors," September 29, 1993	79
INDEX	80

BIOTECHNOLOGY SERIES HISTORY--Sally Smith Hughes, Ph.D.

Genesis of the Program in the History of the Biological Sciences and Biotechnology

In 1996 The Bancroft Library launched the Program in the History of the Biological Sciences and Biotechnology. Bancroft has strong holdings in the history of the physical sciences--the papers of E.O. Lawrence, Luis Alvarez, Edwin McMillan, and other campus figures in physics and chemistry, as well as a number of related oral histories. Yet, although the university is located next to the greatest concentration of biotechnology companies in the world, Bancroft had no coordinated program to document the industry or its origins in academic biology.

When Charles Faulhaber arrived in 1995 as Bancroft's director, he agreed on the need to establish a Bancroft program to capture and preserve the collective memory and papers of university and corporate scientists and the pioneers who created the biotechnology industry. Documenting and preserving the history of a science and industry which influences virtually every field of the life sciences and generates constant public interest and controversy is vital for a proper understanding of science and business in the late twentieth and early twenty-first centuries.

The Bancroft Library is the ideal location to carry out this historical endeavor. It offers the combination of experienced oral history and archival personnel and technical resources to execute a coordinated oral history and archival program. It has an established oral history series in the biological sciences, an archival division called the History of Science and Technology Program, and the expertise to develop comprehensive records management plans to safeguard the archives of individuals and businesses making significant contributions to molecular biology and biotechnology. It also has longstanding cooperative arrangements with UC San Francisco and Stanford University, the other research universities in the San Francisco Bay Area.

In April 1996, Daniel E. Koshland, Jr. provided seed money for a center at The Bancroft Library for historical research on the biological sciences and biotechnology. And then, in early 2001, the Program in the History of the Biological Sciences and Biotechnology was given great impetus by Genentech's generous pledge to support documentation of the biotechnology industry.

Thanks to these generous gifts, Bancroft has been building an integrated collection of research materials--oral history transcripts, personal papers, and archival collections--related to the history of the biological sciences and biotechnology in university and industry settings. A board composed of distinguished figures in academia and industry advises on the direction of the oral history and archival components. The Program's initial concentration is on the San Francisco Bay Area and northern California. But its ultimate aim is to document the growth of molecular biology as an independent field of the life sciences, and the subsequent revolution which established biotechnology as a key contribution of American science and industry.

Oral History Process

The oral history methodology used in this program is that of the Regional Oral History Office, founded in 1954 and producer of over 2,000 oral histories. The method consists of research in primary and secondary sources; systematic recorded interviews; transcription, light editing by the interviewer, and review and approval by the interviewee; library deposition of bound volumes of transcripts with table of contents, introduction, interview history, and index; cataloging in UC Berkeley and national online library networks; and publicity through ROHO news releases and announcements in scientific, medical, and historical journals and newsletters and via the ROHO and UCSF Library Web pages.

Oral history as a historical technique has been faulted for its reliance on the vagaries of memory, its distance from the events discussed, and its subjectivity. All three criticisms are valid; hence the necessity for using oral history documents in conjunction with other sources in order to reach a reasonable historical interpretation.¹ Yet these acknowledged weaknesses of oral history, particularly its subjectivity, are also its strength. Often individual perspectives provide information unobtainable through more traditional sources. Oral history in skillful hands provides the context in which events occur--the social, political, economic, and institutional forces which shape the course of events. It also places a personal face on history which not only enlivens past events but also helps to explain how individuals affect historical developments.

Emerging Themes

Although the oral history program is still in its initial phase, several themes are emerging. One is "technology transfer," the complicated process by which scientific discovery moves from the university laboratory to industry where it contributes to the manufacture of commercial products. The oral histories show that this trajectory is seldom a linear process, but rather is influenced by institutional and personal relationships, financial and political climate, and so on.

Another theme is the importance of personality in the conduct of science and business. These oral histories testify to the fact that who you are, what you have and have not achieved, whom you know, and how you relate have repercussions for the success or failure of an enterprise, whether scientific or commercial. Oral history is probably better than any other methodology for documenting these personal dimensions of history. Its vivid descriptions of personalities and events not only make history vital and engaging, but also contribute to an understanding of why circumstances occurred in the manner they did.

Molecular biology and biotechnology are fields with high scientific and commercial stakes. As one might expect, the oral histories reveal the complex interweaving of scientific, business, social, and personal factors shaping these fields. The expectation is that the oral histories will serve as fertile ground for research by present and future scholars interested in any number of different aspects of this rich and fascinating history.

Location of the Oral Histories

Copies of the oral histories are available at the Bancroft, UCSF, and UCLA libraries. They also may be purchased at cost through the Regional Oral History Office. Some of the oral histories, with more to come, are available on The Bancroft Library's History of the Biological Sciences and Biotechnology Website: <http://bancroft.berkeley.edu/Biotech/>.

Sally Smith Hughes, Ph.D.
Historian of Science

Regional Oral History Office
The Bancroft Library
University of California, Berkeley
October 2002

¹The three criticisms leveled at oral history also apply in many cases to other types of documentary sources.

October 2002

ORAL HISTORIES ON BIOTECHNOLOGY

Program in the History of the Biological Sciences and Biotechnology

Paul Berg, Ph.D., "A Stanford Professor's Career in Biochemistry, Science Politics, and the Biotechnology Industry," 2000

Mary Betlach, Ph.D., "Early Cloning and Recombinant DNA Technology at Herbert W. Boyer's UCSF Laboratory," 2002

Herbert W. Boyer, Ph.D., "Recombinant DNA Science at UCSF and Its Commercialization at Genentech," 2001

Thomas J. Kiley, "Genentech Legal Counsel and Vice President, 1976-1988, and Entrepreneur" 2002

Arthur Kornberg, M.D., "Biochemistry at Stanford, Biotechnology at DNAX," 1998

Fred A. Middleton, "First Chief Financial Officer at Genentech, 1978-1984," 2002

Thomas J. Perkins, "Kleiner Perkins, Venture Capital, and the Chairmanship of Genentech, 1976-1995," 2002

"Regional Characteristics of Biotechnology in the United States: Perspectives of Three Industry Insiders" (Hugh D'Andrade, David Holveck, and Edward Penhoet), 2001

Niels Reimers, "Stanford's Office of Technology Licensing and the Cohen/Boyer Cloning Patents," 1998

William J. Rutter, Ph.D., "The Department of Biochemistry and the Molecular Approach to Biomedicine at the University of California, San Francisco," 1998

Robert A. Swanson, "Co-founder, CEO, and Chairman of Genentech, 1976-1996," 2001

Oral histories in process:

Brook Byers

Stanley Cohen

Chiron Corporation

Roberto Crea

David Goeddel

Herbert Heyneker

Irving Johnson

Dennis Kleid

Arthur Levinson

G. Kirk Raab

William J. Rutter, vol. 2

Richard Scheller

Axel Ullrich

Keith R. Yamamoto

INTRODUCTION by Brook Byers

Tom Perkins is one of the best to have ever practiced the art of venture capital. He developed his depth and style by early hard work in operating positions in technology companies. He worked in sales, marketing, product management, and then in general management as the founder of the first laser company and as founder of Hewlett-Packard's Computer Division. Tom pioneered a style in the venture capital business by founding and developing a firm that took an active role in working on the technology and marketing challenges faced by management teams as a knowledgeable partner. Tom's intellectual curiosity about how new technology works led him to be part of most of the key science revolutions of our time: distributed computing, lasers, biotechnology, and image processing. Tom is the only person to simultaneously be chairman of the board of three New York Stock Exchange companies--Genentech, Tandem Computers, and Acuson. The venture capital firm that Tom co-founded in 1972 has gone on to help fund and grow over 300 technology companies which have combined revenues over \$200 billion, combined market capitalization over \$600 billion, and employ over 300,000 people. Along the way, he mentored new generations of partners at KPCB [Kleiner Perkins Caufield and Byers] to ensure that the firm was "built to last." Everyone who has worked with Tom Perkins feels privileged to have had the opportunity to work with one of the most remarkable businessmen and science pioneers of our generation.

Brook Byers
Senior Partner
Kleiner Perkins Caufield & Byers

Menlo Park, California
December 30, 2001

INTRODUCTION by Samuel D. Colella

I enthusiastically responded to the request to write the introduction to Thomas J. Perkins's oral history. I am anxious to share with the readers my insights about him from the perspective of an entrepreneur, an operating executive, and a venture capitalist. Given Tom's modesty, I doubt that he would acknowledge or take credit for the accolades he will receive and his many accomplishments. I have received a great deal of pleasure out of being able to point to just a few of his gigantic contributions.

I first met Tom as an entrepreneur when I was a second year student at the Stanford Graduate School of Business. Along with a classmate and a local inventor, I had written a business plan and was seeking financing. In addition to approaching the very few venture capitalists that existed, I was advised to seek out angel capital. I was introduced to Tom Perkins who was known to be interested in helping aspiring entrepreneurs. Coincidentally, in parallel, a young and innovative company, Spectra Physics, was aggressively recruiting me. Spectra Physics was the pioneer in the laser industry and had recently acquired a start up (University Laboratories) financed by Tom and in which he had had a major part in launching. University Laboratories was Tom's first big success and they were looking for someone to succeed their current CEO as they were merged into Spectra Physics. In a typical Tom Perkins fashion, he immediately, and with great conviction, advised me that the choice was a "no brainer"--join Spectra Physics and run University Laboratories, soon to become the Engineering Laser Systems Division of Spectra Physics. This characteristic of strong conviction, decisiveness, and incredible insight was something that I have subsequently observed through my years of association with Tom. As it turned out, he was right--as he usually is--and the choice to join Spectra Physics was a wise one on my part.

In my thirteen years as an operating executive at Spectra Physics, Tom was a major contributor on the Board of Directors. He was known for being totally attentive at Board meetings, where he sat at the front of the room with his steno pad and his wooden pencil. It wasn't long before he gained a reputation for drilling down into the essential facts of a presentation and dismissing all irrelevant materials. He focused on the critical variables and debated those intelligently and articulately. I frequently counseled my division managers, who were presenting some aspect of their business to the Board and seeking approval, that Tom would immediately find the weak points in their proposal. They had better be prepared to defend their position and to justify their proposals and, in particular, to debate the soft points in their presentation. Tom was very direct and to the point, but he took care not to demoralize or humiliate the presenter. He would not, however, let up until he was satisfied that there was an action program, or that decisions had been made that were consistent with the facts presented. He did not pontificate and he was not one who liked to hear himself talk. He was, above all, results-oriented and demanding of superior performance.

Tom became my confidant on the Board of Directors and, in many ways, my mentor. I sought him out when I had difficult decisions to make; I valued his inputs and marveled at his judgment. Rarely did I find him to be wrong.

I was amazed that Tom always had time for me. His schedule was incredibly hectic, but he would take a call or a visit no matter how busy he was. He was also willing to help in personal matters and career counseling. I recall a specific incident where I had received an offer to leave Spectra Physics and join a start up with an incredible signing bonus. I decided that I would seek Tom's counsel. The weak point in this situation was the reputation of the financial backers of the start up. They had a checkered background and were not of the caliber or quality that Tom or I was accustomed to associating

with. Without hesitation, Tom adamantly opposed my considering the offer-- not because the business or the market wasn't promising, but because the people that I would associate with were not up to his standards. His statement was: "In this valley, the most important asset you have is your reputation and that is what you will build on and live with for the rest of your career and life. Don't jeopardize it."

After thirteen productive and satisfying years at Spectra Physics, it was time for me to seek a new challenge. So, whom did I seek out but Tom Perkins? Within minutes of our meeting he said, "You should become a venture capitalist." He gave me the convincing argument as to why I belonged in the business. He further stated that he was going to introduce me to the five leading venture capital firms that he felt would be a great fit for me. Within an hour after leaving Tom I had received two calls with invitations to follow-up meetings based on Tom's introduction. I was fortunate to have a number of choices for a venture career, but again it was Tom's input that most influenced me. Tom's guidance was: "You and Reid Dennis will make a great team at IVP [Institutional Venture Partners]." And again, he was correct!

Shortly after I joined IVP, Tom called me and said, "Since I got you in the business, I'm going to start you off with a winner," and he proceeded to introduce me to an exciting company that Kleiner, Perkins had helped start. This became my first investment and it was a great opportunity to work with Tom in another capacity--as a venture capitalist and board member. While I could probably write an entire chapter on this company, because it has turned out to be one of the most bizarre that I have been affiliated with in my seventeen years of venture capital, the benefit turned out not to be the financial return, but the opportunity to watch Tom in action. His determination to succeed and his focus were amazing. This company faced an above-average number of hurdles and obstacles to success, but in every case Tom led the charge in finding solutions to the obstacles. He rolled up his sleeves and was more a member of the team than he was the renowned financier. We worked side-by-side with management to move this company ahead. He was incredibly persuasive in getting other investors to join us despite these challenges, and he continued to convince his partners to support the company in round after round of financing. His conviction that this was a winner was motivating to the team, to the Board, and to the investors. There was never a consideration of giving up. Thanks to Tom, I not only received a lesson in venture capital 101, but I got my graduate degree from that very first investment.

As I look back on the impact that Tom Perkins has had on my career, I owe him a great deal of thanks. In reflection, I realize that Tom's example and his lessons to me as an entrepreneur, an operating executive, and a venture capitalist, have greatly influenced how I have conducted myself in my career. As a venture capitalist, I have a great deal of respect for entrepreneurs, a lot of patience, but determination and a competitiveness to succeed that has been inspired by Tom Perkins. While this is only one man's input or perspective, I trust that when the entire story is told, it will be realized that Tom will be one of the great contributors to making Northern California a mecca for venture capital.

Samuel D. Colella
Managing Director
Versant Ventures

Managing Director
Institutional Venture Partners

Menlo Park, CA
December 20, 2001

INTRODUCTION by Reid W. Dennis

Although I had met him previously on several occasions, my first meaningful encounter with Tom Perkins occurred early in May 1974, when we were both invited to speak at a seminar on venture capital sponsored by the University of Washington in Seattle. A month before, Burge Jamieson, Burt McMurtry, and I had successfully closed a \$19 million fund, Institutional Venture Associates [IVA], and now we were all trying our best to generate deal flow. It was a quiet time in the venture capital industry: interest rates were starting to go through the roof, the stock market was about to begin a slide into the doldrums, good entrepreneurs were scarce, and good “deals” were hard to find!

Tom’s presentation was in keeping with the academic setting, for he attacked the venture capital process the same way he would have attacked any complex engineering problem. I was fascinated by the way that his mind dealt with the subject; he was thoughtful, analytical, and very detail oriented. It was obvious that he was very bright and that he had set very high goals both for himself and for his firm. He was determined to be a leader in this industry, and I hoped that, one day, I would have the opportunity to work with him.

That opportunity became a reality a couple of years later when Kleiner Perkins agreed to join IVA as an investor in Collagen Corp., and Tom agreed to go on the board of directors. Collagen was a struggling medical device company, and Tom was a very conscientious and constructive board member. However, we were both somewhat dismayed by the problems of dealing with a highly politicized Food and Drug Administration. After one particularly discouraging meeting, Tom took me aside and said, “Reid, you have gotten this whole process backwards! You are supposed to invest a little money up front and use those funds to reduce the risk before you put in the rest of the money! In this deal, we have to put up all of the money before we reduce the risk! That doesn’t make any sense at all!”

Tom certainly achieved his primary business goal. It was his leadership that created the #1 firm in the venture capital industry, and there is a wide gulf between that firm and the firm next in line.

Reid W. Dennis
Partner Emeritus
Institutional Venture Partners

Menlo Park, California
January 6, 2002

INTRODUCTION by Franklin "Pitch" Johnson

Tom Perkins started off in venture capital in 1972 with a resume typical of the rest of the small group in the business on the West Coast: Engineer, MBA, and a strong background in an operating business. Within a couple of decades, however, he was the prime mover in building the greatest name in venture capital and one of the very top firms in performance. Tom was an entrepreneur in venture capital with all the desire to win and unwillingness to fail that characterized the best people he backed.

Tom added some things to the business that were new, or at least gave them much more emphasis. The first was the idea of incubating people and ideas inside the venture firm. Many of the entrepreneurial ideas were created in part by Tom. Tandem Computers, and its founding president, Jim Treybig, lived in its formative months inside the young firm of Kleiner and Perkins. The same was true of Bob Swanson and Genentech. In case of both these companies, Tom led the way in getting them other investors when they were ready to leave the K&P offices. He remained an influential figure, usually as chairman, in the companies he helped create.

A second major innovation was the use of organized public relations. K&P did not hide its light under a bushel. It sought and received a lot of attention in the press, and thereby drew attention to its deals as well. Prior to Tom the idea was to quietly go about your business, be known in the venture and the financial communities, but not to seek attention elsewhere. The fame of Kleiner Perkins Caufield and Byers today rests not only on its creation of many great companies, but on its well-instrumented approach to public relations, which, to complete the circle, has brought it many top deals and people.

A third innovation was to lead the way in the care and feeding of limited partners. K&P and KPCB have not only given strong returns to limited partnerships, but they have, from the earliest days, made major productions of annual limited partners meetings, both as to content and enjoyment. They also, early on, made meetings of their entrepreneurs an institution, and organized investment opportunities for them. In short, Tom's attention to marketing has guided the life of the firm and shown the way for the venture business.

None of the creative ideas and innovations would have made a big difference, however, without the brains and emotional brawn of Tom Perkins. Tom stood out, during his career, for having clear-cut ideas of what he wanted in a given situation, and deflecting or changing those ideas took a lot of energy from his colleagues. He was, however, generally right. A dead-honest man, he has always made clear where he stood, and was and is always good for his word.

Although Tom Perkins was not one of the earliest venture capitalists, no one person has had a greater impact on shaping venture capital into the way it operates today.

Franklin "Pitch" Johnson
Senior Partner
Asset Management Associates

San Francisco, California
December 30, 2001

INTRODUCTION by Thomas D. Kiley¹

Tom Perkins wears charisma in the easy way a fine Italian suit drapes the shoulders. In his presence you begin to understand the impact President John Fitzgerald Kennedy had on those around him --the world seems morning fresh, bathed in photographer's light. His attention makes you feel special.

I recall making a presentation to Genentech's Board of Directors at a time when its membership included David Packard, Tom's own mentor. Mr. Packard compensated for a hearing deficit with aids connected to a directional microphone. When he turned the latter in your direction the world lit up--turned it away and twilight fell. Being with Tom is like that. Because he has done it all and because of the high standard he represents, people around him are encouraged to reach for the best within themselves. Doing so has often been to their financial benefit, but I claim the effort he inspires has as much to do with self worth as with net worth. As Rudyard Kipling's Bandar-log would cry to one another from their monkey purchase on trees above Bagheera the panther: "He noticed us!"

Tom Perkins is too perfect. Better looking than Kennedy, lanky and laconic like Gary Cooper, impeccably dressed but laid back enough like a surfer to influence entrepreneurs in long hair and sandals, and with a mind sharp enough to cut diamonds in the rough, he has cut through life like a knife through butter. The first thing you need to know about him is that he is too lucky to be let to live any longer, lest mere mortals despair of rivaling his achievements.² Yes, I admire the guy.

Not to say Tom doesn't sometimes suffer. I remember an evening when in the garage of his Belvedere, California home I was shown one of his collection of classic cars, a Bugatti that needed lubrication with castor oil. "Run the engine for ten minutes, swallow the fumes, and run for the gentlemen's room."

Tom was a gentleman with Bugatti sculptures (yes, one of a black panther) in a drawing room to which one might be conducted to demonstrate, I thought, "You can live like this if you breathe new life into industries the way Boy Scouts start with tinder and breathe it into fire" -- the way he did, always in compliance with precepts as worthy as the Boy Scout oath, supplemented by the various "laws" attributed over time to him and his partner Eugene Kleiner (about whom more later).

Not to say Tom hasn't *really* suffered. The tile setters who made each fountain pool at Hearst Castle always set one tile awry, lest they challenge God's perfection. God reminded Tom we live in an imperfect paradise when his wife Gerd (née Thune-Ellefsune), a vivacious and brainy Norwegian beauty queen, contracted cancer. Gerd sharing Tom's indomitable will, he sharing her pain, together they endured a years'-long journey through the sharp edges and dark valleys of conventional and experimental therapies before she succumbed. No one claims life is a bed of roses.³ But as a monument to love and memory, Tom later restored completely an ancient ruin in Norway where Gerd

¹ As an attorney, Mr. Kiley represented Genentech from 1976. In the period 1980-88 he served variously as vice-president and general counsel and as vice-president for corporate development.

² As to luck, Louis Pasteur said: "Fortune favors the prepared mind." Tom prepares himself (and others) for good fortune.

³ I am reminded of Bob Swanson's heartbreak on hearing his father say: "My son, the big deal, can't cure me of cancer," [Personal Communication, Robert Swanson to Thomas Kiley] and of Bob's own untimely demise from the same scourge. Consider how many other lives have been and will be extended by the biotechnology these men began.

had played as a young girl, adding for good measure a community center and performance venue there. Always the man has grace, even when standing in ashes.

Tom later married for a time Danielle Steele, a novelist who has affected the world as much as Tom has in his own, if I may say, more lasting way. I don't know any more about that than I have said. But Tom and Danielle together are in their different ways exemplars of the special flavor of the San Francisco Bay area: style, wit, accomplishment, wealth hard-earned. Neither of them is overstated, neither is understated.

Understatement is not a principal ingredient of Tom's oral history, where he claims a substantial share of credit for creating the biotechnology industry. In my view, he owns that share.

Let's start with what some have referred to as "Perkins's Law": "Market risk is inversely proportional to technical risk."⁴ If value is evident and technology hurdles low, existing players will preempt opportunity. It follows what remains to startups will be difficult on one or both horns of the risk dilemma. A corollary of Perkins's Law has always been to "fail fast" or overcome technology risk by the lowest cost proof of principle.⁵

When Bob Swanson first proposed recombinant DNA as ripe for commercialization, risks of both kinds abounded. Could bacteria express human hormones from synthetic DNA? Amid controversy over "genetic engineering," would the environment accept and approve injection of medicinal proteins so made?

Bob's initial plan built up projections of return based on human insulin economics. Ultimately, the first science, done in collaboration with The City of Hope National Medical Center and The University of California at San Francisco (so no laboratories would be constructed at Genentech expense, and prematurely so), proved the principle by expressing somatostatin, a protein far less complicated than insulin. Insulin took a year longer and required substantially more money than Perkins's initial investment in Genentech. But the proof of principle seeded by the initial investment reduced risk in the analogous insulin project, established patent rights that protected the insulin opportunity, and reduced market risk by promoting partnership with Eli Lilly, an insulin market leader. And by this point Kleiner Perkins had invested not more than \$200,000.⁶

It is possible Tom's parsimony impressed on Bob what he later used to make a private company public in hard times--the financial discipline to eke out profit on short resource, by managing to the bottom line. To meld metaphors, did Bob learn from getting pushed through Tom's financial keyhole how to make chicken soup from chicken feathers?

Along the way, a time came when it appeared the somatostatin experiment had failed and the principle was unfounded. Swanson told me "his life passed before his eyes." But he had the moxie to

⁴ David A. Kaplan, *The Silicon Boys and Their Valley of Dreams*, (New York: William Morrow, 1999) p. 176. Kaplan's book holds a wealth of additional information concerning Perkins's background, neither repeated here nor in the oral history within.

⁵ According to Perkins's partner John Doerr, Kleiner's First Law is "identify the risk up front and get rid of it." Ibid., 193. Whether a typesetter transmuted this from Kleiners', implying the venture capital firm Kleiner Perkins, is unknown.

⁶ At the peak of trading on the day four years later when Genentech became a public company, the value of shares so purchased had increased 800 fold.

ignore “Kleiner’s Second Law”--“There is a time when panic is the appropriate response,”⁷ and soldiered on to success.

Now, before attempting to answer the question how to parse credit among Swanson, Perkins, and others for the business genius of Genentech’s founding, I’d like to make a side journey to what others have called “Kleiner’s First Law”⁸--“When the money’s available, take it.”

According to Tom, in a “heated discussion,” Bob resisted as premature Tom’s proposal that Genentech undertake a public financing in 1980.⁹ Bob’s own oral history¹⁰ is silent on that point, though in later years I often heard him refer approvingly to this First Law. All are aware of the celebrated IPO that ensued October 14, 1980 and proved the proposition that public finance would be available for biotechnology companies. But Perkins acknowledges the offering “was a huge amount of additional work for [Swanson]. Not for me.”¹¹ With the company on a sound footing and Perkins’s firm able in law to distribute its holdings shortly after,¹² Tom nevertheless remained active as chairman for many years, consistent with the hands-on, value-added traits that have always been characteristic of the Kleiner Perkins approach.

Now as between Bob and Tom and for that matter Eugene Kleiner, whose experience with Bob preceded Tom’s own, how to apportion credit?

I will begin by paraphrasing Tom: “Bob did the work.”¹³ But if Swanson was the father of the biotechnology industry, as is often said, Perkins was plainly his mentor then and for a long time to come. The early years of Genentech seem to bear the thumb prints of both Perkins and Kleiner and all their eponymous laws, and some that might be called after Swanson himself --“science first,” “share the wealth,” “share the credit,” “focus, focus, focus,” and so on.¹⁴

In the early days of Genentech, it sometimes seemed annual strategies were divined by looking back at what had been accomplished, largely from necessity, in the year just past. It is all too convenient, in the retrospective lens of a quarter century and more, to assign prescience to a time when the “sciences” of both biotechnology and venture capital at large were germinal.

Consider that Kleiner Perkins’s first fund, raised only four years in the advent of Genentech, was a modest \$8 million. Consider that of the companies it funded, only Tandem Computers and Genentech attained prominence sufficient to countenance without embarrassment the promulgation by

⁷ *Kaplan*, n. 4, p. 176.

⁸ *Ibid.* But Kleiner doesn’t recall having ever said this.

⁹ See this volume at p. 12.

¹⁰ Robert A. Swanson, “Co-founder, Chairman, and CEO of Genentech, Inc.,” conducted in 1996-97 by Sally Smith Hughes, Ph.D., Regional Oral History Office, The Bancroft Library, University of California, Berkeley, 2001.

¹¹ See this volume at p. 12.

¹² Not to say they did so all at once--more likely they managed distribution consistent with the combined needs of the company and their limited partners, to the ultimate benefit of both, as is the style.

¹³ And Bob had the vision and took the personal risk and devoted 100% of his energies and hired all the people that helped him pull the weight.

¹⁴ But while Bob excelled at another quasi-law, “management by walking around,” conventional wisdom says Hewlett and Packard invented this, and likely Perkins was the agent who passed this on to Bob from his HP experience.

Perkins and Kleiner of venture capital “laws” of any kind.¹⁵ Could Swanson or Jim Treybig, Tandem’s founder, have learned entrepreneurial genius elsewhere than in the hothouse environment of Kleiner and Perkins? Would Kleiner and Perkins have been launched on a meteoric trajectory without Swanson’s Genentech vision and Treybig’s own pursuit of fail-safe computation? Were the “laws” derived to some extent from what happened at and because of Genentech and Tandem? It is the province of history to ask not what might have happened in other circumstances, but rather what happened in particular circumstances, and why.

What happened in known circumstances was Kleiner Perkins launched Treybig and Swanson, or Swanson and Treybig launched Kleiner Perkins, or in a beautiful convergence of mind, will, energy and timing they together contributed mightily to lifting America from the “economic malaise” bemoaned by President Jimmy Carter in the wake of the Arab oil embargo and under the supposed threat of Asia’s “tiger economies.”

Whether “laws” were divined only in a *post mortem* (or, better said, *post vita*) way, or only after circumstance rubbed one’s nose in them, it is fair to say no one involved ever after forgot these, and all commenced to apply them in a disciplined way to building engines that power technology development today.

In the end, Tom Perkins and the venture capital firm he co-founded plainly have been a major (perhaps after Hewlett and Packard and Intel the principal) tributary watering the Silicon Valley (or according to one’s prejudices the “Siliclone” Valley), to its current green state as the new Fertile Crescent.

Speaking of water, Tom has always loved the sea and sailing ships. As a fellow fan of Patrick O’Brian’s remarkable series of seagoing novels set in the Napoleonic wars, I never envied Tom more than when he told me O’Brian had accepted his invitation to sail with him among Mediterranean ports along tracks depicted in the books. To Tom’s surprise, the author proved impatient at the slow pace wind power imposed on getting from one destination to another. O’Brian forgot what Ursula K. Le Guin knew and Tom’s whole history illustrates:

“It is good to have an end to journey towards, but it is the journey that matters in the end.”

May Tom’s future journeys continue to matter as much as those so far completed. In the end, he will be seen to have mattered a great deal. May the wind always be at his back. May the Wind Maker hold Tom and Gerd, and all whom Tom has loved, in the palm of His hand.

Thomas D. Kiley

Hillsborough, California
January 15, 2001

¹⁵ It needs to be said that both had earlier founded or co-founded entrepreneurial companies in which proto-laws might have been born--Kleiner at Fairchild Semiconductor; Perkins at University Laser/SpectraPhysics, with simultaneous seasoning from driving Hewlett-Packard toward the computer business. (Interestingly, Perkins served on the board of Tandem for 23 years, joined the board of Compaq Computer when it acquired Tandem, and will likely serve on the board of Hewlett Packard if its pending acquisition of Compaq is approved by shareholders, thus bringing him full circle.)

INTRODUCTION by C. Richard Kramlich

From my vantage point, Tom Perkins has made significant contributions to both venture capital and science.

Tom was tapped by David Packard in 1969 to develop Hewlett-Packard's initiative in computers. He chose to lead from H-P's strength focusing on scientific and technical applications and then migrating to general business applications.

He & Eugene Kleiner formed their firm in 1972. After some trying early investments, they developed the style that represents Kleiner Perkins Caufield & Byers today. Genentech caused the biotechnology revolution & Tandem Computers initiated a new form of computing called redundant or fail-safe computing. Tom was the chairman of both companies.

Tom found time to be the president & chairman of the National Venture Capital Association (NVCA). His intelligence, acerbic wit, and sense of adventure help form a man of great depth and breadth. He is a world-class sailor and understands and appreciates art as well.

C. Richard Kramlich
Senior Partner
CMEA Ventures

San Francisco, California
December 21, 2001

INTRODUCTION by Floyd Kvamme

On my first day in venture capital back in March of 1984, Tom took me to lunch in SF. I'll never forget a comment he made in helping train the newcomer, "Remember, Floyd, all start up companies have one thing in common--they all get in trouble. It's how they and you on the board handle their trouble that separates the winners from the losers." That advice has certainly served me well--both in its accuracy, in its application, maybe most importantly in its validity.

Tom understood that the CEO had a tough job and that supporting him or her was a critically important part of our role. He was very much in the "Back 'em or replace 'em" school, but I don't remember his exact words on this point. He certainly didn't try to take any credit for the successes of companies he supported; he wanted that to go to the CEO and more often than not he "backed 'em" understanding that excessive changes at the top could be ruinous.

A related point is that he never wanted media attention for KPCB (which ultimately did happen), he always pushed the press and other media to the companies. He had a clear understanding that our success as a firm was 100% linked to the success of the companies we backed and, thus, always sought to promote the companies.

Tom has a very wry sense of humor--specific examples elude me, but he was always a great audience for humor as well. I remember the day Frank Caufield mentioned that a specific presenting entrepreneur had only one problem--a charisma bypass. Frank had so perfectly captured the problem that the humor of it caused Tom to burst into incredible laughter.

Tom was a perfectionist. He wanted all the details done right. It showed in everything the firm did. It had to reflect well--from the office look, to his personal appearance, to his boat projects. Tom has incredible taste and uses it well.

Tom cared a lot about the profession. He served the NVCA [National Venture Capital Association] well and helped others understand the importance of the venture capital field. I thought it particularly appropriate when he was honored by the NVCA for his lifetime achievements in the field.

Floyd Kvamme
Senior Partner
Kleiner Perkins Caufield & Byers

San Francisco, California
January 7, 2002

INTERVIEW HISTORY--Thomas J. Perkins

"I can't remember at what point it dawned on me that Genentech would probably be the most important deal of my life, in many terms. The returns, the social benefits, the excitement, the technical prowess, the fun." (page 24)

Thomas J. Perkins is one of the most historically significant financiers of the twentieth century—because of the venture capital firm he built, because of the tone he set and the image he embodied for an entire class of financiers, and because of the deals he closed. Genentech was one of the most important deals of his life.

This set of interviews is a Genentech-centric view of Perkins's storied life. There is much more to be said by Perkins about his life. For example, here he only touches upon his years moving Hewlett-Packard into the computer business, his philosophy of venture capital, the role of Kleiner Perkins Caufield & Byers in continuing to create new industries, the equal significance of Tandem Computers in his professional life, his passions for fast cars and sleek sailboats, and his wife and family. Still it is remarkable how much of his life and ideals are woven into the fabric of Genentech.

Perkins is obviously a big picture guy and a people person. Over the years he has seen and signed thousands of deals for hundreds of companies in dozens of industries. Even with the most important deals, as you'll read here, his memories are not about amounts of cash raised and detailed shifts in governance but rather how those deals changed the relations among people. Some of the most poignant moments in these interviews are Perkins's insights into the personalities of Bob Swanson, Kirk Raab and the other people dedicated to the success of Genentech. Perkins never mentions how much he made on the Genentech IPO; what he remembers best is the excitement that swirled around that IPO. For various reasons, Roche's impact upon Genentech since 1990 has been a historical enigma. Perkins here describes it in very human terms, elegantly, as Roche's "good behavior." (page 39)

Readers will note information here not widely known about Genentech's history: Perkins's prior failed investment in Cetus (page 3); his efforts to alter the initial business plan to subcontract scientific work so that "for next to nothing we had removed a world class question about the risk" (page 6); how Herb Boyer broke an impasse on timing of the public offering with his poignant joke that "he always votes with his friends" (page 12); and about why Genentech kept the Roche deal quiet until it closed (page 37).

Perkins claims credit for inventing the financial instruments of junior common stock and clinical partnerships (page 10). In his own oral history interview, so does Fred Middleton, Genentech's first chief financial officer. The documentary record, or a frank discussion between the two, may sort out these competing claims. Most likely, both Middleton and Perkins played key roles at each stage of moving these vehicles from conception to reality: isolating the need, discovering an analog, working through the system of details, and converting the plan into actual cash. What is significant about these claims is not that they are competing, but that two leaders in venture capital agree that the clinical partnerships and junior common stock are very historically significant. Indeed, they are.

Venture capital created biotechnology as an industry. Both industries—venture capital and biotechnology—surged in prominence in the 1980s and 1990s through symbiosis more than coincidence. Into the 21st century they may also fade apace. Perkins calls the historical role of venture capital in pharmacology "an anomaly" (page 50). The history of medicine is replete with examples of

new technologies coming out of university or government laboratories that only succeeded after being subsumed into big pharmaceutical firms. Recombinant DNA, likewise, could have, and eventually did, fit quietly and easily into the laboratory structure of big pharma. In Genentech's case, though, venture capital created a petri dish upon which the technology of recombinant DNA became an independent firm from which sprouted an entire industry.

Independence, on many intellectual and financial levels, drove the Genentech founders. These founders were well aware that since 1958 only one new firm—Syntex of Palo Alto—had succeeded at integrating all pharmaceutical operations from discovery to marketing. So rather than follow some extant model for becoming a fully integrated firm, they invented their own business model. Perkins as Genentech's venture capitalist, helped invent that model. Venture capitalists did not simply infuse molecular biologists with cash and their willingness to risk it. What venture capitalists do well, that no other types of financier really try to do, is capture the equity in a technical idea. Genentech's independence was rooted in the founders' firm belief that they should hold the equity in the brilliance of their sciences. Perkins encouraged that. And Genentech's independence was created and maintained, on a more prosaic level, by the novel alliances they forged and by their ability to invent new financial instruments.

David Packard, the lion of Silicon Valley, joined Genentech's board early on at Perkins's request. Perkins relates Packard's comment that his involvement with Genentech taught him nothing about DNA, but that he "learned an awful lot about financing." (page 21). As much as it was a hotbed of science, Genentech was a hotbed of financial innovation. Bob Swanson and Fred Middleton, both trained in finance, were at the tops of their games and worked with only the best and the brightest among their colleagues in law and banking. But at Genentech, on matters of finance and governance, Perkins most likely got the last word.

The San Francisco Bay opens northward toward Tiburon in the expansive view from Perkins's present-day office in the KPCB suite atop Embarcadero Center. Other than floor-to-ceiling windows, Perkins's office is sparsely decorated, surprisingly empty of the Lucite tombstones of closed deals that dot most venture capital offices. It is also largely empty of paper, and Perkins noted that he had a tendency to toss out any old documents that did not need to go to warehouse storage. We did three interviews there on Wednesday mornings in the months following the 11 September 2001 terrorist attacks on New York. Perkins was polite enough to not gaze thoughtfully out of the windows at the sailboats gliding by below, wishing he was captaining one instead, though we did occasionally pause in thought at airplane noises.

Kathy Jewett, Perkins's long time assistant, scheduled our interviews then held on to the growing stack of telephone messages until we were done. Tom Kiley, Genentech's former chief counsel, asked some of Perkins's friends in the venture capital business to write introductions to this volume, and all responded enthusiastically. My thanks to them for their help, and to Tom Perkins for such engaging and pleasant conversations.

Glenn E. Bugos, Ph.D.
Principal Historian

The Prologue Group
Redwood City, CA
October 2002

Biography

Thomas James Perkins

Thomas J. Perkins was born on 7 January 1932 in Oak Park, Illinois, the son of Harry H. and Elizabeth H. Perkins. He grew up in White Plains, New York. In 1953, he earned his bachelor's degree in electrical engineering from the Massachusetts Institute of Technology. Upon graduation he spent a year on overseas assignments with Sperry Gyroscope Company repairing airborne armament guidance systems. In 1957, he earned his master's degree in business administration from Harvard University.

Perkins moved to the San Francisco Bay area to work with the Hewlett-Packard Company, first as a machinist and then as western sales manager. Perkins quit to spend a year as consultant with Booz, Allen & Hamilton. In 1961, David Packard asked Perkins to join Optics Technology, a new company that Packard and Hewlett personally had backed. Three years later, Perkins resigned from Optics Technology following a boardroom battle with its founder.

In 1965, Perkins founded University Laboratories, Inc. along University Avenue in Berkeley. He built the company based on various patents he had earned in the manufacture of self-contained, adjustment-free, low-cost, shock- and water-resistant helium-neon gas lasers. His lightbulb-like lasers found wide industrial applications. He remained chairman of University Laboratories until 1970 when it was merged into Spectra Physics, Inc. Perkins joined Spectra Physics as a director, and Spectra Physics became one of the world's leading laser companies.

Also in 1965, Perkins returned to Hewlett-Packard as the business manager of its corporate research laboratory. One laboratory project was a minicomputer which became the HP 2116. In 1966, Packard asked Perkins to serve as general manager of Hewlett-Packard's new computer division. The Hewlett-Packard computer division quickly became the largest and most profitable business line within the company, shadowing its traditional instrumentation divisions. In 1970, during David Packard's tour of duty as Deputy Director of Defense in Washington, D.C., Perkins served Hewlett-Packard as director of corporate development, reporting directly to William Hewlett. Perkins left Hewlett-Packard in 1972 to become a venture capitalist.

In the summer of 1972, Perkins and Eugene Kleiner founded Kleiner & Perkins and had raised their first fund by January 1973. The \$8 million fund, driven largely on investments in Tandem Computers and Genentech, showed a 41.5 percent compounded gain after its first decade. In 1978 they reorganized their firm by adding Frank Caufield and Brook Byers as general partners, and raised their second fund, of \$15 million. In 1980 they raised a third fund of \$55 million. Upon the raising of the \$150 million KPCB IV fund in 1986, Perkins nominally retired from the senior partner role. Kleiner Perkins Caufield & Byers, with offices in Menlo Park and San Francisco, remains the most prominent venture capital firm in Silicon Valley, and the most successful.

Perkins became chairman of Genentech, Inc. in April 1976 when his venture fund made the first investment in Genentech. He remained chairman of its board of directors until February 1990, when Genentech founder Robert Swanson assumed the chair. Perkins continued to chair the executive committee of the board, and remained a Genentech director until March 1995. This interview deals primarily with his contributions to Genentech.

Perkins also served as chairman of the board of directors of Tandem Computers Inc., Acuson, Inc., Alliant Computer Systems, and twelve other high-tech firms that he helped found. He also served as

a director of Compaq Computers, News Corporation Limited, Corning Glass Works, Home Health Care of America, Inc., Collagen Corp., LSI Logic Corp., Hybritech Inc., Econics Corp., and Vitalink Communications Corp. He is currently on the board of directors of the Hewlett-Packard Company.

Perkins served as president of the Western Association of Venture Capitalists in 1975, and as president and chairman of the National Venture Capital Association from 1980 to 1982. He has been a trustee of the San Francisco Ballet since 1980.

Perkins is an avid sailor. He belongs to the New York Yacht Club, designed the yacht *Andromeda La Dea* with ship designer Fabio Perini, and restored the *Mariette*, a 1915 Nathanael G. Herreshoff gaff schooner which he docks in Antibes. He assembled one of the world's great collections of supercharged roadsters from the 1920s and 1930s, won numerous awards for his restorations, and served as president of the American Bugatti Association from 1983 to 1985. He lives on Golden Gate Avenue in Belvedere, California. He and his wife restored Plumpton Place in East Sussex, which is listed in the Domesday Book, and where they recreated the rose garden designs of Gertrude Jekyll.

He married Gerd Thune-Ellefsen on 9 December 1961. They have a son, Tor Kristian, and a daughter, Elizabeth Siri. Gerd died on 20 August 1994 following a battle with lymphoma. Perkins was knighted by the King of Norway for his role in the reconstruction of a historic site near Hamar, Gerd's birthplace in Norway. Perkins was married to best-selling novelist Danielle Steel from March 1998 to August 1999, who dedicated to him her novel *The Klone and I* (1999).

Publications:

"Cruising with Patrick O'Brian: The Man and the Myth," *Latitude38* (August 2000).

Classic Supercharged Sportscars (Corte Madera, California: Paradise Press, 1984).

Experiments in Physical Optics Using Coherent Laser Radiation (Belmont, Ca.: Optics Technology, 1962).

"A survey of two-phase servomotor amplifiers," *Thesis*, MIT Department of Electrical Engineering, 1953 (with Jan Diedrik Otten).

INTERVIEW WITH THOMAS J. PERKINS

[Interview 1: October 24, 2001] ##¹
[San Francisco, California]

Perkins at Genentech, from 30,000 Feet

Bugos: Perhaps we could begin this interview by you giving some structure to your experience with Genentech, starting with the formal positions you held there, going through the list of your major accomplishments on Genentech's behalf, and finishing with how you think historians should or will portray Genentech and venture capital. So if you would start with your resume, please.

Perkins: Well, [Eugene] Kleiner and I started the venture capital partnership in 1972. Genentech was one of the investments in the first partnership. There were two major investments in that first partnership, and they share a common theme. Tandem Computers and Genentech had the common element of being founded by employees of the partnership. Jimmy Treybig was a limited partner and an employee of the partnership, as was Bob Swanson. Both companies were unusual in being done that way, and none had been done that way before--in the venture capital industry as a whole.

Kleiner and I were the original financial backers of Genentech, and I became the chairman of the board from the beginning. Really from before there was even a company: just Bob Swanson, Tom Perkins, and a checkbook. We'll get into how all that worked. I remained chairman of the board for about twenty years, I guess. Eventually Bob Swanson became chairman of the board at the time of the merger/investment from Roche. I left the board not much longer after that and have not been involved with the company since. That's it from 30,000 feet. [laughter] Maybe we should start with: What was venture capital like in the 1970s? Why did we hire Bob Swanson? How did the idea for Genentech come about? Does that sound right?

Bugos: Sounds perfect.

¹## This symbol indicates that a tape or tape segment has begun or ended. A guide to the tapes follows the transcript.

First Kleiner & Perkins Partnership

Perkins: These days venture capital is a very big deal, though somewhat deflated at the moment. Billions and billions of dollars are invested in venture capital. It's hard to imagine that there always wasn't venture capital. But back in the early 1970s venture capital was almost an unknown business.

Kleiner and I started Kleiner & Perkins. We originally started in Menlo Park, and then after about a year moved up to San Francisco because we thought it was more central to what was going on--which may or may not have been true, but we both like San Francisco. We had only a part-time secretary, a young lady who worked for us from just nine until twelve, because the phone never rang. If it did we'd answer it ourselves. You can't believe how quiet it was. Back then you could have put all the venture capitalists in America into this office--which is maybe twenty by twenty feet. I'm not exaggerating. I could name all their names, even now. Just a handful of people, in New York, a couple in Chicago, a few out here. The total amount of money in the industry was certainly less than 200 million dollars. New money was being raised at the rate of ten, twenty million dollars per year. So we're talking about a cottage industry. Very small.

Kleiner and I, with our first Kleiner & Perkins partnership of 8 million dollars, were the largest venture capital partnership in the world. It's just hard to imagine how different it was. Of course, Kleiner and I had a lot to do with changing it. Tandem and Genentech and one other deal with our first partnership were very successful, so we were able to raise additional money and keep going. Over the years, Kleiner Perkins has been the most successful venture capital partnership. Well, I can go beyond that. It's been the most successful financial institution in the history of the world. We might have to modify that statement if the Medicis and the Rothschilds make their data available. But until they do, I'll stand on that statement. We've had returns of about 40 percent per year, compounded, for coming up on thirty years next year. Nobody else has done that well.

Genentech was one of the key ingredients, not only to our success, but to the success of high-tech venture capital in America. And to its success throughout the world, because it's been copied everywhere else. Genentech accomplished a lot, not just scientifically, but in the business world as well.

Genentech was founded in 1976. Tandem had been founded in 1974. Kleiner and I felt that we needed help in finding deals, creating deals, getting the business going. We had hired two employees to help us, though they didn't overlap. The first was Jimmy Treybig, who had worked for me at Hewlett-Packard. He and I put together this company called Tandem Computers. It was a mixture of our ideas. He put more into it than I did, but I was pretty involved with it technically. As with Genentech, we couldn't find anybody else to invest in Tandem. So Kleiner and I backed it 100 percent, in the initial phase at least, and got it going. By the time we got around to Genentech, Tandem Computers was clearly going to be a success. How big we didn't know, but it was on its way to an initial public offering. We were encouraged by that formula.

Hiring Bob Swanson

Perkins: So we hired Bob Swanson, whom Eugene Kleiner had known through venture capital circles. Bob had worked for Citibank in their venture capital operation and he and Eugene had been involved in a failed deal. Eugene had been impressed with Swanson's ability to think straight and get things done. So when Bob was looking for a new position, we hired him. That would have been about late 1974. We were in Embarcadero Center Two then, on the top floor.

Bugos: Did you have any other employees?

Perkins: No. Well we had the secretary and a bookkeeper. Very small operation. But Kleiner Perkins is still a small operation. We don't have huge numbers of people.

Bob worked on various deals for us. And, I have to say, not very successfully. Eugene, in particular, was increasingly unhappy with Bob. He didn't think much was going to be happening.

Kleiner & Perkins Invest in Cetus

Perkins: About that time we had made an investment in Cetus. To be kind to Cetus, I'd have to say that, in my opinion, it was a high-class fraud. Soon after we made that investment we became very disillusioned with the principals there. We felt that nothing was going to come of it. Their original business plan was to automate biological laboratories. It was not to do genetic engineering of any sort. But to make an effort to save our investment in Cetus, we put Bob Swanson on the case, to see if he could come up with something. He started spending as much time as he could *on* that company, though they wouldn't let him spend much time *at* their company.

He arranged a luncheon with Professor [Donald] Glaser of U.C., a Nobel Prize winner, the management of Cetus and, since I was available, me. We met to see if Glaser could inspire the people at Cetus to do something that would amount to something. At that lunch, Glaser covered the horizon with all kinds of ideas. At one point he mentioned that he thought it might be possible to do--I don't think he used that term--gene-splicing. It had never been done before, but he was aware of the work that professors [Herbert] Boyer and [Stanley] Cohen were doing. He just sort of rambled on about it.

We became very interested in that gene-splicing--all of us, Kleiner, Swanson and myself. We tried to encourage Cetus to do it. Bob tried very hard. I proposed to Cetus that we set up a separate division of Cetus, to do that, and put Bob in charge of it. They wouldn't hear of it. It was absolutely rejected. So we reached a dead end with Cetus. Kleiner had kind of reached a dead end with Swanson, so we advised Bob that he should seek employment elsewhere.

Bugos: Can I interrupt here? How big were you into Cetus? Was it a major investment for you?

Perkins: Well, of course, we didn't put much into anything in those days. It was probably half a million dollars. Which was a big deal in those days. It was enough that we were concerned about it. The problem was that I think we had been conned, by doctors [Ronald] Cape and [Peter] Farley, into not only investing but investing at too high a price. The morning after, so to speak, we didn't think this thing would ever get us an investment return. We were completely disillusioned.

Swanson and Boyer Found Genentech

Bugos: OK. So, Bob you let go?

Perkins: Yes and no. We let him go, but he didn't leave. He was still there in the office, which we said was fine. At the same time, literally, he began to explore gene-splicing with Boyer. This is well documented, their ten minute meeting, but I'll tell you from my perspective.

So Bob is sort of looking for another job. He told me he really planned to get something going in this field of biotechnology. That's what he really wanted to do and he asked me: what did I think? If he could get something going, would I be interested in helping him do it, both with my time and money? I said, "Yes, I would." He was a little encouraged, so he sought out Herb Boyer whom I hadn't met yet. They had what has become a very famous meeting. It was supposed to be ten minutes of Boyer's very busy time. Bob met him, just the two of them, they went out to have a beer, they kicked the ideas around. Boyer kept saying it's ten years of basic research and it might work, but it's far in the future. Swanson kept asking why? why? why? And he was able to bring Boyer along to the point of view of: "Well, maybe. Why not? Maybe we can get going on this quickly."

Initial Financing

Perkins: A week or so after that they had put together the nucleus of a business proposal to do genetic engineering, Bob brought it to me for financing. It was very conventional, in that I would put up the money, they would hire the people, and it would be a straightforward venture. I took the view that the technical risk was so enormous. I remember asking, "Would God let you make a new form of life like this?" I was very skeptical. I said that I would agree to meet with Boyer. He came in that same week, and we sat down in our conference room for about three hours. Of course, I have a background in physics, electronics, optics, computers, lasers. Biology was never a strength for me. I really didn't know what kind of questions to ask. So I said, "Let's just go through it, step by step. Tell me what you're going to do. What equipment you'll need. How will you know if you've succeeded? How long will it take?" I was very impressed with Boyer. He had thought through the whole thing. He had an answer for all those questions--you'll need this equipment, these basic chemicals, and take these measurements, and on and on.

I concluded that the experiment might not work, but at least they know how to do the experiment.

Risk Reduction in the Business Plan

Perkins: I still felt the risk was stupendous. The next day I got together with Swanson, and I took the view that I'm willing to go along with this thing but that we've got to figure out a way to take some of the risk out of it--something instead of me giving you all of the money, then you renting the facility, buying the equipment, and hiring the people. With that approach, you'll have spent maybe a million dollars by the time you get to actually performing the experiment. Then if it doesn't work, it's all over and all that money is lost. "Can't we figure out some way to subcontract this experiment to different institutions each of which already had part of these capabilities?" Nobody had all of the capabilities, that was very clear. In order to give some incentive to do that, to subcontract the work, I said I would be willing to finance the thing in phases, to put up less money up front. If this thing starts to work then I'll put up more and more money at higher and higher prices, and you and Boyer will end up owning more of the company than if we just do it the conventional way. I'll want to own most of the company if I'm going to take all of that conventional risk. Swanson thought that was not a ridiculous suggestion. He went back to Boyer and a few days later they had come up with three institutions that could do this work.

Subcontracting the Research

Perkins: Then we entered into a long series of negotiations with those institutions. With hindsight, we should have negotiated longer and harder, because it led to incredible patent disputes. Even as we speak there's a jury trying to decide whether the City of Hope is owed another four hundred million from Genentech, based on that very original deal that we put together. In my opinion, they are not owed a penny. Anyway, that's getting head of the story.

So the three institutions were the University of California in San Francisco (the U.C. medical school), the City of Hope medical research foundation down in southern California, and Caltech. The U.C. component was to involve Herb Boyer's expertise in splicing, or opening and re-closing plasmids in bacterial hosts. City of Hope had technology to synthesize genes using just analytical chemistry techniques, not biotechnology in any shape. There were two groups in America that could have synthesized the gene--at MIT under professor [Har Gobind] Khorana and then doctors [Arthur] Riggs and [Keiichi] Itakura at the City of Hope. Caltech had the ability to test for results.

Swanson did most of the contract negotiations with these institutions. I was involved just in checking and agreeing to it. This is a whole story in itself that could best be told by Tom Kiley, because he was deeply involved in each negotiation. However, I did go down to visit the City of Hope and meet with their management and with Riggs and Itakura. First of all to satisfy

myself that they could do the work if we gave them the contract; secondly, to persuade them to do it. They had other things they could have done instead. We wanted their cooperation.

Proof of Concept

Perkins: So Genentech, which had been named and incorporated by then, was basically Bob Swanson, a part-time secretary, a checkbook, and these contracts. Swanson had moved out of our office into a small office in the Bank of America building. We decided to do a proof of principle first, with the smallest gene that, we hoped, could be expressed. It might have some use but basically it would be a proof of principle. It was a gene to express a protein called somatostatin. Somatostatin has not yet found a commercial use, but it could some day. It wasn't an utterly useless exercise. The gene went together more or less as planned and was delivered up to UC where it was spliced and expressed, then tested. And it worked. There was not much hoopla about that.

Now, I neglected to say how much money was involved in all this. The initial experiment was basically done for a hundred thousand dollars, which was the money that Kleiner and I had put in originally. In view of what happened subsequently, that just seems so small. Almost a joke. But that was enough to remove much of the risk from the entire venture. It was a perfect example of Kleiner's and my strategy to try to structure deals so that the initial money got rid of the risk, whatever it was--marketing, technology, people. The subsequent money could be used to develop the venture. You just couldn't have a better example of doing it that way than Genentech. For next to nothing we had removed a world class question about the risk.

Additional Investment in Insulin

Perkins: Then we put in additional money. Swanson and I reached an agreement. Fifty thousand more went in, with the agreement to put in something like seven to ten thousand a month after that was used, if needed. Swanson thought that significant success could be achieved for that amount of money. I thought they would overrun the budget and that we'd end up owning more of Genentech. We were both right. They did end up overrunning the budget some, and we did invest more to get more, though less than another hundred thousand dollars to develop insulin.

Insulin had always been Swanson's primary target. Somatostatin was just a way station on that quest. He and I both agreed on this. We didn't have to do market research to convince ourselves that if we could make human insulin--literally human insulin--with this genetic engineering approach that the market would be tremendous. Whether we developed the product ourselves or licensed it, it would be a very valuable thing.

So the second gene was put together. It took much longer, because it was three times the physical length, in its DNA content, of somatostatin. But Riggs and Itakura did it, then it was expressed. Now we had a big thing to talk about. The announcement of the insulin was a world news event. The day we announced it was the headline in the *San Francisco Examiner*. That

woke up the world to what we now call genetic engineering. It put Genentech on the map. It went from essentially nothing to a very interesting and viable enterprise. Thus began the real fundraising for Genentech. We were able to raise money at much higher prices. So high that Kleiner and I made only token investments ever after, because Kleiner & Perkins already had a significant ownership of Genentech. Fundraising went on for years, and ultimately added up to billions, in countless rounds, all of which I was involved with, until finally I left the board.

Building Genentech's Scientific Culture

Perkins: We started renting facilities, outfitting them, expanding them, through a long series of moves, in the South San Francisco industrial park.

##

Perkins: Over many years we became the largest employer in that area. It was our world headquarters and our laboratories. But the physical plant is not the most interesting part of the story.

Bob Swanson deserves tremendous credit for putting Genentech together in the first place. I think the next most important thing he did was to realize--and Herb Boyer helped him come to this conclusion--that to build a world-class scientific research corporation he had to hire world class scientists. To do that he had to establish an academic-like environment, but even better than an academic environment. In academia, the researchers spend a huge amount of their time writing research proposals to get funding. Genentech eliminated that, while encouraging some pretty basic work. In the early days, everything Genentech needed to do commercially was also basic work to the whole field. It appealed to academicians--professors, scientists--even though it was commercially oriented. Bob encouraged them to write and publish scientific papers. Of course, we had to file our patents first and that took some discipline that the scientists hadn't been exposed to, though they accepted it pretty gracefully. Over the years, Genentech scientists have published as many papers as some of the leading research institutions in the field. To this day, anybody working in the field has to reference Genentech's underlying work. So the scientific excellence of Genentech is directly attributable to Bob Swanson.

Where do you want me to go with this next?

Swanson's Early Business Affiliations

Bugos: Can I go back and ask you to fill in some of the early parts of the story? Was Swanson officially let go?

Perkins: Bob was probably officially unemployed for two or three weeks. Physically he never left. I think that his termination lit the fire under him to really get on with something better. It definitely cooled the relationship with Kleiner, but Bob and I remained pretty good friends.

Bugos: Swanson formed an exploratory partnership with Boyer about January 1976. Was that something Treybig had done in starting Tandem Computers?

Perkins: No. With Treybig it was much more direct. We decided to do Tandem, we incorporated Tandem, and spun Treybig out into Tandem. I was chairman of the board. We did all the financing for that. I'm still somewhat involved with that, because it got merged into Compaq, another company we financed. I'm on the board of Compaq, and it's probably going to be merged into Hewlett-Packard. I started the Hewlett-Packard computer business. All these things tie together. I'll probably be a director of the combined companies.

Bugos: So the three-hour meeting you had with Swanson and Boyer. Had they put together a business plan for you to critique?

Perkins: No. It was more a one-page with rough estimates of how much it would cost.

Bugos: But clearly then, their idea was to build the laboratory, hire the people, spend the million dollars.

Perkins: Yes. And as I said, I was able to change that thinking.

Patent Rights

Bugos: OK. Boyer and Cohen had already filed for their fundamental patent. Stanford and UC were talking about licensing it, though it wouldn't actually issue until 1980. Was getting rights to that patent a big deal to you in terms of allowing Swanson and Boyer to move forward with their business plan?

Perkins: It was a big deal. But we weren't too worried about it. I knew the patent and licensing people at Stanford, and they were in the business of licensing patents. So I felt getting a license would not be a problem.

Bugos: You had some indication that they weren't thinking about an exclusive license but would license it broadly.

Perkins: We asked for, not expecting to get, an exclusive license. We were not surprised that we didn't. But remember, our own patents also became very valuable.

After two or three years of work at Genentech we had some strategic questions to ask ourselves. Should we attempt to use our patents as a barrier to other companies? Or should we license our patents broadly? I persuaded Swanson to follow the licensing strategy. Otherwise, our technology was just so absolutely basic that we would be in endless patent litigation. We would spend every resource defending patents and it would be years before we had an income stream from the products to pay for that. It would be better to license and shoot for royalties.

On the license with Eli Lilly for the manufacture of insulin, there wasn't too much disagreement between Swanson and myself on that one. There was some talk, should we do it

ourselves? Could we do it ourselves? But the amount of money required was just so huge. I felt that from the perspective of building value in Genentech, that the royalty would be just as good as doing it ourselves. And we did write a rather attractive royalty agreement, I felt. Even that was locked into endless litigation. A patent is simply an invitation to a lawsuit anyway. I'm very cynical about that.

Looking back at Genentech, I honestly think that if we had to do it all over again we'd do it the same way. I don't think that we made a single strategic error. We might have done a few things different tactically, and we should have spent more time tightening all these agreements, though they seemed so tight at the time. But I still think the basic strategy of the way we did it--subcontracting the experiments, then licensing Lilly, then developing our own products and capabilities, then merging, selling to Roche, then the Roche spinout to keep it a public company. I don't think we could have done it better. That's why we're talking. It was done so well. And continues to be a major player in this whole industry. *The major player.*

Early Financial Engineering

Bugos: You mentioned the importance of licenses and royalties. After the Lilly license and the Kabi license, in the summer of 1978 you did a business plan exercise that was issued in December of 1978. It said that you were going to become a fully integrated pharmaceutical company. Prior to that had you expected to be a research-and-development-driven, royalty-based, think tank of a company? What was the business plan prior to the FIPCO plan?

Perkins: The business plans have to be around somewhere. It would be interesting to see, in retrospect, what they did say. My recollection is that we had planned as a first step to license and as a second step to manufacture. That was the plan we executed. Genentech delivered on its financial expectations and was, of course, the darling of the investment community.

There had to be a lot of financial engineering in this thing as well. With the exception of some royalty income that was beginning to develop from Lilly, there was no income at all, only huge development expense. If you looked at the P&L, the profit and loss statement, there was no income, no sales. Tremendous expense, big loss, and that was that. It dawned on me--first, I guess--that that was not a viable financial model. Subsequent world events with the Internet have changed that. But in those days, a company was supposed to make earnings, or at least have reasonable prospects of making earnings fairly soon. And we had to fund clinical trials through the Food and Drug Administration. After all, we were making pharmaceuticals. We were lightning fast in doing it--two or three years on our products, though typically five to seven years and hundreds of millions of dollars is required to get a new drug on the market. I didn't see how we could take Genentech public and have a decent stock price if that's what our P&L was going to look like. Gallons of red ink for years. And I think I was right about that at the time.

Clinical R&D Partnerships

Perkins: So I invented this idea of the clinical R&D partnership. It was a financial invention; I've got some patents on some technical things. It was an extremely simple idea, but it transformed Genentech's P&L in a very basic way. We separated out the clinical trials, which is the largest expense in any drug development company. We set up a partnership that would fund the clinical trials, and that funding came back to Genentech. So the profit and loss statement is transformed. At the top line, you have hundreds of million of dollars coming in as revenue. Then the company does the clinical trial under a subcontract, and has that expense. It essentially breaks even on that whole transaction. It doesn't make any money, but it doesn't lose any money either. With a stroke of a pen, I was able to change the P&L from just horrific red ink to break-even.

We did a series of these partnerships. The reason they worked was that if the clinical trial was successful--and we had enough insight into the drugs to know that it would be--then the company had the right to reacquire the commercial interest of the partnership in return for cash and stock. These worked very well, until some years later the Securities and Exchange Commission decided it was too aggressive. [laughter] It worked at the time we needed it to work. I personally invested in these partnerships. They were very lucrative, and everybody was happy.

Junior Common Stock

Perkins: I had two financial inventions for Genentech. The other was the invention of junior common stock, which was also subsequently outlawed by the Securities and Exchange Commission. [laughter] Genentech went public and became the hottest stock offering in history to that time. Absolutely famous. We didn't have a clue how to price the stock. We knew it was going to be a hot issue, we knew it was going to be oversubscribed. But Swanson, the board, the management, the investment bankers--we were all caught somewhat by surprise. We could have sold less stock at a higher price. It came out at thirty-five, shot up to eighty-five, then drifted back down. But that spread brought us world wide publicity. Everybody knew about Genentech. I had cousins I had never heard of that were calling me trying to get in on that deal. [laughter] It was fantastic.

However, it established the idea that you could start a new biotechnology company, raise obscene amounts of money, hire good employees, sell stock to the public. Our competitors started doing all of that, so much so that it became an impediment for us to hire and retain employees. We started to lose employees to other biotech startups. Our employees had originally acquired our stock as common stock. We were able to justify a ten-to-one difference in price. So if the preferred stock was at thirty-five a share, then employees got common at three-fifty a share. No problem. But you can only do that once. Once it becomes a public stock, the preferred shares convert to common and everyone is on the same platform. So how

are we going to continue to attract these people? Continue to hold these people? It was a big problem.

So I said, let's create a new kind of stock. We'll hobble it. It won't have voting rights, and most important, it won't have liquidation rights. In the event of a collapse or, more importantly, in the event of an acquisition or merger, it will only have value after all the other stock has been redeemed. We got an opinion from the accountants that this stock was only worth one tenth of what the regular common stock was worth, and we called it junior common stock. It would convert to ordinary common stock in case of certain events. We picked specific events into the future such as: Genentech had to be earning a certain amount, or some product had to be achieved. Not events with great certainty, but events they had to work towards which gave a risk factor to it. By diddling that formula, over about four years, we were able to use that form of stock, just as we had in the beginning, to attract and hold key employees.

We were the first company to ever have such a thing. My name and fingerprints were all over it. We were very careful to run these plans through the SEC. They approved it. We never had to retract any of that stock. However, the idea was stolen by all of our competitors and so grossly abused that the SEC made most of our competitors retract and eliminate those stock plans. But not Genentech. We were prevented from issuing that stock again, but we could play out what we already had in place. That was junior common stock.

Pre-IPO Equity Structure

Bugos: From the S-1 registration it looks as though all the preferred shares had converted into common well before the IPO because of automatic conversion at a revenue milestone. Today, most of it converts at the IPO. Was that the case?

Perkins: Going up to the IPO there was preferred stock and common stock. Employees holding the common, all the investors holding preferred which then converted to common. The expected way that the preferred stock would become liquid was that it would convert to common in a registration. The absolutely planned exit was an IPO and registering that stock with the SEC. There may have been other events thrown in. Most preferred contracts have other redemption clauses. I don't even know that we put those in, because the definite plan was that it would convert to common. I think Kleiner and I invented that also--the preferred to common conversion--going way back. Kleiner & Perkins used that in every company we financed--the preferred/common route--years before others did it. The reason was to be able to offer employees very inexpensive shares. That was the only reason to do it. Kleiner and I pioneered that. There was no SEC problem in doing so, it just hadn't been done before. It took our competitors a while to figure that out.

Bugos: Who was of counsel to you in helping you nail down details like that?

Perkins: I honestly can't remember. We used Pillsbury, Brobeck, Sonsini; not so much Cooley Godward. Lawyers spread those ideas, but it took some time for these ideas to spread.

Bugos: Let me ask about another anomaly in the equity structure. You only did one series of preferred stock, a series A, at increasing valuations. Today most VCs do a series A, series B, series C, and so forth. What was the idea behind only doing one series of preferred stock?

Perkins: Go with what worked. Then you don't have to renegotiate everything. Also, most of the investors were just buying more of what they had. We had strong investor loyalty. I don't think there was anything too sophisticated about that.

Look, I'm pretty proud of those two inventions--the junior common stock and the partnerships--because they let Genentech stay on the cutting edge for years. There was no quarrel, incidentally, with Swanson, on any of this. Bob relied pretty heavily on my financial judgment.

Quarrel with Swanson on IPO Timing

Perkins: The only major quarrel we ever had was over when to take the company public. I felt very strongly that we should be the first, that it would nail down Genentech's position as the leader. It would be horrible if a flaky outfit like Cetus were to be first. Swanson and I really quarreled about this. He knew that we needed to be public, but it was a huge amount of additional work for him. Not for me. My telephone wasn't going to ring from irate investment analysts and shareholders. His was, and he knew that.

We had a classic board meeting. There were just three directors, Swanson, Boyer, and myself. Swanson and I were in a very heated discussion. Finally we both turned to Boyer and asked, "What are you going to do?" I wanted to vote on this thing, get moving. Boyer said, "I always vote with my friends." [laughter] In other words, no answer. Just go back at it. So we did. We broke up that day without a decision.

Bob and I got together for lunch the next day and I asked, "What do you think of Cetus?" I got a blast from Bob: "They're the flakiest of the flakes." I asked, "How would you feel if they got all the world publicity from being the first public biotech company?" That did it. Otherwise we would have been second.

It's just hard to recapture how exciting it was on that initial public offering. It was a world-class undertaking. We went all around America, we went to Europe, drumming up support for that IPO. If we had been second, it would have been nothing compared with that. That IPO defined Genentech. We were the hot guys, with the best this, the most aggressive that, the best science, the best patents, the best financial relationships, the best publicity. It was all true.

Liquidity As an Issue

Bugos: Where were you with your fund at that point? Were you looking for liquidity? Was that driving your interest in going public?

Perkins: October of '80 we went public. I think we had just started our second fund.

##

Perkins: From our point of view, the Kleiner Perkins point of view, liquidity was not a concern. We had achieved liquidity in other investments. Tandem Computer went public in 1976 or 1977. We had returned our investments to our limited partners ten times over. We had no trouble raising our second fund. So liquidity wasn't a factor at all.

Kleiner and I used to make a point with the entrepreneurs that we were going to finance. The decision to take a company public was a huge event in the life of a company and we, the partnership, were not going to exit the deal at that point. You can't get rid of us by going public. [laughs] Going public is important, but it's not by any means the end of the process. We will stay with you, we will help you, we won't just dump that event on you then leave.

Kleiner & Perkins: Commitment to Ventures

Perkins: There was always concern on the part of the entrepreneurs that when we distribute our shares that the stock price would collapse. We had been so good at doing that over the years. We've distributed slowly, we've done it in a good way. Even though we distribute our shares, we will stay with the venture for a long time. John Doerr is still on the board at Sun, I'm still on the board at Compaq, Frank [Caufield] is on AOL Time Warner. We just hang in there. It's hard to get rid of us. We want to have a credible story that we build big businesses. We know how to do it. When you sign up with Kleiner Perkins we're in it for the long haul. That was true with Genentech. Swanson didn't want me to leave, and we didn't leave when we took the company public and we distributed our shares.

Bugos: Some of the co-investors with you on subsequent rounds were limited partners in your venture fund--like the Hillman family.

Perkins: That's right. Of course, that was enormously profitable for the Hillmans. I remember bringing Henry Hillman out here and showing him around Genentech. He was looking through microscopes and loving it all. Corning was another investor. The quid pro quo for the Corning investment was that I would go on the board of Corning. Then when they sold, I left. I didn't feel like I had a long term commitment to them beyond the interest in Genentech.

You know, if we are going to talk about specific rounds of funding, I am going to need to have records. There have just been so many deals in so many companies over the years. It's hard to keep them all straight. Not just with Genentech, but with everything else. There have been about three hundred Kleiner Perkins companies.

Hybritech

Bugos: I'm not sure I need to know details. Just how things were different then from today.

Perkins: Well, it couldn't be more different, could it? We duplicated the whole Genentech thing in a company called Hybritech. If it worked once, let's do it again. There's a lot of parallels. Everybody knew what Swanson had done with Genentech. Brook Byers was very interested in biotechnology. He heard about this monoclonal antibody development, which was given to the world by Oxford or Cambridge. He heard of a scientist, Ivor Royston, in San Diego, who was working on it. He went down and we set up a company, with Brook as president, called Hybritech. We negotiated the deal at the airport, on the back of a napkin so to speak. Subsequently, [Howard E.] Ted Greene approached us with the identical idea. He was going to start a company to do monoclonals, and instead we talked him into becoming president of Hybritech. So we got rid of a potential competitor and picked up a superb executive. Then we did all the same things--the clinical partnerships, taking it public, the junior common stock. We subsequently sold it. For a long time it was the best investment we ever made in terms of absolute dollars returned. It was way over a billion dollars. In those days that was a lot of money.

Focusing Genentech's Strategic Vision

Bugos: Did you ever think of bringing monoclonal antibodies into Genentech?

Perkins: No. Genentech was up to its chin doing what it was doing. Swanson knew all about it, and there were research agreements between the two companies. But Genentech was too busy with its own technology. There was not a conflict on that one. Even now, we sort of check with the entrepreneur of company A before we do company B, to make sure that company B is not going to be too offensive to them. So we would have talked with Swanson before we started Hybritech, because that would have been our policy. We never fund directly competitive enterprises, though sometimes they get fairly close.

Bugos: About the time you started Hybritech, interferon was the hot new project at Genentech, and Genentech was beginning to diversify its efforts in a variety of areas. You had the option of going in many directions or focusing on protein production through recombinant DNA. How much discussion was there at the time on whether to diversify into new areas?

Perkins: Quite a bit. We were aware that there was the whole field of agriculture to explore. I went to meetings where we talked about the differences between plant and animal DNA. We made the conscious decision that we just couldn't do that. It's just too different. Though we did discuss it fully.

We got much closer in the field of animal and veterinary products. We did develop bovine growth hormone. I took a very strong position that we should not develop that at Genentech; that we should license it. We were already running flat out. I didn't see how we could take on another industry with its different distribution, marketing, and manufacturing. I have to give

myself some [credit for] prescience on this. I was very concerned about the reaction of the consumers to putting anything in milk. I saw that bullet coming. We ended up licensing it to Monsanto, who just walked into a firestorm. They paid us a billion dollars, and got 10 billion dollars worth of trouble. Thank God Genentech didn't try to do that on its own.

The joint ventures were an effort to focus, focus, focus, and spin out in ways where we could benefit as much as possible but not lose our focus. Swanson and I were reading from the same page on that.

Perkins's Friendship with Swanson

Perkins: Bob and I did have a handful of fairly major disagreements that surfaced from time to time. I think it's fair to say that Bob and I, by the end, were not close friends. There had been too many tough ones. Particularly involving Kirk Raab and the Roche situation. I took a lot of bullets on those. I don't even know how much I want to get into it. I mean, the guy's gone.

We had a complicated relationship. I wasn't old enough to be his father, but certainly old enough to be an older brother. There was some jealousy and rivalry. When he married and wanted to build his house, large parts of it were copied from mine, which upset my wife. Things like that. He was trying to find out who had more money, Bob Swanson or Tom Perkins? [laughter] Interesting, though, that there was all that rivalry. That part of our relationship was definitely unproductive. The early years were the better years. As the business grew and it became necessary to bring in more people, particularly Kirk Raab, Bob felt less and less essential to Genentech. In the beginning he was absolutely essential. Towards the end it didn't matter whether he came to work or not. Although he agreed with every step along the way, each step came with the loss of his prestige. Unfortunately, my name and fingerprints were all over each step. You just add up enough of them, and I think there was a resentment that was fairly serious.

Bugos: He knew Eugene Kleiner first. But when it came time to put together this deal, he came to you.

Perkins: You have to know more about my background. I am an entrepreneur. So is Kleiner, but not to the extent I was then. While I was working at Hewlett-Packard, starting their computer business for Dave Packard, I also invented the most commonly used kind of laser. I had the idea, and persuaded Packard to let me do it as a moonlighting project on nights and weekends, which amazingly enough, he let me do. It was a success, I made millions of dollars back when that was a lot of money--the mid sixties. Back when the Earth was still cooling. [laughter] Plus, I had built the largest part of Hewlett-Packard, the most successful and profitable part of Hewlett-Packard. I put together Kleiner Perkins. I was a hotshot, I guess.

Swanson wanted to get on that bandwagon. That's why he came to work for us and why he wanted me to be the player in Genentech. Which I was happy to do. Ten years. We had a long honeymoon. We got along. We accomplished a huge amount. I feel a sadness that our relationship didn't stay as good. It didn't totally sour. It just became a little more formal and a little less friendly than it had been, although when Bob got sick I think I was a pretty good friend to him. I talked to him at length. He had had the surgery and was debating whether he

should do chemotherapy. I urged him and urged him, and I think may have talked him into doing the chemo which, unfortunately, didn't work. Towards the end, I think, our friendship revived.

I have to say that I think the world of Bob Swanson. I don't know how I got on this negative kick for the last few minutes. Looking back on life you wish your friendships could always be as strong as they once were. The same thing happened with Jimmy Treybig. Ultimately, the board decided that Treybig had to go after twenty years. That was a very difficult thing to do. We're still friends, but it'll never be the same. That's what chairmen are supposed to do, I guess.

Kirk Raab Versus Swanson

Bugos: We'll revisit this in a later interview, but in a nutshell, could you tell me the Kirk Raab story and the Roche story?

Perkins: OK, Kirk Raab. Genentech was becoming a big, complex business. Bob's primary interest was in what was going on in the research labs, and less so everything else. But he was having to run everything else. He had hired very good people. Bob was very good at hiring good people, keeping them and motivating them. He was certainly the best entrepreneur I ever worked with. No question about that. I thought as chairman, that Bob was just doing a great job. But Bob kept saying, "I'm exhausted. I don't have a minute's time for my family. I can't take a vacation. I've got to get help." I kept saying, "You're doing fine, nothing's broken." Finally, he just said, "We have to get someone in to help me."

It's very difficult to bring in a chief operating officer under a chief executive officer. Anybody really great always wants to be the CEO. Bob and I both knew this, but we agreed to try to do it. Kirk's name came up. Bob met with him first. Bob said, "I think we found the guy." I was skeptical but willing to meet with Kirk and did meet with him independently of Bob. I was impressed with Kirk. But I remember telling Bob that this guy is really good, he's very aggressive, and I think it's going to be very hard for you to control him. In the long run, he will want your job. Bob said, "If he didn't want my job he wouldn't be the right guy." So we hired Kirk Raab.

He was there a long time. I can't remember how many times I had to go down and pull these guys apart, get their hands off each other's throats, recalibrate everybody, and reacquaint them with what the mission was, and remind them what everybody's job was. I think Kirk did a better job of it than Bob. Bob had such mixed feelings about Kirk. On the one hand he respected him and realized that he was brilliant, that he was building Genentech and that it was going well. Bob was able to take some time off, enjoy life and enjoy his fortune. By then he was an extraordinarily wealthy young man. He couldn't have done that and enjoyed his family unless Kirk was there. On the other hand he was very insecure. Afraid that Kirk would somehow displace him. Never really comfortable with Kirk. He did a great job of disguising those fears. Most employees at Genentech, below the top levels, thought that Bob and Kirk were a great team. People closer to them realized that there was a lot of tension there. Bob didn't second guess Kirk too much, and Kirk would say over and over that there wouldn't be a

Genentech without Bob Swanson. He was the founding entrepreneur who created the culture. For years they coexisted.

As part of the Roche deal, when it was important to make Kirk CEO, we had to find something for Bob to do. So we made him chairman. I agreed, no problem. I stepped down. Bob became chairman. I stayed on the board for a couple more years. And thought great, everything is fine, I can leave. And I did. I left the board. Within thirty days Kirk was fired. The only thing that all agree on--Kirk, Bob, and the rest of the board--was that if I had stayed on the board it wouldn't have happened. I think if I had stayed on the board I could have kept it glued together. After all, the alleged conflict of interest was, you know, two steps below trivial. It was blown out of proportion. The lawyers got in there, frightened the directors, and it happened. I think Bob didn't mind it happening. Maybe it should have happened, who knows. Genentech has since gone onwards and upwards. I have a very high opinion of Kirk Raab. Personally, I feel that the alleged conflict of interest didn't amount to anything. It certainly should not have led to his resignation. I also think he was humiliated publicly, in an excruciating way that might have ruined his future career. I think that was unconscionable. I would never have agreed to the public humiliation that he was exposed to.

Bugos: Do you remember the sort of issues that Bob and Kirk clashed over?

Perkins: The issues were almost trivial. Either one of them could have taken either side of the issue. I can't recall a single strategic issue, except for the Roche merger, where they really disagreed from a basic point of view. It all had to do with who's running the company--an emotional thing. It would just take me to go down and remind each of them where their interests were, and that this is not an easy thing, and that they were mature guys, blah, blah. Over and over. I spend a lot of time doing that with other companies. It's people who cause problems, rarely the technology. That's what I do. [sighs]

I may go on the Hewlett-Packard and Compaq combined board. Now there's a CEO/COO situation. I can see those two trains--and I'm sure I'll be spending time on that. That's just life.

I think Kirk had and has a genuine respect for Bob Swanson. Bob created Genentech. He created the culture, the enthusiasm, the research orientation, the way you treat scientists. Kirk understood that. Kirk was very aggressive in the marketing side, in manufacturing, in the deals and negotiations. I never felt that he was too aggressive, but aggressive. There'd be complaints, but I think those were normal.

Roche Acquisition

Perkins: Now the Roche story. Very complex. We had had some failures in research such that the product pipeline was looking pretty dry. Genentech stock was under a lot of pressure, as were a lot of biotech stocks. Kirk Raab and I and others on the board were worried. We were worried about Genentech stock getting pushed down and some sort of hostile takeover occurring.

##

Perkins: Kirk mostly, with Bob, came up with the Roche arrangement that as you know is a complex arrangement. Basically, it converted Genentech stock into a bond and stabilized the stock. Then there were various performance criteria, where Roche could buy out Genentech. There had always been the understanding that Roche had the right to buy out Genentech. There had always been the understanding that if Roche did exercise its rights that it would spinout a portion of Genentech so that it could remain a public company and so that it could keep its stock option plans. This was a huge decision, and the board was quite definitely behind it--including me, including Kirk and Bob. However, Bob was very difficult over this, and negotiated salary and stock options for himself which were pretty aggressive. The deal couldn't have been done without Bob's approval. So it was a price that had to be paid, and we paid it.

Again, with hindsight, I think it was absolutely the right thing to do. Genentech could have been taken over by somebody else. Who knows what they would have done to it. Roche has behaved extremely well. As you know, they did exercise their warrants, they did spin out part of the company, and I think they're happy with their investment. The employees are happy as well. So it was the right thing to do.

Bugos: Was independence the key to it? Was the overriding goal to keep Genentech independent? Or was it the need to finance new manufacturing facilities?

Perkins: I think the overriding goal was to keep the research going and to develop the newer products that were entering the pipeline, for scientific reasons, for economic reasons, for humanitarian reasons. We felt that those were great products to have on hand. There was fear that somebody could have taken over Genentech and simply milk what already existed and cut it way back. We were confident that Roche wouldn't do that. It would be a foolish thing for Roche to do. And they didn't. Those were the basic reasons--to prevent somebody from ripping off Genentech by getting the patents, getting the royalty stream, getting the existing products, and dispensing with its future. Genentech has been run for the benefit of the scientists and of the consumers, pretty well over all those years. Shareholders have done all right too.

White Squire Fund

Bugos: About six months prior to the Roche acquisition you raised what the press called a "white squire" fund. Was that one of many options you considered?

Perkins: Yes, but I never raised that fund, for a couple of reasons. First off, my wife had gotten very ill. I just didn't want to take on the burden of that new fund. And it had to be quite a large fund to work. It needed to be a billion dollars. I had raised five hundred million of it in two weeks, from everyone who knew and loved me, and then I hit a brick wall. I realized it would take a year to raise the other five hundred million, a year of just full-time, day-after-day fundraising. I can't do that and be with my wife, so I didn't do it.

Who knows how it would have worked out. There were times when that fund would have been absolutely brilliant, and there were times when I would have lost my shirt, depending on whether I would have been smart enough to foresee all those turns in the road. I presently think I'm pretty lucky that I decided not to do that.

Bugos: What were some of the options you explored prior to the Roche acquisition?

Perkins: I don't think that there were any others. We talked about taking it private, but even at depressed stock prices there was so much money involved that I didn't see how we could do that. That would have been the third option to protect it. Again, in hindsight, the depression in the stock market for high-tech issues didn't last that long, so some of the pressure disappeared. Maybe we didn't have to do the Roche deal. But I remember that for a year and a half after the Roche deal, we were all congratulating ourselves that we did do it. I think it was the right thing. Roche has behaved extremely well.

Bugos: One more specific question. Because of the success of the clinical R&D partnerships, a lot of Genentech stock was issued in the late 1980s. Some people suggest that this dilution in stock may have driven down the prices and driven you to the Roche deal.

Perkins: Well, some of that kind of criticism is ridiculous. At the time, you have to do what you have to do and hope it works out all right. Hindsight is a wonderful thing.

More on the Genentech IPO

[Interview 2: October 31, 2001] ##

Bugos: Let's start by revisiting the IPO. In our last conversation you focused on the importance of getting to market first. Today, perhaps we could focus on the specifics of how you got to market, preparing the company for the IPO, and what happened afterwards.

Perkins: Financially, we had gotten the company to a modestly profitable or at least breakeven point. Prior to the Internet boom, companies had to have some financial performance in order to have effective public issues. We thought, and I think we were correct in this, that Genentech had to look fairly good financially. Lubrizol functioned as a mezzanine investment, establishing a solid value. We had that in mind in taking those funds, that it would set up the IPO.

With the IPO, Swanson was a reluctant bride. In some ways it was better for me to be pushing for it than for him to be pushing for it, in terms of relationships within the company. To the extent that he was forced to do it made it easier for him to sell it. I think he understood those roles, though in the beginning he really was a bit reluctant. Once the momentum began to build he was very enthusiastic about it. Once the roadshow started he was especially enthusiastic.

Possible Sale to Eli Lilly, Inc.

Bugos: One other option would be to sell the company to big pharma. One significant theme in the history of biotechnology is that it is an independent industry rather than a scientific service

within big pharma. That's based largely, I believe, on the decision that you personally made to go public rather than to sell to a big pharmaceutical firm.

Perkins: We did have some preliminary discussions with Lilly. They made one of the biggest mistakes in business history in that they didn't try to push us very hard to sell the company. I think if Lilly, a year before the public issue, had made an attractive offer we probably would have gone for it. Because there were no precedents to follow; we would have had a good return on the investment. That would be that. But they didn't. So we gave up that idea and decided to pursue the public issue.

Bugos: I heard that an 80 million dollar figure was mentioned and that Lilly never responded to that.

Perkins: I remember it being a hundred million. About a year before the public issue we had a dinner at my house in Belvedere with senior Lilly people and Swanson and Boyer, where we kicked the idea around. It wasn't a hard sell. It was sort of an exploratory discussion. They didn't jump at it, and we felt we could do this without them. So we let it drop. It wasn't an urgently, strategically pursued idea. It was just an exploration. But if they had picked up the ball it might have happened. Of course, with hindsight they should have. And we shouldn't have ever talked to them. [laughter]

Picking Investment Bankers

Perkins: In your list of questions you ask why did we pick Bud Coyle at Blyth Eastman Paine Webber and Bill Hambrecht? Kleiner knew Bud Coyle very well. Coyle had been romancing Kleiner & Perkins and was extremely enthusiastic about doing Genentech. Then I picked Hambrecht & Quist because I had good experience with them. Historically, we always looked for an East Coast and a West Coast investment banker. It seemed like a good match. Why not Tommy Unterberg? I guess I wasn't that impressed with him at the time. I guess he did Cetus after we went public. I've had a long and not entirely satisfactory relationship with Tommy Unterberg. I probably was a little soured on him at that time. In my opinion, Tommy Unterberg is deeply and profoundly cynical and considers most investors to be stupid. And it's just hard to deal with somebody like that, whereas Hambrecht & Quist are Boy Scouts. They dig in there and do a good job. They were also co-investors on the second round, but very small. Token.

You also asked about why we took in Inco and Mayfield. It's just that we needed the money. We were spreading the idea around with people that we thought would be supportive in taking this thing all the way.

Recruiting the Genentech Board of Directors

Perkins: Similarly, getting Dave Packard on the board. I took the lead on that, though Swanson was enthusiastic about it. That was kind of a gamble. After he agreed to go on the board of directors and we had our first board meeting, I realized that I, in effect, was risking my



The Genentech Board of Directors, from left to right: David S. Tappan, Jr., Thomas J. Perkins, Donald L. Murfin, Robert A. Swanson, Dr. John T. Potts, Jr., David Packard, Dr. Herbert W. Boyer, and Harry Faulkner

photograph from the 1982 Genentech Annual Report

chairmanship by having an individual that famous and powerful on the board. But Packard, fortunately for me, let me be chairman. He was a very strong and wonderful director, but he never dominated a situation or insisted that his ideas prevail. I don't think we ever had a strong disagreement on anything, but the whole financing of Genentech was so alien to what he had done at Hewlett-Packard. He was more bemused by it. Kind of entertained by it. More so than the other directors.

He was on the board of Boeing, maybe U.S. Steel, some big companies. Hewlett was on the Chrysler board. I approached him by saying, "This is so completely different from anything that any of us have ever done before. It's really exciting. It's like Hewlett-Packard all over again but in a different industry. Great science, great opportunity. We need all the help we can get. You've been through it. Would you give us a hand?" Remember that he was a friend of mine, also. Kind of to my amazement, he said sure. A couple of years later I heard from somebody else at Hewlett-Packard, maybe John Young, that they were all standing around the famous coffee pot in the top management area. Packard came out and somebody asked, "Dave, since you've been on the board of Genentech have you learned a lot about DNA?" And Packard replied, "I haven't learned a damn thing about DNA. But I've learned an awful lot about financing!" [laughter] Which is kind of a backward compliment.

Some other directors--Professor Potts, who Bob found and placed on the board. John Potts was terrific. Became a good friend. Also Harry Faulkner from Alfa Laval was strong. Don Murfin was strong, and Dave Tappan. We had a pretty good board.

Bugos: Was your willingness to take investments from companies like Lubrizol and Fluor driven by your desire to get a broad base of industrialists like Murfin and Tappan on your board?

Perkins: That's right. We could have raised money from just about anybody. We were fairly selective. We didn't have other venture capitalists on the board. I didn't think that was necessary. A typical board would be mostly venture capitalists, so our board looked pretty sophisticated compared with most boards. We had a good board, and that didn't hurt the public issue at all.

Perkins as Chairman

Bugos: And most of the companies represented on your board explored the options of doing joint ventures with Genentech, like HP Genenchem in research instrumentation.

Perkins: Right, which we did do. That was not brought on by Dave Packard though. It came out of the laboratory side of Genentech. Likewise the benchmarks on the licenses, which you asked about. I personally was not very involved in determining those benchmarks. That was pretty much Swanson and the research people that came up with those goals, which I was educated to and went along with. But I don't recall ever changing those or trying to influence that very much.

Basically, Swanson and the research people were a coalition, and Fred Middleton and I and the management people were a coalition. I got much more involved in the financing, marketing, production side of things. Though Bob did get involved with all the things I got

involved with, he kind of let me carry the spear in those directions. We worked pretty well together. I never ventured into the research side very far. I did attend all the research meetings where there were reviews of all the projects and tried to keep abreast of the science as best as I could.

I spent a lot of time at Genentech. One afternoon a week, year in and year out. Swanson and I would get together over lunch, and that would spill over into some Genentech activities.

Bugos: The benchmarks allowed Genentech to avoid going back to the venture capital well.

Perkins: Absolutely. It worked extremely well. It was one of those win-win situations where the licensees were happy and we were happy. Plus it set the company up to be profitable. It established a business savvy which none of our competitors ever equaled. Except Amgen, later.

License Agreement with Lilly

Bugos: Attaching those benchmarked licenses to the S-1 registration document, as the SEC requested, was something Genentech strongly resisted.

Perkins: Yes. We actually were successful in excising the confidential aspects of those contracts. Bruce Mann was. We figured that our competitors would try to ferret out the details of those contracts. They were literally inked out in the SEC files. That was, I think, a first.

Bugos: What about the argument that they may have shown a very young Genentech negotiating from a sign of weakness, a weakness you didn't want other potential licensees to know about. Did the Lilly contract display Genentech weakness?

Perkins: No. No. I didn't view that agreement as a sign of weakness. Just the reverse. The royalty payments were unusually high. We just didn't want to disclose all the details of that. That was a great deal.

The relationship with Lilly ultimately soured, and there was litigation. Lilly basically tried to break the patent. There was a long history of bad blood with Lilly. But that developed later. In the early years, the contract paid large royalties into Genentech. I also had some trouble with Lilly in connection with other companies--with nothing to do with Genentech. I came to the conclusion that they were fundamentally unscrupulous people. But that was later.

Bugos: Was it Dick Wood you worked with?

Perkins: Yes. Arrow Collar Dick Wood. That's what we used to call him.

Bugos: Do you think he understood what Genentech was trying to do?

Perkins: I don't think he had a clue. Lilly had made some drugs that saved some lives. I thought that they had a very self-righteous attitude, like a liberal Democrat: No matter what you do, since your heart is in the right place, then the ends justify the means. So they could do some bad,

ruthless, anti-competitive things and consider themselves still as saviors of human kind, in my opinion. It was kind of weird. They could cheat and steal and still consider themselves to be good corporate citizens, I thought.

We went to them because of their monopoly power. As good monopolists, I felt, they realized that we were a major threat to them. If we had licensed it to one of their competitors, that competitor could have given them huge problems. So you'd probably get a good deal from a monopolist, I thought. That's what we got.

The early years of our relationship were fine. They paid us on time. I forget when we got into the patent problems with them, but it was at least five years into the mission. I think they realized the scale of the royalties they were going to be paying us. Some lawyer decided to figure a way out of that.

Negotiating Other Licenses

Perkins: Kabi by contrast, approached us, and that was a more friendly negotiation. That was a Swanson-negotiated contract. I got involved in the Lilly negotiation, went back to Indianapolis and was working with Tom Kiley on that contract. But not with Kabi. I never went to Sweden. Swanson pulled that one out of the hat. That remained a good contract for a long time. Same pattern with Roche on interferon, the other licensing agreement prior to the IPO. Swanson and Kiley went over to Basel. I didn't go with them.

Bugos: And the idea that Genentech sells the drug three times--regionally, in Europe, Japan and the United States--rather than one global license to a big pharmaceutical. Where did that come from?

Perkins: I have to give Swanson full credit for that. He, for whatever reason, had a great interest in and affinity for the Japanese. He got along extremely well with them and was always interested in cultivating a Japanese connection for Genentech. He enjoyed going to Japan and negotiating with the Japanese, which very few people do. [laughs] And he did a great job on that.

Bob had an early appreciation for the science at Genentech. More than anybody did. This enthusiasm came to him early--that you could divide up the world and get a lot of people interested in paying a lot of money for this. Swanson, for a young guy, had an incredible vision. I'd never seen anything like it before.

Fully Integrated Pharmaceutical Company (FIPCO)

Bugos: Let me have you look at the December 1978 business plan, where Genentech outlined a vision, a somewhat different one than you started with. I'm not sure that this document would have come to your purview of chairman. Basically it says that Genentech was going to become fully

integrated, get into the manufacture and marketing of its own drugs, and become the first new pharmaceutical firm to be born from this new technology.

Perkins: Of course, to become fully integrated was the rule, not the exception, for everything else that we were doing. Kleiner Perkins has never advanced anything that was just meant to be a licensing vehicle. My instinct, and Swanson's, was to make this thing fully integrated. After all, we were MBAs and that's what we were trained to do. Marketing, manufacturing, the full monty. [laughter]

What was so different about Genentech was the astonishing amount of capital required to do all this. I know, on Day One, if anyone had whispered into my ear that, "For the next twenty years you will be involved in raising literally billions of dollars for this thing," I might not have done it. [laughter]

But in 1979, it occurred to me that for something of this importance, that there was enough money out there for us to do whatever we needed to do. I always viewed my role--my ultimate responsibility--was to make sure that the company didn't run out of money. That was my job. Swanson's job was to make sure that the company deserved more money, at ever increasing prices. We both had a pretty clear notion of that. It worked for a long time. Hence, all the different things that we did--the private rounds, the research partnerships, the public rounds, and all the deals. It was always more capital than I anticipated. It dawned on Swanson before it dawned on me.

I can't remember at what point it dawned on me that Genentech would probably be the most important deal of my life, in many terms. The returns, the social benefits, the excitement, the technical prowess, and the fun. By '79 I was a total Genentech junkie. I was committed to making Genentech into a huge success. I had signed on for the long haul pretty early. The idea of making a fully integrated company was very attractive and very consistent with everything we were doing.

Bugos: How did you go through the process of envisioning what Genentech, as a fully integrated company, would look like?

Perkins: Bob studied both Syntex and Alza. He met [Alejandro] Zaffaroni. Bob was very charming. He would meet with someone like Zaffaroni, who was very successful and important, and say, "You've done it right. I'm just this little guy with an idea, and I'd like to learn from you." A sincere form of flattery. They would tell him everything. Bob did understand that model. Syntex did all its manufacturing in Mexico. We talked about that.

Should Genentech be an off-shore company? There were reasons to consider that. All the uproar over genetic engineering in the press and in the public. We decided that we would do it here. But the decision to locate in South San Francisco--that location was picked for manufacturing because it was not Berkeley. We perceived that Cetus would have a lot of trouble in Berkeley, and they did. Just from Berkeley being Berkeley. Whereas, Bob and I had a meeting with the then-mayor of South San Francisco, who was very encouraging of us to locate there. Bob was very thorough. He explored the political side, he explored the corporate models, then laid out a strategy.

We rented space in those old warehouses then spent fortunes outfitting them and buying them and building. Of course, that's where a lot of the money went, in outfitting those research facilities.

##

Perkins: Most companies aren't constantly raising money the way that Genentech is. After a while it dawned on me that there will never be enough money for Genentech. Especially with the nature of the clinical trials.

Risk Factors for S-1 Registration

Bugos: Which brings up another question about the IPO, the issue of writing risk factors for the S-1 registration. This is a brand new industry, and a company for which there were no good models, nothing to forewarn you, for example, about the amount of capital required.

Perkins: I think I wrote the risk factors on that S-1, originally. Of course, the lawyers then went through it. I've been involved in a lot of risky IPOs, and early on I learned there's a way to write the risk factors so that by discussing the negative you can emphasize the positive. Something along the lines of, "There is no guarantee that this company will soon become the most important biotechnology company on the face of the planet." [laughter] Is that bad or good? We said there's no guarantee. And, "There's no guarantee that our fundamental patents will survive every challenge." I used to have fun writing those risk factors, so I probably wrote Genentech's.

Bugos: And you anticipated that perpetually raising capital was going to be a risk factor?

Perkins: No. Certainly there was no risk in raising the IPO. By the time I was promoting the public issue I was convinced that it would be successful. It was more successful than I thought it would be. I would never have promoted the idea if I thought there was any risk in carrying it off. When you walk out onto the stage and sit at the piano, you'd better be able to play the piece. I would never have exposed the company to a failed IPO. Hence the mezzanine round, which sets up the IPO. Which is something Kleiner Perkins has done many, many times. We did the same thing at Tandem, before its IPO.

Hostile Press

Perkins: But this IPO was extraordinary. There was so much press. Even the hostile press helped establish the name, helped make the company famous.

Bugos: Hostile press meaning the concern about biohazards, academic freedom, the private ownership of public knowledge?

Perkins: There were two streams of hostile press. One was the Jeremy Rifkin, Luddite, anti-technology stream, which is still going. At the root of it was a genuine fear that we'd make Frankenstein monsters, poison the atmosphere, and everything else. The other stream of it was whether it was morally correct for these academicians to make so much money, like Boyer. That died down as the Genentech competitors got going and hired all these people. It was easy to be jealous and hostile until you were at the same gravy trough yourself. Then you have to shut up. And of course, early on, Boyer gave so much back. Boyer would have the Nobel Prize if he hadn't made so much money.

Bugos: So the concerns about biohazards and intellectual property had been largely quelled by the 1980s?

Perkins: Yes, by the early 1980s. The fact that there *isn't* any risk has something to do with it. [laughter] Eventually people would wake up to that fact—that it really wasn't risky. In the early days, we didn't know whether it was risky or not. So some of the bacteria we used were selected to be weak, so that they couldn't survive outside of their special environments. Should we have a leak, no one would be hurt.

Also, for example, we never had a live HIV virus at Genentech, through a conscious decision not to take that level of risk even though we were working on HIV. We worked very hard on HIV, for many years, with essentially no success. We tried three or four scientifically very exciting approaches that didn't pan out. It was one of the big disappointments at Genentech.

Food and Drug Administration Approval

Bugos: What about government risk, regulatory risk, like dealing with the Food and Drug Administration? The risk that the FDA wouldn't understand what you were trying to do, that they would only understand if big pharma presented them with the data. Was the FDA a particular area of uncertainty?

Perkins: Yes, but we were so sensitive to the potential for delays within the FDA, that Genentech worked that side of the equation aggressively. At the end of the day our drugs were approved on a much faster track than most. That was another thing Swanson did a good job with—the handling of the political side of the FDA. He and the research people did a really brilliant job. They learned quickly, and learned very well, how to design the clinical trials with the FDA very fully informed as to what was going to go on. What would be the efficacy benchmarks, and so forth. There have been some holdups at the FDA, but it would be interesting to contrast Genentech's time at the FDA with everybody else. I think you would find that it was much faster. It was well done.

Bugos: So there was no prejudice against Genentech being a startup, being a biotech company?

Perkins: I think there was prejudice *for*. Genentech had a lot of appeal. First of all, it was fundamentally new science, so we could get the attention of the best scientists at the FDA. We weren't making some aspirin substitute, you know, which would gravitate down to the bottom

of the FDA. This was really hot, life-saving technology. So the really best people at the FDA worked on it, and the reason they're the best people is because they're smart. They liked Genentech. They bent over backwards to help Genentech, because Genentech did not have the arrogance of the big pharmaceutical companies whose researchers probably considered themselves superior to those at the FDA.

But did we love the FDA? Of course not. To this day, I think the FDA is pretty much a redundant organization. The whole idea of efficacy is a dangerous idea and should be eliminated. But that's my political view.

There were some mistakes that the FDA made, that Genentech could have publicized to embarrass the FDA for short term tactical advantages. Now I'm talking about Kirk Raab more than Swanson. Raab perceived that that's not the way you play the game. You just cooperate, and love 'em, and eventually it will work out.

But there was conflict. For example, tPA, the blood-clot-dissolving drug, could be extremely efficacious in the treatment of strokes. Not those caused by hemorrhage, but those caused by blockage. There were a number of papers written by researchers, not at Genentech but out in the world. It's illegal for the Genentech marketing staff to circulate those papers to anybody. Genentech salesmen cannot even call a paper to the attention of a potential purchaser of the drug. That's true for all off-license pharmaceuticals in the United States. I have always thought that's an absolute violation of the First Amendment right. It's so egregious. I tried to talk Swanson and Raab into taking that one to the Supreme Court. It's outrageous that you can't hand a physician an article from the *New England Journal of Medicine* without potentially going to jail. I think we could have won that one. But I could never get any momentum going on that because it would have been so offensive to the FDA. We would have gone onto their enemies list. Someday, I'd like to see somebody take the FDA to court on that. [laughter]

Bugos: Do you think it helped your relations with the FDA that your first two products, insulin and human growth hormone, were natural products. There was no question about efficacy, just about Good Manufacturing Practices?

Perkins: Yes. We had some holdups in getting approval for our plant. There were some paperwork snafus and some batch tracking problems. Everybody has these; we had some. But I think the FDA was charmed by Genentech. They tried to help Genentech, and did.

Growth Hormone Sales Controversy

Bugos: The problems you mentioned with off-label discussions of tPA, would that have been about the same time that Genentech was questioned about off-label sales of its human growth hormones?

Perkins: Maybe. Kirk Raab was extremely aggressive. In my opinion he never did anything that approached the unethical. Was it atypical? Absolutely. Was it aggressive? You bet. But so what? That's my attitude. And to the extent that I influenced the board, that was probably the board's attitude.

Bugos: Do you recall the growth hormone controversy? Another Kleiner Perkins company was involved with that--Home Health Care. Could you give me some insight into that story.

Perkins: I think Home Health Care, unbeknownst to Genentech, carried it further that they should have. One or two physicians did. "Kickback" was the term used in the press. There was a physician who was paid to do research, and maybe it wasn't research and maybe it wasn't done. I didn't know about it, the board didn't know about it, Swanson likely didn't know about it, and probably Raab didn't know about it. Did somebody at a lower level in Genentech know about it? Maybe. Should it have been brought up? Yes. Was anybody hurt? No. Did it damage anybody? No. But we shouldn't have let it happen.

Bugos: Because you were involved with those two companies when the decision was made to make growth hormone an infusible drug, did you suggest to anyone at Genentech that they contact Home Health Care to deliver the drug?

Perkins: No. Actually, Home Health Care, because of its size, was a logical choice. It came about without any effort on my part. Kleiner Perkins was, as I recall, no longer on the board of Home Health Care. By the time that happened we had detached.

Bugos: OK. You mentioned the Supreme Court earlier. Another press item leading up to the IPO was *Diamond v. Chakrabarty*, wherein the Court allowed a utility patent on a living organism. It unleashed the floodgates on a number of patents in the life sciences, including the Boyer-Cohen patent. Do you remember how significant that was in generating press as you approached the IPO?

Perkins: It was important, but we still would have gone ahead. If *Chakrabarty* had not been approved there would still be a Genentech and it would have looked pretty much the same. It was obviously good news.

Quiet Period Violation

Bugos: So the last issue leading up to the IPO was the alleged quiet period violation.

Perkins: That was interesting. There was so much interest from the press that it was impossible to have a conventional quiet period. The press just kept writing about Genentech. Even though the company was sensitive to the fact that they shouldn't talk to the press, it looked like the company was talking. It looked like the company was ginning up interest. The SEC was concerned about that. The reason I picked Bruce Mann was because I knew that Bruce himself was being considered to become a commissioner of the SEC. Bruce was very highly regarded at the SEC. He had great rapport with them. He said to them: "We can't keep this quiet. It's just explosive. You've got to let this IPO go or it's just going to get worse." And they did. As I recall that whole incident was just a matter of weeks. It wasn't a major holdup.

IPO Roadshow

Bugos: Did you, as someone who had been through some IPOs, coach the Genentech people on how to approach the IPO?

Perkins: Yes. I did. But this one was different from everything. I explained what the roadshow was, how the investment bankers built the book, how we had to have it oversubscribed by ten-to-one. Just the ground rules, because I had been through it a couple of times. Swanson was a natural. That roadshow was great. We just knocked their socks off. I don't know how many times it was oversubscribed, a hundred, maybe a thousand. It was just a crazy deal.

Bugos: So no hard questions?

Perkins: Well, yes. The questions were: You guys make hardly any money, hardly any sales, how can you possibly justify this kind of valuation? Then the guy asking the question, after the meeting, would try to fight his way in and get more shares than he was entitled to. In hindsight we should have sold more shares at a higher price. On the other hand, we gained worldwide publicity, and it was worth it.

Genentech Jolts Wall Street: *San Francisco Examiner*, 1980

Bugos: Do you recall the conversations on the price?

Perkins: I remember a telephone conversation the night before with Bill Hambrecht. We had set the price. Swanson was on the call too. Hambrecht called up and said, "This thing is wild. I've never seen anything like it. If you want to, we could change the price, but we'd have to refile and that would delay it a day or so." We decided, no. Let's go with what we got. I remember getting up early in the morning to see what the trades would be. We wanted it to trade up about 10, 15 percent. We didn't expect it, or want it, to double or triple. I remember calling Swanson, who was pretty cool about all this, and waking him up, and saying, "You're the richest guy I know Bob." "What, what?" he said in a sleepy voice. Just blew him away.

Bugos: And that was the first time there had been such an enormous run-up on a first trading day? Tandem wasn't like that?

Perkins: No. Tandem was more conventional. All of them were. I have always tried to price the thing so that you leave about ten percent on the table. Then everybody's happy. The syndicate can dissolve immediately. If you push it right to the gag level, if anything goes wrong, then you have an embarrassment. The syndicate can't dissolve, and the investment bankers hate you. The next time you try to raise money from the public everyone will remember. It just makes sense to leave something on the table. But all investment bankers don't view it that way. Some do push it.

Let's say you agree that the price will be ten dollars a share. That's the price on the prospectus, that's your latest filing with the SEC. You think, though, that it's going to trade at

twelve. There's some more demand for the shares than what you are selling at. You purposely price it so that there will be immediate profit in it for the syndicate. Then several things happen. They're called underwriters because--the long list of investment bankers involved in taking one of these things public--they all agreed to purchase a certain number of shares from the company. But they don't ever want to touch those shares. They want to have sold them ahead of time. If the price is ten, and the first trade is at eight, then they're stuck. They have to purchase those shares at ten, and sell them much later or at a loss. So the underwriting syndicate can't dissolve until they've purchased or sold the shares. But if the shares' initial trades are over that purchase price, then they don't need to buy them. The syndicate is dissolved instantly. They never have to risk their own capital. They love you. The next time you come along, they have a pretty good idea that you'll do the same thing. Kleiner Perkins has always done that. So a Kleiner Perkins deal always has a certain attraction to them. Everyone's going to make some money on this. Kleiner Perkins protects us. Kleiner Perkins could have taken twelve, instead we only took ten.

The other reason to do that is that there's a long list of secondary shares that eventually want to be sold, and the investment bankers want you to hold those back for a certain number of days. Again, if you have underpriced it slightly it makes it easier for those shares to come out later.

We call it getting the hockey puck on the ice. Taking a company public is just a first step in a long series of financings and secondary issues. So we tell our entrepreneurs to sell 8 to 15 percent of the company. You can sell more later, at higher prices. That's also behind leaving something on the table.

But of course, at Genentech, we left much more on the table than we should have. Unless you look at it as a public relations move. Genentech came to most people's attention through its IPO and the financial side of the story rather than the medical and scientific side. To this day, most people can recall the Genentech IPO, as wow, but probably not the drugs. So it worked.

Bugos: After that huge run-up it settled back to the IPO price. Investors still got their 10 percent, but what impact did that settling have?

Perkins: None. Everybody, including the option holders, understood that that first day of trading was a bizarre bubble. It overvalued the company. It was a great company, but it wasn't that great. We had to earn back that price through performance which, ultimately, we did. It took years. Everybody understood that.

##

Perkins: Even those shareholders were happy. I met little old ladies, who had money but who had never speculated on stocks, that bought Genentech paying top prices, paying eighty-seven dollars a share. I remember some lady in Santa Barbara telling me she had paid eighty-seven dollars a share, and it had gone back down to thirty something. She was happy. She said, "I got those shares and I'm just going to put them away, and maybe my grandchildren will make a lot of money on them." Those people kept those shares. They were in love with Genentech, and they were right to be. [laughter]

Bugos: Was it the individual investors who ran it up?

Perkins: It was individual investors that ran it up, and that was something we hadn't anticipated. We thought it would be purchased by the institutions, who did purchase the IPO shares. But it was the public who ran it up. There were just buy orders from all over the world.

I had a secretary at the time who knew all about Genentech and asked if she could get some shares. Those shares were so rationed, but I did get her some shares through Hambrecht & Quist. I sold her shares at maybe fifty, on the way up, because I thought even that was crazy. I sold them even before I got into the office that morning, and by the time I did it was trading at eighty. I apologized to her, "I got you out at fifty. I'm sorry." [laughter] But she was very happy. It was a crazy time. Headline in the *San Francisco Examiner*, "Genentech Jolts Wall Street!"

That's why we're talking. It's part of the Genentech culture. It established Genentech as the Godzilla of this industry. With hindsight, it was the right thing to do. I couldn't have planned it any better, even though I didn't plan it at all. [laughter]

Fundraising in the Doldrums

Bugos: Tell me a bit more about fundraising during the period that the stock had settled back around its IPO price. It was some years before you went back to the public. In the meantime you did some private placements with the Japanese, with Fluor, you did the clinical partnerships. Did the goodwill you got that first day evaporate?

Perkins: No. Any savvy investor realized that that first day was a bizarre event, but that Genentech was still a strong company. It made it even easier to do all these other rounds and the partnerships. Sometimes soufflés can rise twice, and there was a strong expectation that Genentech stock would recover and do well. Which it did. The problem for Genentech came years later with the erosion that led us to the arrangement with Roche.

Japanese Placement

Bugos: So the Japanese placement you did; a small placement, that was actually a small down-financing on the IPO price.

Perkins: Yes, but not by much. Swanson gets 100 percent of credit for this. He perceived that having Japanese investors in Genentech would make it easier to deal with everything Japanese--licenses, sales in Japan, and so forth. He had met Yaichi Ayukawa [of Techno-Venture Co. Ltd.], who was a terrific guy. I met him through Swanson, and subsequently did some other Kleiner Perkins deals with him. He was a Ph.D. from MIT. His father was a founder of the Nissan *zaibatsu*. Bob correctly figured out that Yaichi could open all the doors in Japan that needed to be opened. At the time we went to Japan to sell those shares it was illegal for a

Japanese investor to invest in an American placement--not a publicly traded stock, but a placement. Yaichi knew the minister of finance. I went with him on the visit. There was some fine print in the law that said if such an investment would be good for the Japanese nation then it could be permitted. The minister said sure, this would be good for the Japanese nation and we got the permission. That was a first also. That hadn't been done before with Japanese investors. We had been using Nomura Securities to help us, and they had come to the conclusion that it could not be done. We went back with our little letter and they were astonished.

The capital then came from a nice long list of investors. They were important financial institutions that we could talk about when talking with other Japanese companies and manufacturers. Bob was brilliant at playing the Japanese card. He liked and respected the Japanese. Rather than cunning. He enjoyed those negotiations and those trips. Similarly with the Europeans. Bob was very good at that. He had an ability to make those people feel very important. Like they were getting in on the foundation. Bob was a superb salesman. I'm a good one too, and when we both got on the same wavelength we were awesome.

Downward Pressure from Secondary Shares

Bugos: What was the story with the placement from Fluor? I'd heard that some of the shares Fluor bought were founder shares coming onto the market after the lockup. Was the release of the founders shares a big concern?

Perkins: No. Over the years that's always been a concern of the management of the companies we've invested in. We've always taken the position that when we distribute our shares to our investors, the company won't even know it's happened. They won't detect it in the stock price, we'll be so careful. Some will hold it, some will sell it. That gets back to the issue of whether you should take a weak company public. If you can just barely sell the stock to the public, so that you're worried about any downturns or secondary offerings, then it's just not suitable to take public. I don't recall ever being concerned about downward pressure on the stock price through secondary shares at Genentech. I can't imagine it ever would have moved the stock more than a dollar or two.

Bugos: But by 1982, 1983, the bloom was off the rose for biotech stocks. Cetus, Biogen, Genex all went public after you and the general market for biotech stocks was depressed.

Perkins: Yes it had. But I don't recall any of those Genentech placements specifically addressing the issue of downward pressures on secondary shares.

Selling the Clinical R&D Partnerships

Bugos: What about with the clinical partnerships. Those were sold retail, to high-net-worth individuals about the time that the biotech bubble had appeared to burst. Do you recall those being hard to sell?

Perkins: No, and that would still be a good way to finance trials if the IRS hadn't taken the steam out of the boiler. You can't get the tax benefits any more. It was a great idea. We also used it at some other companies, but it was the Internal Revenue Service who got unhappy with it. It got shut down with a lot of other things. In 1986 the tax laws got changed pretty fundamentally, and oil wells and cattle feeding and all that other stuff got shut down.

Bugos: You actually became chairman of the Morgan Stanley Ventures, which did these R&D partnerships?

Perkins: Yes. But that was not a great deal for me or Fred Middleton or Morgan Stanley. Morgan Stanley never marketed it the way it should have been. Fred Middleton was probably too conservative in picking companies, and the vehicle got shut down by the IRS. Also, about then, I began to hate Morgan Stanley for entirely other reasons and I didn't want to have much to do with it anymore.

I've run out of investment bankers. [laughter] I've been in the business too long. Except for Fred Frank, I think they all have the mentality of lobotomized sharks. There has to be somebody new starting up that I can work with. I just hate them all. [laughter] I should write a book, but I would be sued. I was married to Danielle Steel when she was finishing her book on her son, who had committed suicide. And the lawyers just made her take so much stuff out. The horror stories I could tell you about this business!

Bugos: Please do. While the tape recorder is running. [laughter] OK, back to the R&D partnerships. The standard unit sold was fifty thousand dollars. A few people bought a couple units. You though, I see from the subscriber lists, bought a million dollars worth. What was that about?

Perkins: I thought it was a great investment. And it was. I made millions on that. I don't step in front of trains. I believed that was a great deal. To be in this business, from a psychological point of view, if you're always balancing the risks and rewards then you'll never do anything great. What I do is, I start off cynical and skeptical and very suspicious of the entrepreneur. The first hour with me is pretty tough, I guess. But if you get through that first hour then I just get so enthusiastic. It's almost like I then develop a mental block on what the downside could be. So when I write that check I'm very enthusiastic. I think it was that way with the R&D partnerships too. As I recall I took one of the bigger pieces. And if it helped sell those, then all the better.

Bugos: Did you do any retail sales on those? Take meetings with potential investors to get them to buy?

Perkins: I can't recall doing any meetings. I did talk to them on the phone. We did a similar thing at Hybritech, and that was very hard to sell. We had three investment bankers involved. Two out of the three failed totally. The third one did it all. But that was a different story. I remember

Steven Evans-Freke at Blyth Eastman, and he was very enthusiastic about it, for Genentech. It wasn't oversubscribed, but we sold them all in about sixty days.

Bugos: Do you remember needing to add the conversion to shares to make them easier to sell? I think the initial partnership plan called for investors to get only part of the royalty stream.

Perkins: Are you sure that conversion into common shares wasn't in there on day one? I can't imagine that I would have bought a million dollars worth if it didn't have that conversion feature. I believe that was part of my original idea. There was a lot of re-enlistment in those three partnerships. A lot of the same investors. It was a win-win.

Chairing a Public Company

Bugos: What about any difficulties in being the chairman of a public company? Did you have to spend more of your time telling the Genentech story to analysts or others in the public markets?

Perkins: I didn't deal with the analysts. That was Fred and Bob. If you're going to be the "elder statesman," you can't really talk to the analysts. Maybe once a year you opine on something. But if you're blabbing all the time, it's hard to be the elder statesman. [laughter] There has to be a little mystery.

Bugos: As a public company did you feel even more pressure to keep expenses below your contract revenue? To remain a nominally profitable company?

Perkins: Yes. With companies that are shipping widgets, you count how many you shipped and that's how much revenue you made in a quarter. Genentech was much easier to anticipate revenues and earnings--by the nature of our research contracts. We had some flexibility in when we would achieve those benchmarks. I'm not saying that we managed our earnings. But we were able to show a developing stream of earnings out into the future.

Independent Biotechnology

Perkins: The great disappointment with Genentech was the slowdown in the late 1980s--that we had to do the Roche deal. With hindsight, I think we had to do it and that it was the right thing to do. Roche has behaved wonderfully, but it was a pity. The stock market was being very tough, and we were concerned about a hostile takeover.

I remember the meeting we had with the shareholders where we presented all of this. One lady stood up and said, "I have a question only for David Packard. How could you permit this to happen Mr. Packard? It's like leaving New York on a train to San Francisco, and you're making us get off in Denver. How could you permit this?" His answer was, basically, "I'm doing what I was told." [laughter] He didn't use those words, of course. But she was so disappointed. We all were. It wasn't a happy thing. But we all felt that we had to do it. The

loss of independence. It's still an independent company, more or less. It's still a public company, at least. But it's no longer the baby Jesus.

Bugos: This longstanding dream of independence, I think, as a historian, is remarkable. Biotechnology could have been a new scientific service function within the pharmaceutical industries. You could have sold out earlier. Instead, by assuming this dream of independence you created a separate industry, the biotechnology industry.

Perkins: Yes. And we did more than the one company. If you take Hybritech and Genentech, those were the two best biotech companies we did at Kleiner Perkins. You could take the market capitalization of all the other companies, add it up, and it wouldn't have equaled what we had in Genentech and Hybritech. That's how good they were. That's the Kleiner Perkins model.

Brook Byers took over the financing of biotech from me. He still does a lot of biotech.

##

Perkins: Certainly, Bob Swanson wanted to be independent. I wanted to be independent too. I think it's amazing we were able to do that as long as we did. The mistake we made was not in strategy, it was in research. That's what caused it. We drilled too many dry holes in the mid 1980s, which led to lack of product by the early 1990s. We figured it out and made changes, brought in [Arthur] Levinson, and got it going again. You'll recall that we also changed research directors about that time. Amgen, they did a better job on their product stream than us. I'm sure there was some bad luck too. We did four major efforts in AIDS, and you'd think that one of them would have panned out. They all looked extremely promising, but they didn't work. We put a lot of resources behind them, but learned very late in the day that they wouldn't work out.

I had my least involvement in research. I went to the meetings and was educated on that but not able to make judgments. I felt Bob had a terrific flair for that. While we backed some horses that weren't able to finish the race, by and large his judgement was superb. Certainly in the early years they were exquisitely done. If you look back at the percentage of products that Genentech has developed that were ultimately successful, the percentage is pretty good. It's just that we hit a dry streak there in the mid 1980s. We got hit with that dry spell at the same time the stock market became weak.

Bugos: Did you think to in-license anything, to keep your marketing staffs busy?

Perkins: We did, but we never found anything. Maybe we didn't look too hard. We thought our products would be OK, but at the end of the day learned that they weren't

Roche Acquisition, 1990: Hiring Frederick Frank of Shearson Lehman

[Interview 3: November 14, 2001] ##

Bugos: On our agenda today is to revisit the Roche acquisition announced in February 1990.

Perkins: OK. Before, we touched on the reasons to do the acquisition--the unmet R&D needs--and we don't need to revisit that. On the acquisition, Raab and Swanson spearheaded the effort. I remember a meeting in New York where we talked to Fred Frank [of Shearson Lehman Hutton]. I think that was my first involvement with Fred Frank, though I subsequently used him on other deals. I have a very high opinion of Fred Frank. He was a well-known investment banker with a good track record in pharmaceuticals.

Bugos: Genentech had actually engaged Frank at about the same time to sell its 25 percent share in Genencor to a joint venture with Eastman Kodak.

Perkins: Yes. But I wasn't involved in that. I knew about all that, but I didn't negotiate that or meet with Fred on that.

Kirk Raab was the primary promoter of using Fred Frank. Swanson went along with it. Finally me, meeting him and being very impressed. Frank did an excellent job for Genentech. The Roche thing was complicated and record-breaking and precedent-setting.

I was so impressed with him that subsequently, on another big deal where I was doing it all--merging Tandem Computers into Compaq Computers, I used Fred. Even though it was a computer industry deal, not a biotech deal. He hadn't done all that much in computers. Again, he did a great job. I was delighted with their work.

He was very important in making the Roche deal happen. I don't know if anybody has pointed out to you that Fred represented both companies in that deal. Roche had enough confidence in, and respect for, Fred Frank that they did not use an investment banker. Maybe at the last minute they got an opinion from somebody. But, basically, he represented both companies. That's pretty astonishing. Very few investment bankers have that kind of support from their clients. That was very impressive.

We did talk to Joseph Perella [of Wasserstein, Perella & Co.]. I remember lots of meetings with Perella on lots of other deals. We used Fred Frank for this deal, though Perella is also very good.

Bugos: How intensive was your own interaction with Frank?

Perkins: As we got deeper into the deal and approached the recommendation to the Genentech board of directors, I did have telephone conversations with Frank. And Fred Frank, being as good as he is and realizing I was chairman, made it his business to keep me informed. He would be calling me, "This is just a quick update, Tom. Here's what's happening. This is what's being done. Swanson is doing this. Raab is doing that. I think you ought to know that I think they're a little out of line here, or there, or whatever." Asking me to help if needed. We had two or three conversations a week in the early days. And then daily. And then hourly, towards the end.

Maintaining Secrecy to Avoid an Auction

Bugos: Press reports said that only six people at Genentech were informed of the deal before the announcement on the second of February.

Perkins: That's probably fairly accurate. It may have been a few more than that. These things are so hard to keep secret, but you have to keep them secret because of all sorts of securities laws. As soon as the circle starts to broaden the probability of leaks expands exponentially. Probably to the fifth power of the number of people involved. I just had a bitter experience with that on the Hewlett-Packard and Compaq merger, which got leaked twenty-four hours before the announcement. Horrible. So you have to work very carefully to make sure that that doesn't happen.

Bugos: There were some shareholder suits, as there inevitably are, alleging that Genentech could have done better had it advertised itself as being for sale more openly.

Perkins: Prior to engaging with Roche, we had scanned the horizon and we had picked them as being the best possible and the only acquirer to be considered. I think that we were right about that. History has shown that that was the right decision. We were very careful that this not become an auction. When we announced the deal we wanted it to be so comprehensive and complete that it would discourage anybody else. Which it did. We didn't want it to be an auction, for the very reasons that led us to Roche in the first place. We were concerned about a hostile takeover, sort of the rape of the technology, and something that wouldn't be to the benefit of the shareholders or employees.

Valuation of Genentech, Inc.

Bugos: When you go with a single buyer, though, calculated methods of valuing the company become more important. Do you recall the various valuation methods Frank offered to you? It turned out to be about one hundred times 1989 earnings, or ten time revenues.

Perkins: Those were the benchmarks, prior to the dot-coms at least. That's certainly at the high end of valuations and so adequate protection against litigation, in my view. In the final fairness opinion that was rendered by Lehman, they looked at all kinds of deals, and a range of other transactions, as part of the due diligence of the board of directors. Prior to all that, in my view, this was the best deal we were going to get. And it was a good deal, and the best deal, and it was what we were looking for, and we approved it.

Bugos: As a venture capitalist, valuing is probably a key cognitive activity in your work. In terms of the Kleiner Perkins way of venture investing, over your whole career, is there an internal methodology you prefer to use for valuing the companies that come to you?

Perkins: The answer to all that is no. First of all, our preferred mode is to take a company public, and then the market determines what you get. Then we distribute those shares to our investors, and then they sell them as they see the value. The selling of one company to another company is maybe 10 percent of what we do. This was an exception, not the rule. Hybritech was sold, similarly. Both Roche and Genentech had confidence that Fred Frank had gotten a very good deal for both parties. We were not unhappy or disappointed at this strike price.

Deal Points

Bugos: In the prospectus describing the deal, the section on the background to the deal mentions three points of contention that Roche proposed that Genentech opposed. One was an option for 20 percent of common shares, one was a substantial termination fee if the deal didn't go through, and then the right of first refusal that Roche would have if any Genentech directors offered public shares for sale.

Perkins: Yes, but I don't think any of those were big deals. One I do remember was that Swanson was adamant that he wanted to go on the Roche board. That was just a non-starter. They were not going to agree to that. Meetings took place in German, a language he didn't even speak. It was a deal point, and he wasn't going to cave on that. Kirk and I had our hands full in talking him out of that one, but we did.

Bugos: Would that serve any strategic purpose for Genentech?

Perkins: No. It was Bob Swanson wanting--a natural thing, I guess. But Roche wouldn't even consider it. I remember discussing this with Fred Frank, and he said, "I presented it to them because I was obliged to but, oh boy, this is not going to happen and we have to get Bob off of this kick." Which we did.

Raab Becomes CEO

Bugos: You mentioned previously that Roche suggested to you that Raab become CEO.

Perkins: Yes. That seemed to have been understood early on. This was something that was going to happen with or without Roche, in my view. Roche was just the event to make it happen. If we hadn't done the Roche deal Kirk still would have become the CEO, but it would have been a more difficult, long, drawn-out thing to accomplish. But it was going to happen. Bob was so schizophrenic about it. On the one hand, he made a fortune, wanted to travel and enjoy his family, take some time off, which is certainly the right thing to do. On the other hand, he didn't want to give up the perks and glory of being CEO. Something had to happen and it was just obvious that Kirk had to be the CEO. In a sense, the Genentech board used the Roche transaction as the trigger to make that happen. I probably presented it to Bob as a deal point demanded by Roche, which it was. But it may have been put in Roche's head along the way. It had to happen.

Raab had a good track record at Abbott. He had run big things. As I told you earlier, from the day Kirk Raab arrived at Genentech, it was clear that he was going to try to be CEO. Swanson knew that this was going to happen. It was deferred for years. It finally happened. There was an inevitability to it.

Roche People and Practices

Bugos: Some of the people involved in the deal from the Roche side were Fritz Gerber, the chairman, Armin Kessler, the CEO, and Henri Meier, the CFO.

Perkins: Yes. I remember meeting with them in New York. I didn't go to Switzerland for this deal. Talking for a couple hours with them; I met in private with them. And they were impressive people. I liked them and felt comfortable with them. Particularly Fritz Gerber. A fine man.

Bugos: And he and Kessler were then elected to the board?

Perkins: Yes. Gerber didn't come to the meetings, though. Kessler did. Kessler was a very savvy businessman, a lot of good ideas. It was a good addition.

Bugos: There were some concerns about that time over a clinical trial in Europe which pitted tPA against a generic streptokinase. Was that a real great concern? Was that a European problem Roche was expected to help you with?

Perkins: That was a not a primary factor. But Roche was helpful. When I think about Roche/Genentech, my emotional foundation for it is this: It was good, it worked, they behaved well, everybody benefitted, if we had to do it over again we'd do it over again. There were bumps along the way and little disagreements here or there. Raab would have been closer to the problems, and certainly Bob would have been. From my perspective as retiring chairman, I had good feelings about Roche.

What is good behavior? Obviously, they had an enormous financial stake in Genentech; they spent a huge amount of money to acquire Genentech. Clearly, Kessler was going to watch out for Roche's interests. That's natural. But I still felt that he was able to also represent the other shareholders of Genentech and the employees and not just grind Genentech's face into whatever agenda Roche had. He did a good job of being diplomatic. He was obviously a big brother in this situation, with huge power, but behaved well.

As you recall, we set up the deal so that Roche did not control the board. They had two seats out of maybe eight. This was something we wanted, something that Fred Frank sold to them as being good for them. They shouldn't let the employee stockholders, and the world in general, think that Genentech was just their errand boy, their lackey. That it would be good for all parties if that's the way the deal was done. It was done that way and it worked.

My perception is that Roche did not try to malignly take over Genentech at the board level. Roche behaved very well during this transaction, at least during my watch.

Bugos: After your watch ended in March 1995 came the best evidence that they behaved well because Genentech extended their option to acquire the remainder of the shares, at increasing prices, in December of 1995. Was it the sense of the board well before then that they would extend this option to Roche?

Perkins: Yes. I was for it. The only problem involving Roche, after I left, was the Kirk Raab situation which we talked about before. But that wasn't pushed by Roche. That was pushed by [John P.] McLaughlin. And I think it was in error.

Loma Prieta Earthquake

Bugos: OK. Roche paid the entirety of the 2.1 billion dollar acquisition from cash on hand. Because of the deal you also had immediate access to 491 million dollars of new cash. I think you spent most on new facilities. Did you have any other plans for that money?

Perkins: I can't remember. I remember there was a lot of cash. But Genentech had proven itself able to spend any amount of money it was given. [laughter] It was never too much. That big research laboratory was built about that time. Then Vacaville. Vacaville was necessary. I used to think that 90 percent of my net worth was displayed along the San Andreas Fault in all these different companies. Genentech was really exposed to earthquake hazard, I felt, so Vacaville made a lot of sense.

There's a little interesting story there. That earthquake in October 1989 was a pretty big one. I personally was on the middle of the Golden Gate Bridge when it hit. I'll never forget that. It scared me. The next morning, Dave Packard and I were supposed to fly out, with Dave Tappan, in the Fluor jet, to go to a Genentech board meeting in New York. It was all part of this Roche thing, so it was a very important meeting. Reports were that bridges were down, it was horrible. But I knew Dave Packard, and he would damn well leave, and that I better get to the San Jose airport. I think we were going to leave at eight in the morning. I got up, and left at like four in the morning from my house in Belvedere to get to San Jose. Of course, there was no traffic, at all. Nothing. I got to San Jose in about forty-five minutes, sat around. [laughter] Sure enough Packard showed up, and the Fluor jet arrived, and off we went. I had been able to ascertain that Genentech hadn't been badly damaged. I asked Dave, "How's Hewlett-Packard?" He said, "Gee, I don't know. My telephone was out." And I asked about the Monterey Aquarium which, of course, he had built. He said, "I don't know." Here he is flying out to a Genentech board meeting without knowing what happened to Hewlett-Packard or to his aquarium. I was so impressed by his dedication. So I talked to the pilot and asked if there was any way he could call somebody at Hewlett-Packard and at Monterey and find out. The pilot did, and came back and told Dave that everything seemed to be fine. Packard said, "Well, that's good. Thank you."

Bugos: And so you were on the Bridge for the earthquake?

Perkins: Yes. It happened at five minutes after five. I had left the office a few minutes early. Kathy [Jewett] was here. We were actually in a different building at the time. It was pretty scary. The building was rocking and rolling, the file cabinets were overturned. Brook Byers was here.

They were having a meeting, that's why Kathy had remained. I just wanted to get home early that night because there was a ball game that I wanted to watch.

That bridge was awesome. It shook. Being an engineer, as it was happening I was sitting there thinking, "How many degrees of freedom does this bridge have?" It's going up and down. It's going sideways. It's twisting. Cables are moving. I got to twelve degrees of freedom before I realized that I may lose my freedom when this thing falls down. You may die. [laughter] It was scary. You couldn't drive. All the cars had to stop and just sit there because the roadway was just moving so violently. I was thinking to myself, you are such a god-damn engineer. Here you are, the bridge may fall down, and you're trying to figure out how many degrees of freedom it has. I said to myself, "This is sick." [laughter]

Bugos: I think everybody remembers that board meeting as the meeting after the earthquake.

Perkins: I have a feeling most of them were already in New York. Raab and Swanson had already gotten there before the earthquake happened. It was only Packard and Tappan and myself that needed to get there to talk about the Roche details.

Bugos: Did John Larson from Brobeck play any role in the structure of the acquisition? Did you get any outside counsel other than that from Fred Frank?

Perkins: Fred was, of course, the investment banker. Larson did not play any role in the negotiation, but he played some role in all the legal stuff that went along with it. And did it well. He's a good attorney. Though [sighs], I subsequently had a falling out with him too. If you're in this business long enough—I don't know if you have many friends. But that falling out had nothing to do with Genentech.

Bugos: So those six months, between September 1989 and February of 1990, how much of your time was occupied by this Genentech deal? Was it high drama in boardroom negotiations?

Perkins: This was something we wanted to happen. We wanted to be taken over by Roche, and did our best job to make that happen in a constructive and profitable way. We were concerned that somebody else might find out about this, and outbid Roche, and we might fall into hostile hands. There was a huge amount of detail, about the cash and prices, and I was involved in all of that.

Final Board Meeting on Swanson's Demands

Perkins: But the most vivid memory I have of the whole thing was of the final board meeting, which went on beyond midnight. That was at a hotel by the airport.

##

Perkins: Frankly, it went on because of the eleventh hour demands of Bob Swanson which had not been in the deal prior to that meeting. It was my job to negotiate with Bob. Kirk at this point couldn't do it. He and Bob were at loggerheads. It fell on my shoulders to negotiate Bob out of

some of his demands, like the seat on the Roche board. He had ten unalterable demands that I guess I boiled down to about four. Bob and I were leaving the meeting and working on it together. "Working" is maybe not the best word. And then coming back to the meeting and moving on. It went on for hours and it was very difficult.

I don't want to sound like apple pie and motherhood. But in the other things I've done, everyone gets treated the same. If it's good for shareholder A, it should be equally good for shareholder B. What Bob was negotiating for himself, I felt, was too aggressive. I had some success in talking Bob out of his demands, but not total success. I think that I and the rest of the Genentech board had an air of resignation about this, "Look, we've got to do the Roche deal, it makes so much sense for all concerned. This is the price we have to pay, and we'll pay it."

Bugos: But were Swanson's concerns financial? Or did they have to do with his position upon the transfer of control of the company?

Perkins: I think his greatest concerns were financial. I had been chairman of the board for essentially no salary, or special payment for being chairman, or if there was it was maybe a thousand dollars a year. And this suddenly went to half a million dollars a year, as I recall. Plus an office, plus a secretary, plus, plus. Stock options and so forth. Yet he was not going to be doing any more than I had been doing. I felt that was over the top. The merger was still worth doing, and it was just one of those things.

Bugos: And all the negotiation at that point was through Fred Frank, rather than directly with Roche, so that no misconceptions could hurt feelings?

Perkins: That is true. At that point I had no discussions with Roche. At that meeting Fred may have been relaying updates to Roche. He must have because it all pertained to the T&Cs [terms and conditions] of the deal.

Bugos: Then on February second you issued a press release saying that the deal was going to happen. Did you breathe a sigh of relief at that point?

Perkins: Yes. [laughter]

Swanson-Raab Conflict

Perkins: I can't begin to tell you how difficult it was keeping the Raab-Swanson thing together over the years. Just the endless hours I spent with those two guys. It was basically the same meeting over and over again. Telling Kirk, "Look, there wouldn't be a Genentech without Bob Swanson. You know that. Everybody knows that." Talking to Swanson, "Look. He's is doing a great job of running this company. You've got to let him do it." Just talking to each of them separately, then getting them together. Getting them to say, "Yes, we love and respect each other. Yes, we will behave." And it would hold for another month. Then bang, another one. They were equally difficult. They both had short fuses. They did a pretty good job of hiding it

from the management and employees. Not perfect. Everybody knew there were troubles, but not to the extent that I knew.

I had the same thing at Hybritech between Ted Green and David Hale. It could have been from the same script. It's common. I guess I handled it pretty well over the years with all these companies. I've always felt that people were the primary problems in these deals. Rarely the technology, rarely the financing. I was good at doing that. I remember once at Hybritech I had to do it during a board meeting. It was like psychotherapy in front of an audience. I did it, got them calmed down, they agreed to cooperate. Dave Anderson, from Sutter Hill Ventures, was on the board. After the meeting he said, "You know, that was absolutely awesome. Do you have to do that very often?" I said, "I think that is what I do. Corporate psychiatrist." [laughter]

Bugos: For me to play psychiatrist, could I suggest that you yourself place some value in that sort of conflict between potential CEOs?

Perkins: In other words, is that dynamic tension necessary for the success of the company? Absolutely not. [laughs] It gets in the way. But they were both so damn valuable. You couldn't lose Raab, you couldn't lose Swanson. They had to work together. It was my job to help them realize that they had to be big boys and swallow their pride or resolve whatever the issue was at that point. It was the same thing over and over.

Bugos: Did people below Raab and Swanson in the organization chart come to you for help in psychoanalysis? People like Bill Young or Lou Lavigne?

Perkins: No. I don't recall ever getting a call. Maybe once, somebody saying you better get down here because something is falling apart. Usually calls from Swanson or Raab saying, "Help." Or saying, "I can't stand it, I'm going to quit, or I'm going to fire him."

You mentioned Bill Young, a good guy, and Lou Lavigne, a fantastic guy. He was a very calming influence on Genentech. Lou's personality is such that when he walks into a room people calm down. These are good players. I never had any trouble with any of the Genentech officers. I liked them and worked well with all of them.

Bugos: How did Lavigne contrast with Fred Middleton, in some ways his predecessor, in terms of the skills they brought or in the way they presented things to the board?

Perkins: They were both very good. Middleton was probably better in the quickly changing, more dynamic situation of a small company. Lavigne probably had better people skills, big company skills, political skills. But I don't mean that in a pejorative way. Lou has certainly been a survivor and a cornerstone, for years. Fred had some troubles getting along with people at times. But Fred was a very quick thinker. Fred was a good salesman. We're talking about two really good people here. I don't need to draw distinctions.

Bill Young did a great job. I have no criticism of him.

Raab's Skills

Bugos: Did you ever think that Young would play the operations role that Kirk Raab was hired to play?

Perkins: No. None of the others, as big as they were--Gower, I suppose came closest. There was nobody there that had the range of experience that Kirk had. Kirk was a very dynamic guy who had excellent contacts in the industry, in government, on Wall Street. Kirk was a big presence. Kirk was their peer--peer of the other industry CEOs--by his ability and his reputation. There was not much rivalry between those subordinates and Kirk.

Bugos: In terms of how he was their peer, until a scientist like Roy Vagelos at Merck came along, most pharmaceutical company CEOs came up through marketing and sales. Did you ever consider marketing as the particular type of functional expertise you were looking for in a CEO, as opposed to a research person?

Perkins: Oh yes. At the time Kirk came aboard, Bob was primarily interested in research, and did a superb job in picking people, picking projects. We hit a dry spell, but that was more from the research director then, David Martin. There was some bad judgment on his part and some bad luck. He felt we should be doing major work in AIDS, which we agreed with, but none of those projects panned out. And I think that was just scientific bad luck. But Bob was going to stay on the research side. Kirk was going to do a good job on the operations side. That's the way it worked.

James Gower's Aggressive Forecast

Bugos: So Jim Gower was your marketing guy?

Perkins: Yes, but under Kirk.

Bugos: Did you ever consider Gower when you were searching for a CEO?

Perkins: No. We were looking for a major, famous, big-league player--which was Kirk.

Bugos: Gower made some sales forecasts for tPA which made Genentech look like it was going to be a billion-dollar company in 1990. When that didn't develop, by 1989, your stock started to tank, leading ultimately to the Roche deal.

Perkins: And we got sued. Yes. Well. He shouldn't have done that. [laughter] It was a mistake. I think he believed it, but it was too aggressive. It's an easy thing to do. And the press picks it up. Just today, I was printed in the *Chronicle* as predicting that Compaq personal computer business would return to profitability. I shouldn't have done that. That's too aggressive. But in a long interview with a reporter, you say things you don't even recall saying. That's what they pick up. It's under the line, but pretty close to the line, and I shouldn't have said it.

With Gower, it was over the line. He didn't mean to do it, but he did it. And Bob backed him up rather than saying, "Now wait a minute." Because I think that Bob believed it too. So they were both wrong.

Aggressive Patent Protection

Bugos: One other person in operations management, Brian Cunningham.

Perkins: I liked Brian. He was a tough, streetfighter kind of guy. Good guy.

Bugos: The aggressive patent protection policy that Genentech has long pursued? Obviously Kiley enabled it, but did Cunningham establish the aggressiveness of the protection policy?

Perkins: I don't think that he out-Kileyed Kiley. Genentech was aggressive on all fronts. We were famous for being aggressive. Not a bad reputation in my book. Not pejorative. With hindsight we were not nearly as aggressive as we should have been in our contract negotiations. A large number of the deals we made wound up in litigation or in patent infringement findings. Even now, the City of Hope, twenty-five years later, is trying to collect royalties that, in my view, it doesn't deserve. It's astonishing. Twenty-five years. Most of the players are dead. They want hundreds of millions of dollars in royalties they claim they should have been paid. All going back to those first contracts, those very first contracts that we negotiated. Their guy was named [Ben] Horowitz, who is dead, and Swanson, who is dead. Those two negotiated it, with me involved on the side, and with Kiley writing it up. There aren't many people around who remember what happened. Much to my surprise, I did not testify in that trial. Of course, my memory is so sieve-like. [laughs] Maybe that's why I didn't get called.

Suing the FDA

Bugos: Let me press your memory on another specific point under litigation, over methionine-free growth hormone. About 1987 there was controversy with Lilly, somebody suggested suing the FDA, and it got to the board level. What do you recall of that story?

Perkins: I do remember that one. I recall that the position the FDA took was that the Lilly product was a new drug and a different drug. It probably was me that suggested we sue the FDA, expecting to be talked out of it by Raab and Swanson. And was. When I said Genentech was aggressive, well, I was aggressive. I wanted Genentech to sue the FDA on another point we talked about earlier, this first amendment right to distribute research material. In both cases, I learned, you don't sue the FDA. They'll crucify you for ever after. But I did feel, and I think I was correct, that the FDA's decision was entirely political and not scientific. I think they simply wanted to create more competition. That's the way they did it.

I don't think that was presented to the board. It was discussed between the three of us. I don't think the board ever voted on whether we should sue the FDA. As a chairman of boards

over the years I can only recall one board vote that was not unanimous in all these companies, and that one was just a mistake that I had made in misunderstanding the position of a director. It happened to be George Shultz, who's a pretty important director. I thought he was happy with what we were doing and we went around the table. He voted last, and he voted no. It was a big shock to me, and a big mistake. Afterwards he said to me, "I have never been on a board where decisions weren't unanimous." I said, "George, I haven't either. We better have lunch." And we did and we worked it all out. I wouldn't let things come to a vote that weren't going to be unanimous. If it wasn't going to be unanimous, let's keep working on it until it will be unanimous.

Executive Committee of the Board of Directors

Bugos: So with Genentech, the mechanism for hashing out the agreement was an executive committee of the board--you, Raab, and Swanson--of which you were chairman? Even after the Roche acquisition, I think, you remained chairman of the executive committee. So what is your philosophy on the composition and responsibilities of the executive committee?

Perkins: Different companies do it differently, so I'll just talk about my view of an executive committee. A true executive committee has the full power of the board and can do anything without checking with the board. However, it's like one of those powers that, if you use it more than once, you'll lose it. The Queen of England can dissolve Parliament but if she ever does it they'll change the law. [laughs] It's a very strong power, but it has to be used very carefully.

The advantage of the executive committee is that if there is an emergency, if something happens suddenly and you can't convene the whole board--you don't know where they are, even by telephone--the executive committee can make a decision. For example, in the case of an accident, a death, a crisis of some sort. It's a good thing to have an executive committee to deal with crises.

The other directors, who aren't on the executive committee, can become comfortable with it if they realize it's also dealing with housekeeping, day-to-day stuff that the rest of the board doesn't need to be bothered with. If anything really important comes up, ninety-nine out of a hundred times the committee will seek the approval of the full board before it does anything. The committee will frame the issue, it will have done preliminary work so that the board doesn't have to wallow around in all the nauseating details. The executive committee is a mechanism to get things done for the board. If you're chairman of the board you better be chairman of the executive committee also, because you don't want to have two competing factions. Any time that there's been an executive committee, I've always been chairman of it. Then it gives the chairman of the board a little extra clout over the CEO, who normally has all the clout. In the case of Swanson and Raab, it gave me some power in order to be able to deal with them. If the psychoanalyst is also their boss it makes it work better.

Bugos: What about its role in soliciting information from within the company? Normally the CEO submits to the board agenda items as well as the facts to come to a decision. Could you as chairman solicit facts or discover problems management hadn't anticipated?

Perkins: Yes, but I lived at Genentech. I was there an afternoon or a day a week. I pretty much knew what was going on. Bob and I would always discuss the agenda of the board meeting before the meeting. Most boards don't have that much to do at their meetings. And a lot of it is idiotic. By law, if the company wants to open a bank account in Hong Kong the board has to approve that, whereas the company can spend a huge amount of money on an advertisement campaign that the board may not even know about. So board meetings are a mixture of very dull housekeeping things, and then a handful of strategic questions. Then, what do you do with the rest of the time? They've arrived. You've got to keep them interested. So there will be presentations from marketing or manufacturing or research. Bob and I would always go through what's going to happen at the board meetings. From my point of view, the best board meeting is a very boring meeting for me, because I know what everyone's going to say, I know what's going to happen. Hopefully it's interesting for the other directors, but not an exciting time for me. If a board meeting is exciting for the chairman, then the company is out of control.

Letting Swanson Chair

Bugos: Some have described your role during the Roche acquisition and afterwards as that of non-executive chairman in the British sense.

Perkins: I don't know exactly what that means. I had been chairman for so many years that I would notice at board meetings, when someone was making a presentation, they would look at me. When someone wanted someone to sum things up, they would turn to me. I had to force myself to look to Swanson and let him sum up. Which I think I did fairly well. I tried very hard to let him be the chairman, and not continue to be the chairman. Packard had let me be chairman of Genentech, because he could have dominated the board. I didn't want to do the same thing to Swanson, and I don't think I did. Bob never came to me and said, "Tom, you're not letting me be chairman." So I guess I did it pretty successfully, because Bob would have been ultra-sensitive to that.

Bugos: So tell me if this is the sort of issue that would have been referred to the board--the 1988 quasi-reorganization where you converted your accumulated debt into paid-in capital.

Perkins: Not to the board. That was Raab, Swanson, and Perkins. Then approved by the board. I think that went fairly straightforward, for the SEC. Buying out the partnerships was a more radical and unexpected issue. And one that I got caught up in, uniquely, because I had exercised some stock options, and then the buyout of that partnership was a sell, and I was caught within a six month period under Rule 16(b).

##

Perkins: It was very complicated. We made money on the deal. We had to be careful that it was fair to everybody, including me. But that came up rather suddenly, those decisions.

Bugos: So this quasi-reorganization did not count as a significant innovation?

Perkins: No. Just bookkeeping.

Disengagement from the Board

Bugos: So in terms of understanding your role on the board. Could you please give us the chronology of your retirement? Both from your venture partnership and from Genentech, and the role that your family events played in that.

Perkins: My wife was diagnosed with cancer in September of 1990. She and I had been married for thirty some years at that point. It hit me like a ton of bricks. She had been healthy, athletic; a wonderful woman. That's her picture there. [points to an office table] I became intensely involved with helping her fight off the cancer. She had stage-III lymphoma, a terrible diagnosis. We had some success, through a combination of conventional therapy and two experimental treatments, one which I found out through my biotech connections. One was back East, done at Dana Farber. One was done at Stanford from a Kleiner Perkins company, IDEC. Each of which probably gave her an additional year. Each of which we thought were going to save her but didn't. And finally, a bone marrow transplant, which was a nightmare.

I was very involved with that. Deeply. She would have remissions and feel pretty good. Then we would travel and do things together. Then the cancer would return and I'd get back into the hospital side of it with her. Every time she went back to the hospital I went with her and stayed with her. There's just no way I could continue with what I was doing in business and at Kleiner Perkins. So I stepped back from most everything.

At the highpoint of my career, which was long before she got ill, I was on seventeen boards of directors, chairman of sixteen of the seventeen, plus the San Francisco Ballet and a couple of charities. I was just a total workaholic. It was stupid, but I built Kleiner Perkins and got a lot done. Anyway, I resigned from all the boards I was involved with when she got ill, except Genentech and Tandem Computers, and maybe Acuson, which I subsequently resigned from. I stuck with Tandem, in which I had a pretty large personal stake, through my wife's illness and her death and into its merger with Compaq.

I felt that after the Roche thing that I could leave Genentech. But I didn't want to leave Genentech while my wife was ill. I could go down there anytime and talk with Art Levinson and others about cancer. I had a personal reason to stay close to Genentech. Bob Swanson helped me. He opened doors for me. He was helpful in getting Gerd into these experimental programs, which did help her. It was all mixed up together. After her death, that reason disappeared. And I truly felt that my watch at Genentech was over. I had gotten Genentech to a safe harbor. Genentech was going to be just fine without me. So I resigned from the board. And as we know, soon after, it blew up. [laughter] Though I didn't expect that.

Genentech's Move into Cancer Therapies

Bugos: Genentech began to make a push into cancer drugs in the mid-1990s, culminating in Rituxan, Herceptin. Did you play any role in that?

Perkins: No. I never played much role in the choice of research projects at Genentech. I knew about them, but I never imposed myself in them, unlike with other companies where I was deeply involved with those things. The combination of Raab and Swanson was beyond anything I could contribute. So I took a back seat. However, Kleiner Perkins started IDEC. I knew about all that and encouraged the companies to work together, but they didn't really need any encouragement.

Kleiner Perkins Moves away from Biotech

Bugos: OK. In the early to mid 1990s Kleiner Perkins began to emphasize its investments in information technology over biotech. What role did your quasi-retirement play in that?

Perkins: Well, for years we were active in a number of biotech companies. But you could add up the profits we made in every one of those companies but Hybritech and Genentech, and it wouldn't come close to what we made in just Hybritech and Genentech. I wouldn't say we lost interest in biotech. We still do biotech deals from time to time. But there are these waves in technology. In my career, I was in on the ground floor of lasers, of minicomputers, of biotechnology, then finally, the Internet. I can't say that I was involved with the Internet because I wasn't active during the Internet craze. The partnership was. And there will be another one. Thank God. We didn't get totally out of the Internet bubble before it burst, but we got out more than most of our competitors did. We still lost our shirts, but not as badly as we could have. I personally was very skeptical about it, and last year I shorted lots of stuff in the Internet field before the bottom fell out.

But they've all gone through bubbles. There was a laser bubble, a minicomputer bubble, a biotech bubble. All these things get overbought, and then become oversold. It's human nature. Fear and greed in their perpetual struggle.

Bugos: Does biotech have another bubble coming up? What do you see as its future?

Perkins: My advice to any young person is to put your money in biotech and forget about it for a long time. Work in biotech. Biotech has changed our lives, but we're still just on the threshold. It's profoundly important and will continue to be for a hundred years.

Venture Capital in Biotechnology

Bugos: And will venture capital continue to be the driving force in the shape of that industry?

Perkins: Well, venture capital involvement in pharmacology is an anomaly, not the rule. Big pharmaceutical companies will continue to dominate the field. Universities will continue to play their role, etcetera. But it's certainly been proven that a handful of venture capitalists can make obscene amounts of money if they back the right biotech ventures. And that will continue. There's a staggering amount of money available, still, to be invested in venture capital. And most firms will still back biotech. Kleiner Perkins showed the way there. We did the two biggest biotech deals in the early phase--Hybritech and Genentech, and caught everybody by surprise. It was endlessly copied, and it'll continue to be copied. There will be big new ideas, and entrepreneurs will emerge, and researchers will want to spin out of universities and big pharma. After all, there's lots of incentives for those ideas to come to the venture capitalists.

Bugos: Your competitors, or copiers, among venture financiers who backed biotech. Who have been the most significant.

Perkins: I think [Franklin] "Pitch" Johnson with Asset Management [Partners]. He never forgave me for not letting him in on the ground floor of Genentech, but then I did let him in on the ground floor of Hybritech and he was very happy. And he was involved with Amgen. So he was involved with two of the big three, as we were. I don't know anyone who was involved in all three of the big three. Pitch Johnson, definitely. After that nobody, really, stands out above anybody else. Nobody else was in on the ground floor. It's Pitch Johnson, Tom Perkins, Brook Byers, those were the guys who saw it pretty clearly and very early.

Biomedical Devices and the FDA

Bugos: What about biomedical devices? How do those compare in terms of the role venture capital has played in that industry?

Perkins: We've certainly had mixed success there. Just in the newspapers from the last few weeks there's been all this stuff about a left ventricle assist device, the implantable heart assist pump, from Thoratec I think. Big deal. We had a company fifteen years ago called Novacor that did exactly the same thing with implantation in patients. In this news there's not a single reporter that's gone to the file and looked it up, and said this happened fifteen years ago. That company failed completely because of the Food and Drug Administration.

To get an implantable device through the clinical trials, it's a hurdle so high that it often doesn't happen, by anybody. It's certainly not a venture capital type of deal. I learned that lesson, bitterly. Particularly with a mechanical device, like this implantable heart. I will predict that this thing will disappear and never be seen again. They will find something wrong with it. Could be a loose screw, or a spring that needs to be tighter, God knows what. You make any change and you have to start all over again. It's impossible. In the course of your

research you have to always restart. This is an FDA idiocy, and I'm sure it hasn't changed since my encounter with it. It's nuts. Only a giant company can afford to do it. So I'm very skeptical about most biomedical products, at least those that deal directly with the body. We've have good luck with other types of biomedical devices.

It's not easy with anything dealing with the FDA. As soon as you say FDA, you're talking hundreds of millions of dollars. Anything. What can you get through the FDA that doesn't cost a hundred million dollars? Maybe a test kit. At Hybritech, our FDA problems were a fraction of those for other companies. Still it's a hundred million bucks for a test kit, I suppose.

I don't think we need the FDA. I honestly think you can rely on peer review. The *New England Journal of Medicine* is pretty good. Say whatever it is, device or drug, has to be peer-reviewed and published in the *New England Journal of Medicine*. You can get rid of the Food and Drug Administration, except maybe for testing hamburgers for bacillus. Sure, they play a role there. It's the efficacy hurdle which is so subjective, and this goes back to Senator [Estes] Kefauver in the fifties. It delays drugs and devices from life-saving applications, and the American people pay the price.

Anybody, any entrepreneur, coming in with a drug or device that needs FDA approval, is really asking for a multi-hundred million dollar deal before it will see the light of day. Unless there's some way around it, like licensing, or whatever. There's lots of ways around it. That's what we do, is try to be creative in getting through or around that brick wall. But if it's a frontal assault, then it's just with money. And so much that a typical deal can't be done as you would with an electronic device or anything else. But all deals have their problems. If somebody walks in and says, "This device is going to put IBM out of business" [laughs] then you're talking a pretty big investment before that happens. Going back to the early days of Genentech, I didn't have a clue as to how many billions of dollars would be involved. Nobody did. We just didn't think it through. I suppose if we had we wouldn't have done it. I'm sure glad we did.

The Promise of Biotech

Bugos: So you've been a true believer in biotech for more than twenty years, enough to put that kind of money into it. When your wife had cancer and you were confronting the medical system did you ever have doubts in the faith that you had placed in the industry? Doubts in their ability to actually deliver cures?

Perkins: When she got the diagnosis, first thing I did was call up a scientist at IDEC and say, "We've got to do this, we've got to do that!" And he brought me down to earth by saying, "Look, what we're doing is very experimental, probably won't work. She has really good prospects just by doing the conventional chemotherapy." So that's what we did. He set me up with the doctor at Stanford that we used throughout the whole period. With full hindsight, I think her life could have been saved if we had done conventional chemotherapy followed immediately, or in months, with a bone marrow transplant. Hit the cancer with everything you've got up front. But she wouldn't have done it, because she appeared to go into remission. A bone marrow transplant is in itself a life-threatening process. Ten percent of the patients die in the process,

so it's not something you do quickly. It's sort of a meaningless thing to speculate on because she wouldn't have done it anyway. So we lost the battle. It sort of ruined my life, and I haven't gotten over her death. But thanks to my personal involvement with biotech I think she gained two years that she wouldn't have otherwise had. That's pretty important.

Bugos: So you didn't lose your faith in the biotech effort?

Perkins: No. In the very early days of Genentech, I was very skeptical. Swanson never doubted that it would work, because he had a background in chemistry, which has always been black magic to me. I was very skeptical until somatostatin was expressed. I figured fifty-fifty on that one, or even worse. You just have to hand it to Swanson. He saw it more clearly than anyone. He saw it more clearly than Boyer did. He saw it more clearly than anyone in the world.

Belief in God the Creator

Bugos: You used the phrase earlier in this interview that the big technical risk was, "Whether God would let you make a new life form." Was that flippant? Or do you believe that there is a God looking out for the integrity of life forms?

Perkins: [Laughs] Oh, man. That's a very deep question and one that I have thoughts on. However, I'm not sure I can get them across very quickly or coherently.

I believe in God, but not in any sort of Christian or religious sense. I believe in God the Creator. And now don't get me wrong. I am absolutely not a Christian fundamentalist, but I believe Darwin only got it partly right. There is something in it, evolution, and it may just be a chemical affinity for molecules wanting to get more complex that is written into life by, you know, the Creator. Biological mechanisms, unlike every other system in the universe, defy entropy. They become more complex rather than less complex, which is against the second law of thermodynamics. I think there is a pattern that leads to genes being formed. There is a theory about this, written by a Japanese scientist, called the theory of molecular evolution which I think is underlying Darwin. I've thought this way for a long time. I now think that genetic manipulation is also in the genes. If we're smart enough to do it, we probably should do it. I don't know if I should go any further into it than that. When I said "Will God let us do it?" it's with all of that in the background. I think there is a God, yes.

Perkins's Law

Bugos: Then another take on this issue gets back to what people call Perkins's Law. Can you say for us now if it is your law? That technical risk is inversely proportionate to market risk. Market risk in Genentech is clearly a social good. There's no question that people need insulin, better insulin, and that lives would be saved and made better by it. But there's that huge technical risk.

Perkins: I've said that many times and I believe it. Genentech is the outstanding example of it and the structuring of the deal, which we've talked about before, reflects that. It all was along the lines that I believe in and practice in venture capital. Maybe it's just common sense; I don't know that it's a law.

Bugos: Since its founding, do you think market risk has become a bigger factor at Genentech?

Perkins: As the technology becomes ever more powerful and the obvious targets have been picked off, market risk will become eventually a bigger factor than it was in Genentech's history. Swanson and his researchers would sit around and ask, "What are the problems, what are the needs? What diseases are out there that our technology can access?" All of those problems that had good market needs were sufficiently interesting, technically, to motivate the scientists. Working on something that we were ultimately going to sell a lot of was technically worthwhile for them. So they never felt that they were compromising their science for dirty lucre. And it continues that way. We just have to hand it to Swanson. He created an extraordinary model with Genentech. Swanson is a hero, not just to the people at Genentech, but in general. His passing is a great loss.

The Genentech Model

Bugos: To sum up this interview, could you boil that model down to fit in the few minutes we have remaining on this side of the tape? Or, what three things should entrepreneurs know about Genentech before pitching you on a new biotech company?

Perkins: Underlying it all was Swanson's belief in the power of the technology. He saw it more clearly than even Boyer. That was a cornerstone of Genentech--his belief that it could be done. And it was not a naive belief. Maybe we were naive in figuring the amount of money it would take to do it, but the belief in the technology was fundamental and essential. So optimism. That's one.

Two, was understanding that to do world-class work you had to have world-class people and treat them extremely well, and create an atmosphere that was better than in a university laboratory. Swanson saw that clearly, but with guidance from Boyer. Hence Genentech is a world leader in scientific work, and papers from Genentech are basic to the entire field.

Third, that you can make a profit and that you'd better make a profit. The sense of urgency to get on with it, to get it done, do it quickly, do it efficiently, with a full understanding of the importance of the bottom line. All companies should have that, but some are pretty casual about it. I suppose this is where I entered the picture. Swanson and I never apologized for the urgent need to make a profit, and to get on with it, and to commercialize these ideas.

TAPE GUIDE--Thomas Perkins

Interview 1: October 24, 2001

Tape 1, Side A	1
Tape 1, Side B	7
Tape 2, Side A	13
Tape 2, Side B	17

Interview 2: October 31, 2001

Tape 3, Side A	19
Tape 3, Side B	25
Tape 4, Side A	30
Tape 4, Side B	35

Interview 3: November 14, 2001

Tape 5, Side A	36
Tape 5, Side B	41
Tape 6, Side A	47
Tape 6, Side B not recorded	

APPENDICES

A.	Genentech, Inc., "Notice of Annual Meeting of Shareholders to Be Held April 30, 1979"	56
B.	Genentech, Inc., "Proxy Statement for Annual Meeting of Shareholders, April 9, 1979"	57
C.	Harvard Business School Bulletin, October 1982, "1957: to and from the 25 th Reunion"	69
D.	Genentech, Inc., "Thomas J. Perkins, Member, Board of Directors," September 29, 1993	79

GENENTECH, INC.
460 POINT SAN BRUNO BLVD., SUITE 1
SOUTH SAN FRANCISCO, CALIFORNIA 94080

NOTICE OF ANNUAL MEETING OF SHAREHOLDERS
TO BE HELD APRIL 30, 1979

TO THE SHAREHOLDERS OF GENENTECH, INC.:

NOTICE IS HEREBY GIVEN that the Annual Meeting of Shareholders of Genentech, Inc. (the "Company"), a California corporation, will be held at the offices of the Company at 460 Point San Bruno Boulevard, South San Francisco, California, on Monday, April 30, 1979, at 10:00 a.m., for the following purposes:

A. To elect a Board of Directors to serve for the ensuing year and until their successors are elected;

B. To ratify the selection by the Board of Directors of Arthur Young & Company as auditors for the fiscal year ending December 31, 1979;

C. To consider and act upon a proposal, described in the accompanying Proxy Statement, to approve the Company's Non-Qualified Stock Option Plan; and

D. To transact such other business as may properly come before the meeting or any continuation or adjournment thereof.

Shareholders of record at the close of business on April 6, 1979 will be entitled to vote in accordance with the number of shares of record in the name of each on that date.

Whether or not you plan to attend the shareholders' meeting, please sign the enclosed proxy and return it in the enclosed envelope.

By Order of the Board of Directors



Fred A. Middleton
Assistant Secretary

Dated at South San Francisco, California
April 9, 1979

GENENTECH, INC.
460 POINT SAN BRUNO BLVD., SUITE 1
SOUTH SAN FRANCISCO, CALIFORNIA 94080

PROXY STATEMENT
FOR
ANNUAL MEETING OF SHAREHOLDERS

April 9, 1979

GENERAL

The enclosed proxy is solicited by the management of Genentech, Inc. (the "Company") for use at the Annual Meeting of Shareholders to be held on April 30, 1979, or any continuation or adjournment of that meeting for the purposes set forth in the foregoing notice. The cost of solicitation of proxies will be borne by the Company, including expenses in connection with preparing and mailing this Proxy Statement. In addition, the original solicitation of proxies by mail may be supplemented by telephone, telegram and personal solicitation by officers, directors or other regular employees of the Company. No additional compensation will be paid to such individuals.

Any shareholder giving a proxy has the power to revoke it any time before it is exercised. It may be revoked by filing with the Company at its offices at 460 Point San Bruno Blvd., Suite 1, South San Francisco, California 94080, an instrument of revocation or a duly executed proxy bearing a later date. It may also be revoked by election to vote in person while in attendance at the meeting.

Only holders of stock of record at the close of business on April 6, 1979, will be entitled to notice of and to vote at the meeting. Each shareholder, if he so chooses, may cumulate his votes in election of directors. Each holder of Common Stock will be entitled to three votes for each share he holds and each holder of Preferred Stock will be entitled to thirty votes for each share he holds. Each shareholder may give one candidate all the votes he is entitled to cast or he may distribute his votes among as many nominees as he chooses. There are no conditions to the right to so cumulate votes in the election of directors. Voting on all other matters to be submitted at this meeting is noncumulative.

As of April 6, 1979 the Company had outstanding 746,750 shares of Common Stock and 61,371 shares of Series A Preferred Stock (the "Series A Stock"). Each share of Common Stock has one vote and each share of Series A Stock has ten votes, except in the case of cumulative voting, where each share has three votes and thirty votes, respectively. Holders of Common Stock and holders of Series A Stock will vote together as a group, rather than separately as a class, on all matters discussed herein.

PROPOSAL A - NOMINATION AND ELECTION OF DIRECTORS

One of the purposes of the meeting is the election of directors of the Company to hold office for the ensuing year and until their successors are elected and have qualified. Shares represented by executed proxies will be voted, if authority to do so is not withheld, for the election of nominees named below, unless one or more of such nominees should become unavailable for election by reason of death or other unexpected occurrence, in which event such shares shall be voted for the election of such substitute nominees as the management may propose. Management knows of no reason why any of the listed nominees should not be available.

The following table sets forth the name of each nominee for director, the positions and offices held by him and his principal occupation and the date on which he became a director of the Company.

<u>Name</u>	<u>Principal Occupation</u>	<u>Served as a Director from</u>
Robert A. Swanson	President of the Company	April 7, 1976
Herbert W. Boyer	Professor of Biochemistry at University of California- San Francisco; Vice-President and Secretary of the Company	April 7, 1976
Thomas J. Perkins	Partner - Kleiner, Perkins, Caufield & Byers	April 27, 1976

PROPOSAL B - SELECTION OF AUDITORS

Management recommends that the shareholders ratify the Board of Directors' selection of Arthur Young & Company as auditors for the Company for the fiscal year ending December 31, 1979. The favorable vote of a majority of the votes cast by holders of Common Stock and Series A Stock, taken together, is required for ratification of the selection of Arthur Young & Company. Arthur Young & Company has examined the financial statements of the Company since its inception. Representatives of Arthur Young & Company are not expected to be present at the Annual Meeting. Management and the Board of Directors recommends a vote in favor of such ratification.

PROPOSAL C - APPROVAL OF NON-QUALIFIED STOCK OPTION PLAN

At a meeting held on March 28, 1979, the Board of Directors of the Company adopted, subject to shareholder approval, a Non-Qualified Stock Option Plan (the "Plan") pursuant to which it may grant stock options as an incentive to selected eligible employees of and consultants to the Company to provide a means by which such persons can acquire stock in the Company, thereby increasing their proprietary interest in the Company's growth and success. Management believes the ability to grant options can be of value to the Company by helping it to secure and retain the services of persons holding key positions and those capable of filling such positions.

Under the Plan, options to purchase up to 150,000 shares of the Company's Common Stock may be granted to eligible employees at a price not less than eighty-five percent (85%) of the fair market value of the Common Stock on the date of grant and for an option period of not longer than ten (10) years. The full text of the Plan is attached hereto as Exhibit A.

The purchase price of the Common Stock issued upon exercise of an option granted under the Plan is payable in cash or by certified check at the time of exercise, or, at the discretion of the Board of Directors, pursuant to a deferred payment arrangement. Under the California Corporations Code, a corporation may lend money or otherwise assist any officer or director to purchase stock pursuant to an option plan provided the plan is approved by the shareholders.

Since the Company's officers and directors who are also employees are eligible to receive options, approval of the Plan by the shareholders would allow the Company to issue the underlying Common Stock pursuant to a deferred payment arrangement.

The favorable vote of a majority of the votes cast by holders of Common Stock and Series A Stock, taken together, is required for approval of the Plan. Management and the Board of Directors recommends a vote for this proposal.

OTHER MATTERS

Management knows of no other business to be presented at the meeting, but if matters do properly come before the meeting, it is intended that the persons named in the proxy will vote in respect thereof in accordance with their best judgment.

The Board of Directors encourages you to have your shares voted by signing and returning the enclosed proxy. The fact that you will have returned your proxy in advance will in no way affect your privilege to vote in person should you find it possible later on to attend. However, by signing and returning the proxy you have assured your representation at the Annual Meeting. Thank you for your cooperation.

By Order of the Board of Directors



Fred A. Middleton
Assistant Secretary

DATED: April 9, 1979.

GENENTECH, INC.

NON-QUALIFIED STOCK OPTION PLAN

1. PURPOSE.

(a) The purpose of the Plan is to provide a means whereby selected eligible employees and consultants of GENENTECH, INC. (hereinafter called the "Company") and of its subsidiaries may be given an opportunity to purchase the Common Stock, \$0.02 par value, of the Company (the "Common Stock"). The word "subsidiary," as used in this Plan, means a subsidiary corporation as defined in Section 425(f) of the Internal Revenue Code.

(b) The Company, by means of the Plan, seeks to retain the services of persons now holding key positions, and to secure and retain the services of persons capable of filling such positions.

2. ADMINISTRATION.

(a) The Plan shall be administered by the Board of Directors until such time as the Board of Directors, as stated in subparagraph (c), delegates administration to a committee.

(b) The Board of Directors shall have the power, subject to, and within the limits of, the express provisions of the Plan:

(1) To determine from time to time which of the eligible persons shall be granted options under the Plan, and the time or times when, and the number of shares for which, an option or options shall be granted to each of them.

(2) To construe and interpret the Plan and options granted under it, and to establish, amend, and revoke rules and regulations for its administration. The Board, in the exercise of this power, may correct any defect

or supply any omission, or reconcile any inconsistency in the Plan, or in any option grant, in a manner and to the extent it shall deem necessary or expedient to make the Plan fully effective.

(3) To prescribe the terms and provisions of each option granted (which need not be identical).

(4) Generally, to exercise such powers and to perform such acts as are deemed necessary or expedient to promote the best interests of the Company.

(5) The Board of Directors shall have the sole and final power to determine all questions of policy and expediency that may arise in the administration of the Plan.

(c) The Board of Directors, by resolution, may delegate administration of the Plan to a committee composed of not less than three members of the Board, none of whom shall be eligible for benefits under the Plan. If administration is delegated to a committee, the committee shall have, in connection with the administration of the Plan, the powers theretofore possessed by the Board of Directors, subject, however, to such resolutions, not inconsistent with the provisions of the Plan, as, from time to time, may be adopted by the Board of Directors and subject to the provisions of subparagraph (b)(5) of this paragraph 2. The Board of Directors at any time may abolish the committee and revest in the Board the administration of the Plan.

3. SHARES SUBJECT TO THE PLAN.

Subject to the provisions of paragraph 8 (relating to adjustments upon changes in stock), the stock which may be sold pursuant to options granted under the Plan shall not exceed in the aggregate 150,000 shares of the Company's authorized Common Stock and may be unissued shares or reacquired shares or shares bought on the market for the purposes of the Plan. If any options granted under the Plan shall for any reason terminate or expire without having been exercised in full, the stock not purchased under such options shall be available again for the purposes of the Plan.

4. ELIGIBILITY.

Options may be granted to any employee of or consultant to the Company and/or any subsidiary. A director of the Company shall not be eligible for the benefits of the Plan unless he is also a salaried employee of or consultant to the Company and/or any subsidiary and unless and until he

is expressly declared eligible to participate in the Plan by action of the Board of Directors of the Company, of which a majority of the directors acting in any such matter are ineligible for benefits under the Plan.

5. PURCHASE PRICE.

The purchase price under each option shall be not less than eighty-five percent (85%) of the fair market value of the stock subject to the option on the date the option is granted.

6. TERMS OF OPTION AGREEMENTS.

Each option grant shall be in such form and shall contain such provisions as the Board of Directors or the committee from time to time shall deem appropriate. Option grants need not be identical, but each option grant by appropriate language shall include or incorporate by reference the substance of all of the following provisions:

(a) The term of any option shall be not more than ten (10) years from the date it was granted.

(b) The minimum number of shares with respect to which an option may be exercised in part at any time is ten (10), unless the option grants the right to purchase fewer than ten (10) shares. Said minimum number shall not change, unless specifically changed by action of the Board of Directors, by reason of any changes in stock to which paragraph 8(a) hereof relates or any adjustments made under that paragraph; in the event of any such changes in stock, the Board of Directors may make such change in said minimum number, if any, as the Board of Directors may deem appropriate in the circumstances.

(c) The total number of shares subject to an option may, but need not, be allotted in installments (which may, but need not, be equal). From time to time during each of said periods the option may be exercised with respect to some or all of the shares allotted to said period, and, in addition, with respect to some or all of the shares allotted

to all prior periods with respect to which the option was not fully exercised. During the remainder of the term of the option (if its term extends beyond the end of the installment periods) the option may be exercised from time to time with respect to any shares then remaining subject to the option. The provisions of this subparagraph are subject to the provisions of subparagraph (b) relating to the minimum number of shares with respect to which an option may be exercised.

(d) The purchase price under each option shall be as specified by the Board of Directors or the committee described in paragraph 2(c) above pursuant to paragraph 5 hereof.

(e) The purchase price of stock sold pursuant to an option shall be paid either:

(i) in cash or by certified check at the time the option is exercised, or

(ii) at the discretion of the Board of Directors or the committee described in paragraph 2(c) above, pursuant to a deferred payment arrangement with the person to whom the option is granted or with his legal representative, heir, legatee or distributee.

(f) The Company, during the terms of options granted under the Plan, at all times will keep available the number of shares of stock required to satisfy such options.

(g) The Company may require any person to whom an option is granted, his legal representative, heir, legatee or distributee, as a condition of exercising any option granted hereunder:

(i) to give written assurances in substance and form satisfactory to the Company to the effect that such person is acquiring the stock subject to the option for his own account for investment and not with any present intention of selling or otherwise distributing the same; and/or

(ii) to grant the Company a right of first refusal with respect to the stock obtained upon exercise of the option, upon terms determined by the Board of Directors of the Company.

No optionee shall be entitled to exercise any option granted hereunder unless and until the issuance and sale of shares pursuant to the portion of the option exercised comply with all applicable laws and regulations, including, without limitation, that such issuance and sale, if not registered by the Company under the Securities Act of 1933, will, in the opinion of counsel to the Company, either (1) meet all the requirements of Rule 147 under such Act including the requirement that the optionee be a resident of California at the time of exercise, or (2) meet all of the requirements of Rule 240 promulgated under such Act or another exemption from registration thereunder.

In the event that the Company shall deem it necessary to register, under the Securities Act of 1933 or any other applicable statute, any shares with respect to which an option shall have been exercised, or to qualify such shares for exemption under the Securities Act of 1933 under Regulation A of the Rules and Regulations of the Securities and Exchange Commission, or to register any such shares under the Securities Exchange Act of 1934 or cause such shares to be listed on any stock exchange, then any such action shall be taken at the sole expense of the Company. The Company shall have the right, however, to make any reasonable determination concerning the time and the manner of taking such action so that, for example, expenses may be minimized and other factors affecting the Company interest may be accommodated. Notwithstanding the foregoing, the Company shall be under no obligation to register any shares obtained upon the exercise of an option under the Plan.

(h) The Company, in order to comply with applicable IRS regulations, is permitted to make the necessary withholdings required on taxable income arising from the exercise of an option.

(i) Neither a person to whom an option is granted nor his legal representative, heir, legatee or distributee, shall be deemed to be the holder of, or to have any of the rights of a holder with respect to, any shares subject to such option unless and until he has exercised his option pursuant to the terms thereof.

(j) An option shall not be transferable except by will or by the laws of descent and distribution, and during the lifetime of the person to whom the option is granted he alone may exercise it.

(k) An option may not be exercised to any extent, either by the person to whom it was granted or by any person after his death, unless the person to whom the option was granted has remained in the continuous employ or has served continuously as a consultant to or director of the Company or a subsidiary for not less than six (6) months from the date the option was granted.

(l) An option shall terminate and may not be exercised if the person to whom it is granted ceases to be employed (as an employee or consultant) by the Company or by a subsidiary of the Company, except if he dies while in the employ of the Company or a subsidiary, his option may be exercised at any time within not more than six (6) months following his death by the person or persons to whom his rights under the option shall pass by will or by the laws of descent or distribution, but only to the extent that such option was exercisable by him on the date of termination of his employment. Nothing herein is intended to extend the term of the option and in no event may an option be exercised by anyone after the expiration of its term established pursuant to subparagraph 6(a) above.

(m) The Board of Directors or a committee to which the power to administer the Plan has been delegated shall have the power to accelerate the date or dates on which an option may be exercised, in whole or in part, notwithstanding the provisions in the option stating the time during which it may be exercised.

7. USE OF PROCEEDS FROM STOCK.

Proceeds from the sale of stock pursuant to options granted under the Plan shall constitute general funds of the Company.

8. ADJUSTMENT UPON CHANGES IN STOCK.

(a) If any change is made in the stock subject to the Plan, or subject to any option granted under the Plan (through merger, consolidation, reorganization, recapitalization, stock dividend, dividend in property other than cash,

stock split, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or otherwise) appropriate proportional adjustment may be made by the Board of Directors as to the maximum number of shares subject to the Plan, the number of shares and price per share of stock subject to the outstanding options, and the minimum number of shares with respect to which an option may be exercised in part at any time.

(b) In the event of: (1) a dissolution or liquidation of the Company; (2) a merger or consolidation in which the Company is not the surviving corporation; or (3) other capital reorganization in which more than fifty percent (50%) of the shares of the Company entitled to vote are exchanged, any outstanding options hereunder shall terminate except:

(i) when another corporation shall assume such options or substitute new options therefor; and

(ii) the Board shall have discretion and power in any such event to determine, and to make effective provision therefor, that, notwithstanding the provision of paragraph 6(c) hereof, an optionee may exercise his option for such number of shares, not exceeding the total number specified by the option, as the Board may determine and/or that any outstanding options shall continue in full force and effect.

9. AMENDMENT OF THE PLAN.

The Board of Directors at any time, and from time to time, may amend the Plan. Rights and obligations under any option granted before amendment of the Plan shall not be altered or impaired by amendment of the Plan, except with the consent of the person to whom the option was granted.

10. TERMINATION OR SUSPENSION OF THE PLAN.

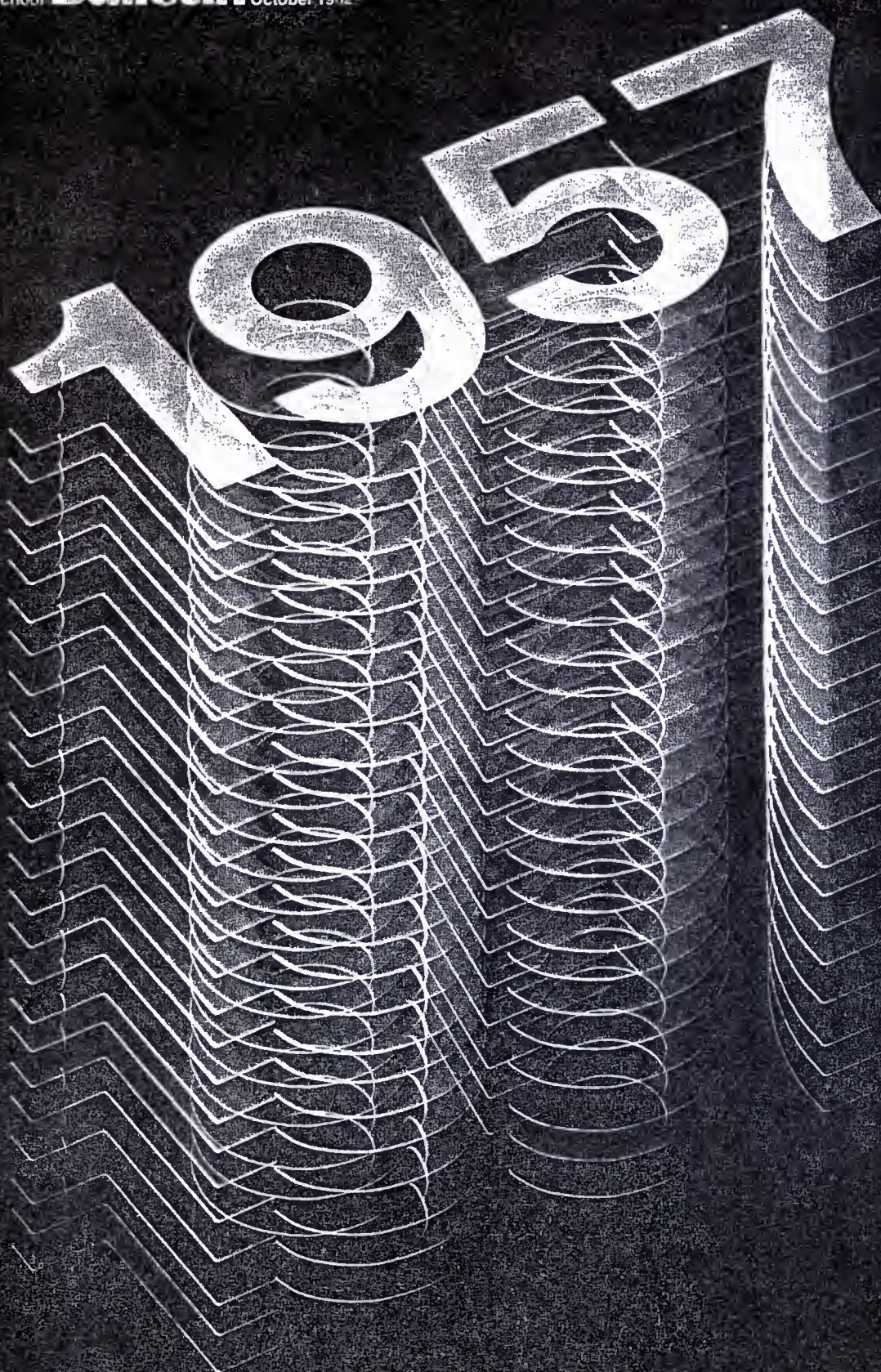
The Board of Directors at any time may suspend or terminate the Plan. The Plan, unless sooner terminated, shall terminate on April 26, 1984. An option may not be granted while the Plan is suspended or after it is terminated.

Rights and obligations under any option granted while the Plan is in effect shall not be altered or impaired.

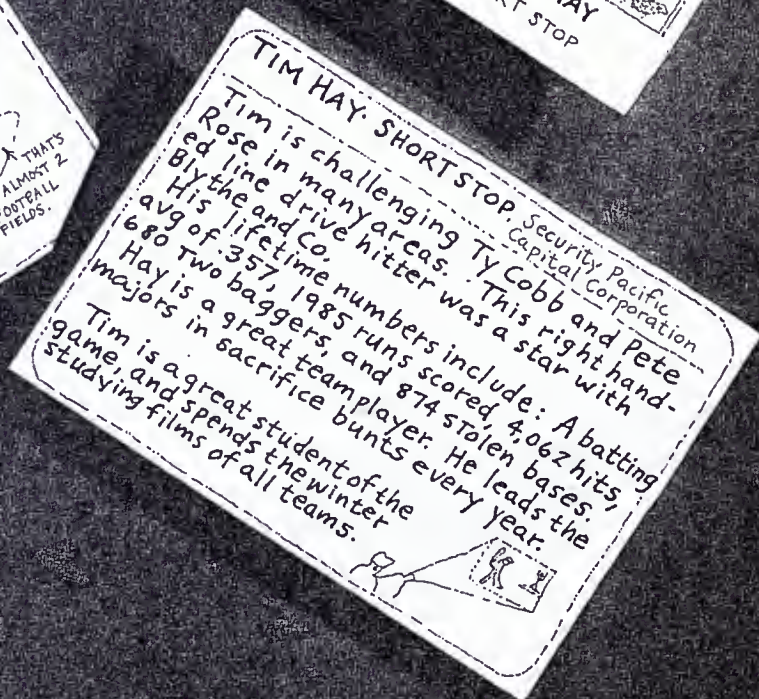
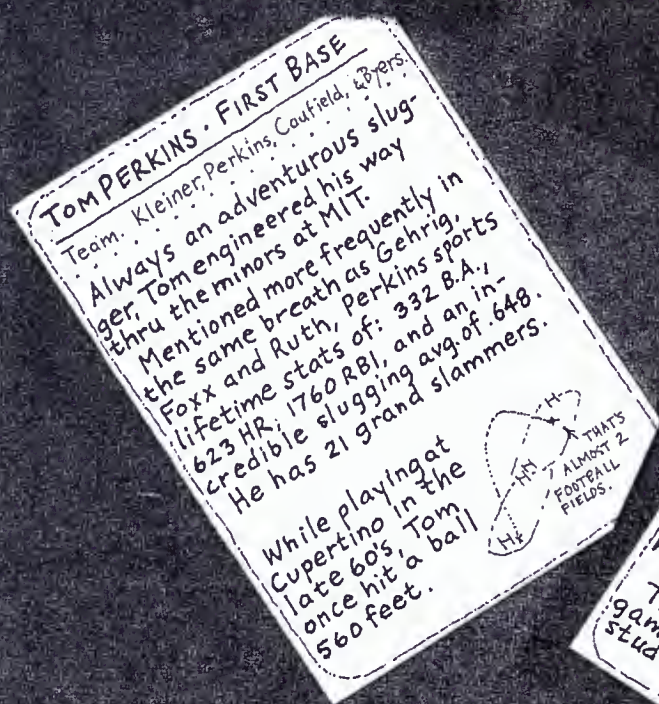
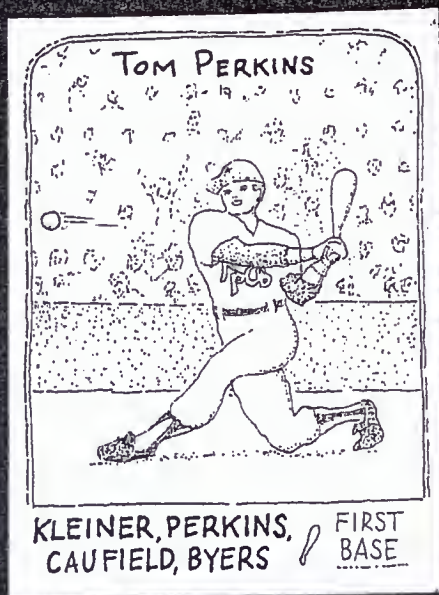
by suspension or termination of the Plan, except with the consent of the person to whom the option was granted.

11. EFFECTIVE DATE OF PLAN.

The Plan shall become effective as determined by the Board of Directors but no options granted under it shall be exercisable until the Plan has been approved by the vote or written consent of the holders of a majority of the outstanding shares of the Company entitled to vote.



to and from the 25th Reunion



The Fascination of the New

Venture n. An undertaking of chance or danger; the risking of something upon an event which cannot be foreseen with certainty; a hazard; risk, specifically, a business enterprise of a speculative nature.

Capital n. An aggregation of (economic) goods used to promote the production of other goods, instead of being valuable solely for purposes of immediate enjoyment.

Webster's New International Dictionary (Second Edition)

by John March

Venture capital.

Unlike manufacturing or consulting or the more traditional branches of finance, venture capital is an area where few in the Class of 1957 have. . . well, ventured; but among those that have, two have enjoyed an unusual degree of success.

At first glance, they are as different as night and day — the one tall and deliberate, with the seriousness of a confirmed problem-solver, the other of moderate stature and a sunny enthusiast, open and curious. Just as different are the investment situations where they've chosen to become involved: seed financings and start-ups in the first case, management buy-outs in the second. Both men, however, share a commitment to the process of venture capital financing and its role in the American economy, and both have demonstrated an unusual ability to serve as midwife to a wide variety of new businesses.

Tom Perkins is a general partner of the San Francisco venture capital firm of Kleiner, Perkins, Caufield & Byers, a firm notable for its early involvement with such high technology enterprises as Tandem Computers and Genentech, each an acknowledged leader in its particular field. (Perkins, as it happens, serves as chairman of both Tandem and Genentech.)

His classmate Tim Hay is chairman and president of the Security Pacific Capital Corporation, the venture capital arm of the Los Angeles-based Security Pacific National Bank. A recent survey by *Venture* magazine ranked the Security Pacific Capital Corporation eighth in total 1981 investments of all venture capital investors in the country on the basis of the firm's decision to invest some \$35 million last year in new ventures.

In the spring of this year, the *Bulletin* met with each man and later spoke with a number of their associates, including several of the entrepreneurs with whom they've worked. What emerges is a compound answer to the question, What makes for success in venture capital?

Tom Perkins learned about high technology start-ups in a way that not every venture capitalist does — as an inventor who founded his own high technology company. An engineer by training — he received his Bachelor of Science degree in electrical engineering from MIT — he capped his early investigations in laser technology by developing a laser with broad industrial applications.

Prior to Perkins' work in this field, lasers had been too delicate for most applications, and as a result they rarely left the laboratory. It was Perkins' contribution to laser technology to develop an instrument far more rugged (he made lasers, among others things, shockproof and waterproof) and capable of far broader application.

The company he formed to manufacture the new laser was later merged into Spectra-Physics, which in turn became the leading volume producer of lasers.

Perkins, in the meantime, moved on to Hewlett-Packard, where he served as manager of that firm's Cupertino, California, computer division from 1965 to 1970, the period of the division's initial growth. In 1970 he was named director of corporate development, a position he held until 1972.

"At that point," he recalls, "I decided I had really enjoyed the whole entrepreneurial experience I had had earlier."

And so thinking, he left Hewlett-Packard and formed a partnership with engineer Eugene Kleiner, a founder of Fairchild Semiconductor, to invest in emerging high technology companies. With their combined experience as engineers, entrepreneurs, and line managers, and their broad familiarity with the people and research activities in the "Silicon Valley" area, they formed a powerful combination.

Today, with the addition of several other partners, including Frank Caufield (MBA '68) and John Doerr (MBA '76), the partnership has a base capitalization of \$70 million and a portfolio of high technology holdings worth several hundred million dollars. An adjective often used in the trade and business press to describe the firm is "high-flying," and it seems to fit.

"We look for a proprietary position in an emerging industry," says Perkins of the firm's investment strategy. "Tandem manufacturers of so-called 'fail-safe' computers were the first in their field, for instance."

The search for such key ventures, and the firm's success in finding them, has earned Kleiner, Perkins a high visibility, and today new proposals crowd in at the rate of three a day. Not unnaturally, given the publicity surrounding Genentech, they

include a number of suggestions for new ventures in biotechnology.

However, says Perkins, the firm will invest only once in a given area, and for an obvious reason: "We don't want to fund competitors," he says, "of companies we're already funding."

As for proposals that do survive the initial screening, he adds, "The firm looks very hard at the people themselves, because a good idea in the hands of the wrong person will be a disaster." And this, of course, is the downside of flying high: there is always the possibility of a rather dramatic failure, despite the best-laid plans. And, in fact, not every venture backed by Kleiner, Perkins is an unqualified success.

"We have a higher loss ratio than some other firms," admits Perkins, "because we take higher risks."

"But when we hit a home run," he adds, "it's a big one."

One of their biggest home runs, of course, has been Genentech, the Bay Area genetic engineering firm now working to develop such products as human insulin, human growth hormone, and leukocyte interferon. When the firm went public two years ago, shares were initially offered at \$35 on the first day of trading. One day later, the price had skyrocketed to \$89, so great was the demand for equity in the fledgling company. Although the initial fervor — and the price — have since subsided, Genentech remains at the forefront of commercial biotechnology. At the same time, Kleiner, Perkins' 938,000 shares of Genentech, purchased at a reported average of \$1.85, have the look of a grand slam.

In retrospect, the firm's decision to fund the basic research needed to demonstrate the commercial feasibility of genetic engineering — research for which they invested \$100,000 in Genentech in its earliest days — was a smart one. Perkins, for his part, attributes the decision in part to the industrial background he and Kleiner share.

"In that respect we're atypical," he observes. "The typical venture capitalist has come from Wall Street, and we've come from the industrial world. I think it's an industrial decision to invest in R & D early on."

Kleiner and Perkins were also guided in their decision by their knowledge of one of Genentech's founders, president Robert Swanson. Before joining forces with molecular biologist Herbert Boyer to form Genentech, Swanson had spent a year at Kleiner, Perkins, having earlier been responsible for Citibank's venture capital operations on the West Coast. Thus, when Swanson returned to

them with a proposal of his own, Perkins and the others were dealing with a known and respected individual.

Swanson, for his part, remains impressed by the readiness of Kleiner, Perkins to invest in what was then largely an untried technology.

"The first round of financing wasn't for a great deal of money — it was \$100,000 or so — but I think it's a good example of the way Tom can respond," he says. "Herb Boyer and I had been working for a number of months to put together a business plan for Genentech, and then when we had it ready we brought it in and made a presentation to Tom and Gene Kleiner — and by that afternoon we had a commitment.

"I think that's indicative. Once Tom sees something, he's able to make up his mind and act quickly. In this case, he saw the importance of this new technology, just as he had done earlier with lasers."

Swanson's counterpart at Tandem Computers, president James Treybig, agrees.

"Tom has a fantastic ability to grasp business opportunities," says Treybig. "He has a strong technical background, and he understands marketing. That's not a combination you find in many people.

"Also," he adds, "Tom feels and sees problems very, very well. Sometimes he'll come in here and say things, and I'll go away and think about them and realize he's picked up on something I haven't seen yet — and he doesn't even work here."

Swanson concurs.

"He's one of what I call 'the early indicators,'" says the 34-year-old Genentech president. "Tom sees things developing early and is able to point them out. His perceptions that way have been very, very helpful."

In addition to his regard for Perkins' foresight, Treybig also credits the Tandem chairman with a willingness to try new approaches.

"Tom has some very innovative concepts in people management," says Treybig. "Most Tandem employees, for instance, are shareholders. That's something that may be a good idea, but if the board doesn't say yes, it's not going to happen. And Tom has been extremely supportive in this area.

"Let me give you another example. I've known Tom since 1968. When I first came to work for him [at Hewlett-Packard], I had worked for just one year — and he hired me to manage about 25 people, most of them quite a bit older than me. That took a lot of guts. I was 28 then. When I started here at Tandem I was 33. What I mean by this is that Tom is a guy who will evaluate an opportunity and take a chance — not only on a business, but on people."

One of Perkins' fellow venture capitalists, Jack Neises (MBA '56) of Boston's Charles River Partnership III, sees this last quality in a slightly different light, using both Swanson and Treybig to illustrate what he calls Perkins' distinctive approach to the practice of venture capital.

"One thing that's interesting about Tom is that he's developed a kind of farm system," says Neises. "He's taken people like Bob Swanson and Jim Treybig and put them in a back room at Kleiner, Perkins and let them work on conceptualizing new businesses. Then — at least in the case of Jim Treybig — when the business is ready to be launched, he sends the man out to be president.

"I think that's a very distinctive approach. Most people in the business are re-active, but Tom is very pro-active."

Neises also cites Perkins' operating experience as an important asset in a field where such experience is not widespread.

"Most people seem to come up through one of the financial disciplines," he explains. "Tom is one of the relatively few in the venture capital business who have come from a significant operating background. And I think that background, which he got at Hewlett-Packard, has helped him with some of the early stage start-ups that have done so well for them.

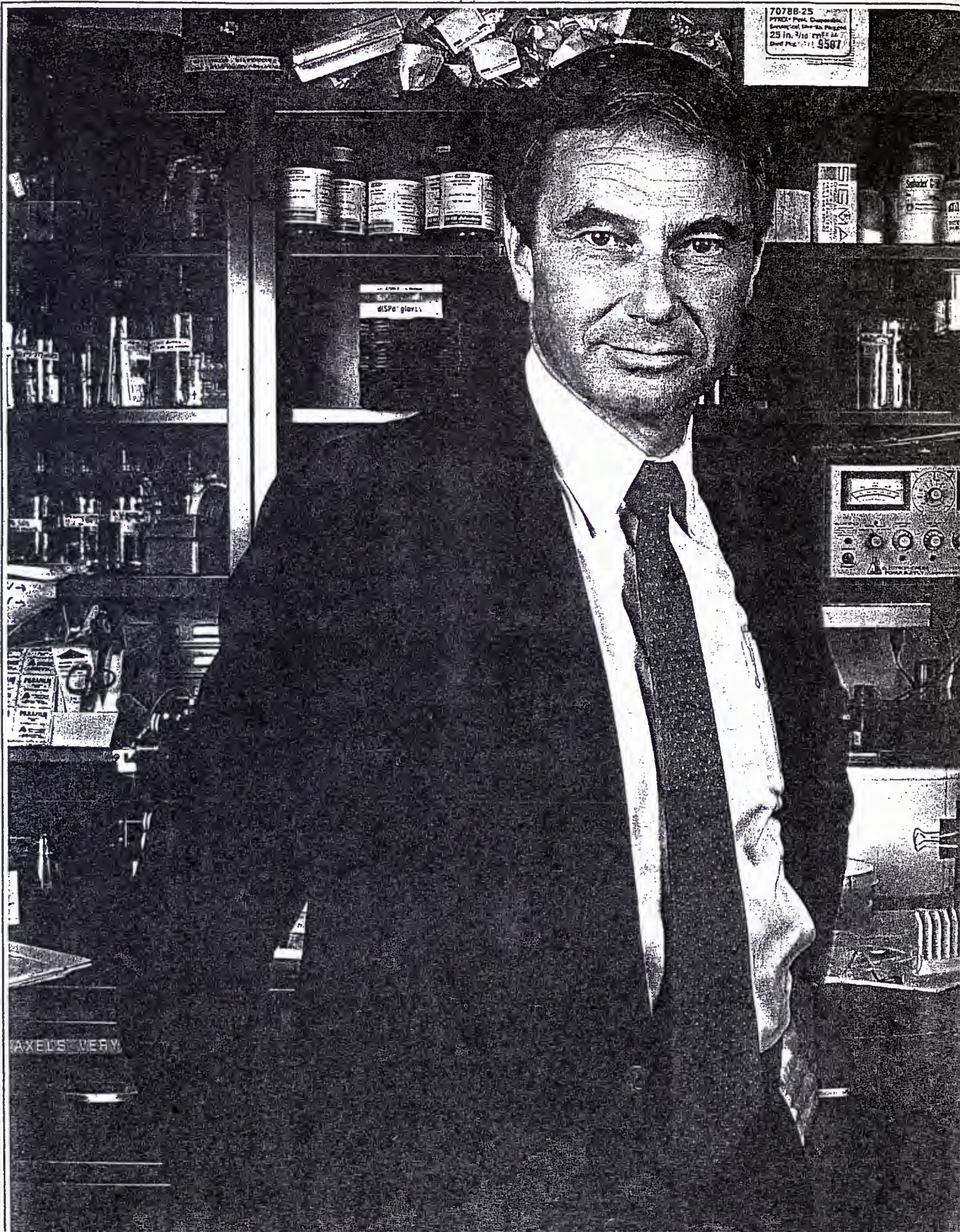
"I'll give you an example. I'm on the board of a company called Zentec. In the early days of Tandem, Tom visited our terminals manufacturing plant in Santa Clara to evaluate our product, among others, and then went back to Tandem and told them what he thought. Now, that's pretty unusual for someone at the board level. Most venture capitalists don't have the background for that. Most of them, in a situation like that, have to just sit back and make wise noises about financial statements, but Tom could roll up his sleeves and go in and do that kind of serious evaluation."

Still another observer, Stanley Pratt, editor of the *Venture Capital Journal*, agrees that Perkins' operating background is an asset, and adds that the San Franciscan has managed to avoid a common pitfall of the line-manager-turned-venture-capitalist: wanting to run the business that is properly the entrepreneur's.

"The shift from operating to venture capital can be quite dramatic," says Pratt. "You find that all of a sudden you can no longer do things yourself. You have to work through the entrepreneur. And the good venture capitalist must learn that.

"In Tom's case, he has a marvelous ability to work with the entrepreneurs, which is really the secret of this whole business."

It is the long-term involvement with the entre-



Tom Perkins at Genentech: "When we hit a home run, it's a big one."

preneur, adds Pratt, that distinguishes venture capital from the other investment professions. As important as the actual financing, he maintains, are the advice and perspective that the venture capitalist can provide over the long run.

"Venture capital used to be done by financial types," he says. "They considered it a subset of their financial and investment skills, but only that. Nowadays, though, the venture capitalist really needs other skills, and financial skills are merely a subset of what he does — which is to work closely with the entrepreneur. And Tom epitomizes this. It's really a five- to seven-year development process, and Tom has the long view, which is critical. In fact, venture capital is one of the few places in today's economy where that's still true."

Finally, says Pratt, Perkins "has a strong feeling about the professional development of the industry," a feeling borne out during Perkins' recent tenure as president and then chairman of the National Venture Capital Association.

Jack Neises explains:

"Tom would like to make venture capital a higher calling, in the sense of a profession. Not that it isn't a profession — most of us in the business have advanced training of some kind. But what we haven't had until recently is a code of standards or ethics, such as doctors and lawyers have. And that's not to say that venture capital isn't a very ethical business — I think it's an honorable calling. But it was Tom who recently drew up a set of standards for the national association, and, again, I think that's typical of the kind of guy he is."

At fifty, Thomas James Perkins looks younger than his years, his features suggesting a middle range between Fess Parker and Gregory Peck. His corner office at Kleiner, Perkins in San Francisco's Embarcadero Center is set off from the lobby by interior walls of dark glass. Near the windows by his desk stands a telescope, mounted on a tripod, which he uses to survey the waterfront and the bay below. At his home in Belvedere, Perkins maintains a machine shop, where he rebuilds classic cars in his spare time. On the evidence, it would appear that the onetime engineer has not altogether forsaken the pleasures of instruments and invention.

Nonetheless, he is quick to acknowledge the basic difference between his former role as an entrepreneur and his present responsibilities as a venture capitalist.

"I sometimes feel like we're coaches on a team," he says, echoing Neises' characterization of the firm's 'farm system' approach, "and I'm sure that

sometimes the coach wishes he were in there playing himself. But our pleasure is vicarious.

"Still," he adds, "the fact that we do it at all means there's a great deal of satisfaction involved."

There is this advantage, too: as a venture capitalist, says Perkins, he has had broad opportunities to utilize both his college and his Business School training — more so, perhaps, than he might have had in a different profession.

"If you're working at a company," he explains, "you tend to absorb the ways and mores of that company. Whereas in our business, where we're working with a number of different companies, we're always going back to theory, if you will."

However, when it comes to evaluating a new proposal, he adds, the firm's approach is consistent not only with theory but also with their collective experience — and experience has taught them to evaluate first how a proposed company will be positioned with its risk and its market. And though risk-taking is at some level indivisible from the practice of venture capital investing, the aim, says Perkins, is to eliminate the risk as soon as possible.

"The risk must come out first," he insists. "That may seem obvious, but it's very important all the same. The first round of financing should eliminate the risk. The later rounds are just to make the company go.

"The thing to remember, though," he cautions, "is that the risk may not always be obvious. And if you misidentify the risk, you may be very deep into the venture before you realize it."

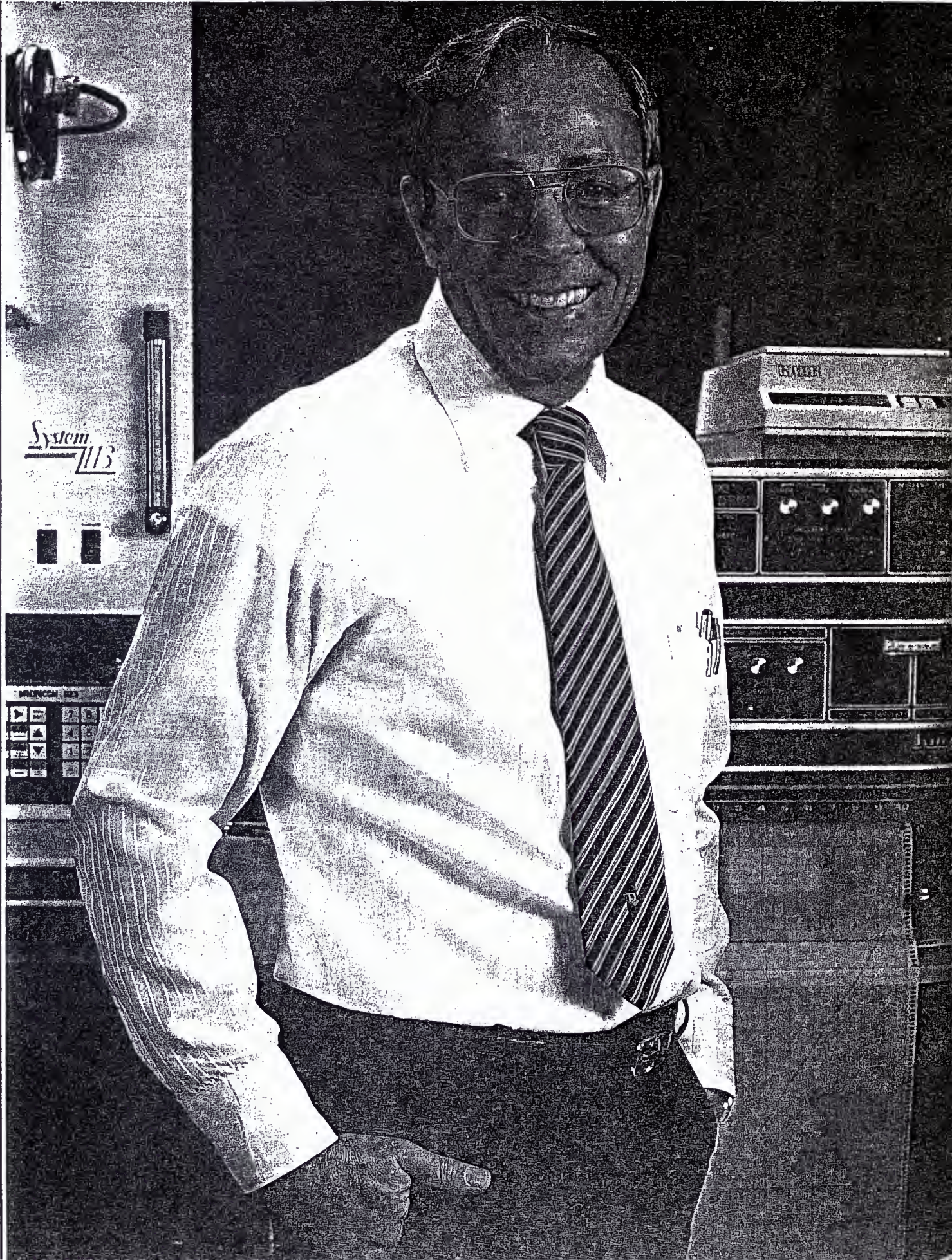
At that point, he observes, there's no turning back.

"Once you're in, you're in. You either succeed or you fail — because there's no in-between. There's no market for a mediocre venture."

On the matter of markets for new ventures, Perkins has a word of caution for the would-be venture capitalist. Many investors have been drawn to venture capital in recent years, he observes, by the prospect of high returns — a prospect that may prove ephemeral as time goes on.

"It's not clear to me what the ultimate effect of the rising rate of investment will be," he says. "It's not clear, that is, how all of those investments will eventually become liquid. Is the market going to be there to absorb them? I'm not sure the investor in venture capital has always thought it all the way through. And I don't think everyone is going to make ten to one on their investments, either. Some of them may lose heart.

"Still," he adds, "I do think that a prudent portfolio should have some portion in venture capital. The returns have been too good to be ignored."



Tim Hay at California's Cahn Instruments: "The justification of our risk money is change."

Beyond that, he notes, for practitioners like himself the returns in personal terms sooner or later outgrow the financial gains.

"What it's really all about," he says, "is the pleasure of creating something new and interesting and useful for the world."

More often than not, says Tim Hay, he is looking for the outcast.

Hay, chairman and president of the Security Pacific Capital Corporation (SPCC), has learned from experience that entrepreneurs are often set apart from other people by the very qualities that make them entrepreneurs.

"I accept it as routine that these people will be loners or eccentrics or driven in a way that may seem neurotic to others," he says. "They may not be tremendously happy, because they are driven — but they have a need to fulfill their vision. And if their vision seems sensible, and their judgment seems good and their temperament tolerable, we just may be able to help them importantly."

Helping entrepreneurs importantly has been Hay's job since 1964, when he was lured from his position with a leasing concern (he had earlier spent six years with Blythe & Co. as an account executive) to direct the four-year-old venture capital arm of what was then the Security First National Bank.

At that time, notes Hay, the bank's venture capital operation had neither mission nor goals. "It was basically a side-door activity of the loan officers," he explains, "and loan officers, who are not trained to take risks, are not the logical people to run a venture capital operation."

Hay, on the evidence, was.

When he joined Security First National, Security Pacific's predecessor, the bank had \$1,200,000 of venture capital investments under management. Today the figure is \$65,000,000 and rising exponentially. What is perhaps more significant is the fact that the bank has shown a profit from its venture capital operation each year since it acquired Hay's services. Accordingly, while the bank's officers initially kept Hay and his colleagues on a tight rein, "Now," he says, "they give us tremendous autonomy."

As a result, Tim Hay apparently enjoys the best of both worlds: he has the freedom to go his own way despite his ties to the bank, yet at the same time he enjoys access to a virtually guaranteed source of capital. (Though most of the firm's resources are generated through its own earnings, it did turn to the parent corporation last year to help finance its record 1981 expansion.)

If the ties to the bank are felt at all, says Hay, they

are felt in the choice of venture capital activities. Rather than concentrate on start-up and early-stage projects, where the risk is always very high, the Security Pacific Capital Corporation has turned to the marginally less risky field of management buy-outs. Taken individually, the returns here are less spectacular than those of some of the more highly publicized start-ups, but taken as a whole they have spelled success for Security Pacific.

Told of Tom Perkins' home-run analogy, Hay laughs and spreads his hands, responding good-naturedly, "I suppose you'd have to say we try to hit a lot of singles and doubles."

The Security Pacific singles and doubles are currently spread out over some 54 investments across the country, from a California-based retailer of maternity clothes to a manufacturer of precision rubber products in Tennessee to a Virginia-based furniture manufacturing concern.

"In each case," says Hay, "the justification of our risk money is change: a redeployment of resources that represents more productivity, more bang for the buck."

Like Perkins, he casts an especially critical eye on the management personnel involved in any investment proposal. Distinguishing the good from the indifferent, he says, is largely a matter of looking at the record.

"What the individual has done that shows good judgment, good reaction to crisis, clever innovation, and honesty and integrity," he observes, "are especially important to the outside investor."

Beyond that, he adds, there is the question of the deal itself and how it will be structured.

"It's rare that the original proposal does not need to be reformed in some way," he notes, "either by bringing in new people or new resources. And that's where our business can become very creative: taking bits and pieces and reforming them to make what we see as a do-able deal."

Once an investment has been made, however, Hay and his colleagues are content to serve primarily as interested observers, offering advice only as needed. This hands-off approach, he says, is simply a matter of each party doing what it does best.

"The skills of operating are quite different from alternative investment decision making and deal structuring," he explains. "If we are skilled in selection, negotiations, and the nurturing of especially efficient users of investment capital, it doesn't necessarily make us good managers. There

are some people, I guess, who think that having the money gives them the authority to operate businesses, and that's usually a mistake. My desire is simply to select and stimulate excellent managers, rather than try to become a surrogate manager or a busybody investor."

Nonetheless, he concedes, the ventures he supports do need occasional assistance, and when they do he's there to help.

"The process is different for each company. Sometimes it's careful expansion through acquisition and a broadening of the management. With others, it may involve product or distribution innovations. On the other hand, sometimes we find that it's useful to do some financial restructuring."

Joseph Globig, chairman of General Design, Inc., a Sun Valley, California, manufacturer of aerospace components and an early partner with Security Pacific, is a strong supporter of Hay's approach.

"Tim has the knack of allowing you to run if he's satisfied that your goals are clear and you know what you're doing," says Globig. "And to me that means he's confident of his judgment."

"With some venture capitalists, you find that they're always seeking more control. I think that's not because they don't have confidence in the business they've invested in, but because they don't have confidence in their own judgment. Tim's not like that. His judgment is very good, and his confidence reflects that. We've invited them any number of times to put someone on our board, but he's never seemed to feel it was necessary."

Equally impressed with Hay's abilities are industry colleagues, who named him president of the 400-member National Association of Small Business Investment Companies for the year 1973-74. Still another observer, Stanley Pratt of the *Venture Capital Journal*, calls the SPCC president "an acknowledged leader" in the venture capital field. "Most management buy-out activity is centered in New York," he notes, "but Tim has done a superb job in the Los Angeles area. You just have to look at the bank's annual reports to know that he's been extremely successful."

Hay is also a strong advocate of the economic — and even the moral — virtues of venture capital, whose role he considers central not only to the American economy but also to the American idea.

"It's right at the core of what makes the whole capitalist system work at its finest," he maintains, "which is the serving of consumer needs most efficiently. The venture capitalist nurtures and helps

make possible innumerable creative innovations throughout American industry in a way that isn't always done by large corporations because of their inertia. And it is the concentration on individual initiative that keeps capitalism vibrant and its rewards accessible to each individual. Without the possibility that venture capital gives to the fulfillment of the dreams and visions of individuals, the capitalist system would not be as broadly successful."

Perhaps not surprisingly, Hay is plainly at home in southern California, where his thoughts on the importance of the individual — and on the bootstrap possibilities still open to the entrepreneur — find a ready audience. At the same time, however, he credits the state's other (and in some ways opposite) characteristic — its tendency to be less wed to tradition than other parts of the country — with having encouraged the growth of venture capital operations there.

"I think one reason venture capital finds such a base in California," he observes, "is the ease with which change and innovation is accepted as a way of life here."

Change, he continues, must always begin with the individual, and the conditions for change, he maintains, have rarely been better.

"Everything is in place," he says. "The money is there through the venture capital industry. The institutional framework is there through the lowered capital gains tax. The world market is there."

"The crying need now," he says, returning to his earlier theme, "is for individual action."

Genentech, Inc.
Genentech, Inc.
Genentech, Inc.
Genentech, Inc.
Genentech, Inc.

THOMAS J. PERKINS

MEMBER, BOARD OF DIRECTORS

Thomas J. Perkins became a member of the Genentech, Inc. Board of Directors in April, 1976 when the company was founded. Perkins is a founding partner of Kleiner Perkins Caufield & Byers, a venture capital firm located in San Francisco which has played a major role in the growth of the biotechnology industry. Prior to that, he spent seven years at Hewlett-Packard Company, where he started as assistant manager of corporate research laboratories, moved on to become general manager of the computer division, and eventually became director of corporate development.

Perkins' entrepreneurial spirit led to the creation of University Laboratories, Inc., which he founded in 1965 and chaired until 1970. University Laboratories, Inc. was the first to develop adjustment-free lasers. The company prospered and was merged into Spectra Physics, Inc., one of the world's leading laser companies.

Besides being a director of Genentech, Inc., Perkins also is chairman of Tandem Computers Inc.; Acuson, Inc.; Alliant Computer Systems and director of LSI Logic, Inc. In addition, he is a trustee of the San Francisco Ballet Association.

Perkins holds a bachelor's degree in electrical engineering from the Massachusetts Institute of Technology and a master's degree in business administration from Harvard University.

#

9/29/93

INDEX--Thomas J. Perkins

- Acuson, 48
- Alfa Laval, 21
- Alza, 24
- Amgen, 35
- Anderson, Dave, 43
- Ayukawa, Yaichi, 31, 32

- biotechnology industry, 50, 51, 52
- Boyer-Cohen recombinant DNA patent, 8
- Boyer, Herbert, 12, 20, 26
 - commercializing recombinant DNA, 4, 5, 7, 8, 52, 53
- Byers, Brook, 14, 35

- Caltech, Genentech contract, 5
- Cape, Ronald, 4
- Cetus, 12
 - and genetic engineering, 3
 - and Kleiner Perkins, 3-4
- City of Hope Medical Center, 5-6, 45
- Compaq Computers, 36, 37, 44
- Cooley Godward, 11
- Corning Glass Works, 13
- Coyle, Bud, 20
- Cunningham, Brian, 45

- Diamond vs. Chakrabarty*, 28
- Doerr, John, 13

- Eastman Kodak, 36
- Eli Lilly, 19-20, 22-23
 - and growth hormone, 45
 - and insulin, 8-9
- Evans-Freke, Steven, 34

- Farley, Peter, 4
- Faulkner, Harry, 21
- FDA [Food & Drug Administration], 26, 45, 50-51
- Fluor, 21, 31, 32, 40
- Frank, Fred, 33, 36, 37, 39, 41, 42

- Genencor, 36
- Genentech
 - agriculture, 14-15
 - animal & veterinary products, 14
 - benchmarks, 21, 22
 - board of directors, 1, 20-22, 27, 34, 39, 41-42, 46-48
 - business plans/strategy, 8, 9, 14-15, 23, 24-25, 31-32, 53
 - cancer therapies, 49
 - clinical R&D partnerships, 10, 11, 19, 33-34, 47
 - corporate culture, 7
 - executive committee, 46
 - FDA, 26-27, 45, 45
 - FIPCO status, 9, 23-24
 - foundation, 4-6
 - growth hormone, 27-28, 45
 - HIV/AIDS research, 26, 35, 44
 - intellectual property, 7, 8, 45
 - IPO, 10-12, 19, 25, 28-31
 - Kleiner Perkins investment in, 1, 2, 4-7, 24, 49-50
 - location/facilities, 24-25
 - as a model company, 53
 - somatostatin, 6, 52
 - stock, 10-11, 17-18, 19, 29-31, 32, 34, 40
 - tPA, 27, 39, 44. *See also* Hoffmann-La Roche
 - gene synthesis, 5
 - genetic engineering/gene splicing, 4, 5, 7
 - controversy, 24, 25-26
- Gerber, Fritz, 39
- Gower, James, 44-45
- Green, Howard E., 14
- Green, Ted, 43

- Hale, David, 43
- Hambrecht, Bill, 20, 29
- Hambrecht & Quist, 20, 31
- Hewlett-Packard, 8, 37, 40
- Hillman, Henry, and family, 13
- Hewlett-Packard, 15, 17, 21, 40

Hoffmann-La Roche
 acquisition of Genentech, 9, 15, 16,
 17-19, 31, 34-42
 interferon contract with Genentech, 23
 Home Health Care, 28
 Horowitz, Ben, 45
 HP Genenchem, 21
 Hybritech, 14, 33, 35, 43, 49, 50

IDEC Pharmaceuticals, 49, 51
 Inco (International Nickel), 20
 insulin, human
 agreement with Eli Lilly, 8-9, 19-20, 22-23
 Kleiner Perkins investment in, 6-7
 publicity, 6-7
 investment bankers, 33, 36
 Itakura, Keiichi, 5, 6

Jewett, Kathy, 40-41

Kabi, 23
 Kefauver, Estes, 51
 Kessler, Armin, 39
 Khorana, Har Gobind, 5
 Kiley, Tom, 5, 23
 Kleiner, Eugene, 1, 2, 3, 7, 11, 13, 15
 Kleiner Perkins Venture Capital, 28, 31, 35, 49
 Bob Swanson employee of, 3, 4, 15
 Cetus investment, 3-4
 foundation, 1-2, 15
 Genentech investment, 1, 2, 4-5, 6-7, 12-13
 investment strategy, 25, 30, 32, 33, 37-38,
 49, 53
 white squire fund, 18

Larson, John, 41
 Lavigne, Lou, 43
 Levinson, Arthur, 35, 48
 Loma Prieta Earthquake, 40
 Lubrizol, 19, 21

Mann, Bruce, 22, 28
 Martin, Dave, 44
 Mayfield Fund, 20

McLaughlin, John P., 40
 Meier, Henri, 39
 Middleton, Fred, 21, 33, 34, 43
 monoclonal antibodies, 14
 Monsanto, 15
 Monterey aquarium, 40
 Morgan Stanley Ventures, 33
 Murfin, Don, 21

Nomura Securities, 32
 Novacor, 50

Packard, Dave, 15, 20-21, 34, 41, 47
 Perella, Joseph, 36
 Perkins, Gerd, 48, 51-52
 Perkins's Law, 52-53
 Perkins's religious beliefs, 52
 Pillsbury, Brobeck, Sonsini, 11
 Potts, John, 21

Raab, Kirk, 28, 44, 46
 and FDA, 27, 45
 and Roche acquisition, 15, 16-17, 36, 38,
 39, 41-43
 as Genentech CEO, 38-39, 47
 relationship with Swanson, 16-17, 41-43
 Rifkin, Jeremy, 26
 Riggs, Arthur, 5, 6
 Royston, Ivor, 14

Securities & Exchange Commission, 10, 11, 28,
 29

Steel, Danielle, 33

Swanson, Bob, 28, 34, 45, 52, 53
 affinity with Japanese, 23, 31-32
 and Roche acquisition, 35, 36, 38, 39, 41-42
 employee of Kleiner Perkins, 1, 3, 7
 foundation of Genentech, 4-6
 and Genentech board of directors, 46, 47
 and Genentech science, 7, 21, 44, 52
 and IPO, 12, 20, 29
 relationship with Perkins, 12, 13, 15-16
 relationship with Raab, 16-17, 41-43
 Syntex, 24

Tandem Computers, 1, 2, 8, 13, 25, 29, 36, 48
Tappan, Dave, 21, 40, 41
Treybig, Jimmy, 1, 2, 16

University of California, San Francisco, 5, 6
Unterberg, Tommy, 20

Vagelos, Roy, 44
venture capital, 1-2, 3, 49-50, 53. *See also*
Kleiner Perkins

Wood, Dick, 22

Young, Bill, 43-44
Young, John, 21

Zaffaroni, Alejandro, 24

Glenn E. Bugos

Since 1994 has served as principal historian with The Prologue Group, a corporate history consulting firm. He received his Ph.D. in 1988 from the University of Pennsylvania, through the Department of the History and Sociology of Science, Technology, and Medicine. He has published on the history of biotechnology, aerospace, and other topics in the recent history of business and technology.

7-5016

U. C. BERKELEY LIBRARIES



C083158822

