

# Douglas Richman

*Interview conducted by*

*Mark Jones, PhD*

*August 4, 1997*

SAN DIEGO TECHNOLOGY ARCHIVE



The Library  
UC SAN DIEGO

## Douglas Richman



Dr. Douglas D. Richman, MD is Professor of Pathology and Medicine at the University of California, San Diego School of Medicine and Chief of the Virology Section, Professor and Director of the Research Center for AIDS and HIV Infection at the San Diego VA Medical Center. Dr. Richman has investigated HIV disease and pathogenesis for the past 20 years and was the first to identify HIV drug resistance. He is also a virologist and practicing physician with the Veterans Affairs San Diego Healthcare System. He has made major clinical and laboratory contributions to the field of HIV/AIDS, which represent a model of translational medical research. Dr. Richman helped design and conduct the clinical evaluation of new drugs and treatment strategies, including the first trial of combination antiretroviral therapy and the initial study documenting the value of the strategy of rendering HIV RNA undetectable. Two areas of his laboratory investigations represent landmark studies in HIV research. His laboratory first identified HIV drug resistance. He serves as a Consultant to the NIH, the Veterans Administration, the World Health Organization and the State of California. Dr. Richman has been Chairman and Member of Clinical and Scientific Advisory Board of Anadys Pharmaceuticals Inc. since December 2, 2004. He also serves as a Member of the HIV Scientific Advisory Board of Idenix Pharmaceuticals Inc. He serves as Member of Scientific Advisory Board at Biota Pharmaceuticals, Inc. He serves as Member of Clinical Advisory Board at Tobira Therapeutics, Inc., and Koronis Pharmaceuticals, Inc. Dr. Richman serves as Member of Clinical & Science Advisory Board of Presidio Pharmaceuticals, Inc. Dr. Richman serves as Member of the Advisory Board of Body Health Resources Corporation. He serves as Member of the Scientific Advisory Board for Multimeric Biotherapeutics, Inc., Chimerix Inc. and Monogram Biosciences Inc. He served as Member of the Scientific Advisory Board of GenPhar, Inc. He served as Member of Clinical Advisory Board of Achillion Pharmaceuticals, Inc. He was recently named to the endowed Florence Seeley Riford Chair for AIDS Research at UCSD. He serves on the Editorial Boards of numerous scientific journals, including the Journal of Virology and Antimicrobial Agents and Chemotherapy. He is a Member of the NIH AIDS Vaccine Research Committee. Dr. Richman has published more than 480 original research

articles, reviews, and book chapters, and he is the senior editor of the major textbook of medical virology, *Clinical Virology*. He was honored with an NIH Merit Award and the Howard M. Temin Award for Clinical Science and Clinical Excellence in the Fight Against HIV/AIDS. Dr. Richman is a Fellow of the American Association for the Advancement of Science, the American Association of Physicians and the Infectious Disease Society of America. Dr. Richman trained in infectious diseases and medical virology at Stanford, the National Institutes of Health (NIH) and Harvard. He earned his B.A. degree from Dartmouth College, an M.D. degree from Stanford University and postdoctoral training at Harvard and the NIH.

Source: Bloomberg Businessweek



*THE SAN DIEGO TECHNOLOGY ARCHIVE*

**INTERVIEWEE:** Douglas Richman

**INTERVIEWER:** Mark Jones, PhD

**DATE:** August 4, 1997

1 **JONES:** How long have you been here at UCSD?

2 **RICHMAN:** Twenty-one years.

3 **JONES:** When did you meet Karl Hostetler and Dennis Carson?

4 **RICHMAN:** When I arrived, I became friends with them. Yeah, actually, one of the  
5 guys I did a fellowship with at the NIH was a very close friend of Dennis', so I've  
6 known them both since I got here.

7 **JONES:** And you've collaborated closely with them over the years?

8 **RICHMAN:** I've done research with them since the '70s, some collaborations, and  
9 we're friends as well.

10 **JONES:** Were you working with Karl when he was working with calcitonin and  
11 putting it in lipid envelopes?

12 **RICHMAN:** He was doing some of that. We had worked with amantidine, an anti-  
13 influenza compound. We'd done some research for that, and then he was doing his  
14 liposomal stuff and I was working on anti-virals. We decided to put it together. There  
15 was a request for proposals for drug discovery programs at the NIH. We responded to  
16 that, and my memory of it was that, although we both thought it was a good  
17 proposal, the review committee decided to change the review criteria from what the  
18 NIH requested proposal was, when they set up their criteria for evaluation. The  
19 review criteria specified brain delivery, which had nothing to do with the NIH request  
20 for proposals. So, we didn't get funded, and we were both upset about that. Karl was  
21 so ticked off that he said, 'Well, I'm going to get private money to support it,' and that

22 was the start of, or at least part of the impetus of starting Vical. If we had gotten the  
23 NIH grant, we might not have done it.

24 **JONES:** Were you planning to be part of this from the beginning, or was it just Karl's  
25 idea for his stuff with calcitonin?

26 **RICHMAN:** No, what prompted the Vical stuff, I think, was primarily the anti-viral  
27 drug delivery. Calcitonin was sort of added on, I think, as part of the package. Karl  
28 was sort of the major driving force.

29 **JONES:** Do you recall how he got hooked up with Tim Wollaeger?

30 **RICHMAN:** I think he just started snooping around for venture capital, to start  
31 something. He can tell you more of how, in his snooping, he managed to.

32 **JONES:** Then how did you get involved once...

33 **RICHMAN:** Well, you know, we were scientific collaborators, and that's been my  
34 role, basically. I've sort of kept away from the business end. I've never fancied myself  
35 as much of a businessman. I'm sort of a....

36 **JONES:** So, prior to this, you never had any notion of commercializing any of your  
37 research?

38 **RICHMAN:** No.

39 **JONES:** When did you start working with AZT?

40 **RICHMAN:** In the beginning, when it was actually the first...Sam Broder and I, we  
41 were interns and residents together, and close friends. He was at the NCI at the time.  
42 He subsequently became the director of the National Cancer Institute. But he was the  
43 one who evaluated the drug under code for Burroughs-Wellcome, to show that it  
44 worked against HIV. And he called me up to see the data, and discussed it with me  
45 before it actually became public. And then they did the phase I study at the NCI, and  
46 when it was clear that it had some activity, and that a large phase II study was  
47 needed, I was asked to be one of the people to design the multi-center phase II trial.

48 **JONES:** And when Vical was started, was the idea initially to develop something with  
49 AZT?

50 **RICHMAN:** Yeah, the delivery of nucleosides in a more effective way was part of the  
51 concept, yeah.

52 **JONES:** Is this something that Vical was shopping before Burroughs-Wellcome?

53 **RICHMAN:** No, clearly Burroughs-Wellcome had AZT. That was not an issue. But we  
54 thought that we had a way that could potentially deliver it more effectively in a  
55 modified form. And in fact, I guess the first business partner that Vical had was  
56 Burroughs-Wellcome, to evaluate that.

57 **JONES:** And were you involved in setting that up, did you go and make  
58 presentations?

59 **RICHMAN:** Yeah, yeah, I sort of made the initial contacts, and we went to RTP  
60 [Research Triangle Park] and made presentations.

61 **JONES:** So you knew people at Burroughs-Wellcome through your AZT research?

62 **RICHMAN:** Well, even before that. David Barry who was head of Infectious Diseases,  
63 and subsequently became president of Burroughs-Wellcome, we were fellows  
64 together back at the NIH, and I've known him since the early '70s.

65 **JONES:** So, they gave you, the company, \$5 million.

66 **RICHMAN:** I can't remember the numbers.

67 **JONES:** And you made it work, right? That was the outcome?

68 **RICHMAN:** Well, basically, the ultimate development of that AZT derivative was  
69 dropped by Burroughs-Wellcome.

70 **JONES:** But you had delivered something to them that could have been developed  
71 into a product.

72 **RICHMAN:** Yeah, and for various reasons, they chose not to do it.

73 **JONES:** So what was the fate of that technology?

74 **RICHMAN:** Well, this is something that has had its ups and downs because there  
75 were many other subsequent derivatives of this technology that have gone into a  
76 whole series of patents that Karl has been the prime mover on, with applications for

77 hepatitis and HIV, and those patents were...when Vical sort of discovered the naked  
78 DNA technology, it was decided by the business leaders that they should keep the  
79 business plan clean and focused, and they sold off all of the drug delivery component  
80 to Nexstar, or whatever, it was a different name initially, and they were simply  
81 incompetent in developing and managing that opportunity. They ultimately dropped  
82 it and gave it back to Karl.

83 **JONES:** So he owns it now?

84 **RICHMAN:** Yeah.

85 **JONES:** Is he trying to do something with it?

86 **RICHMAN:** Yeah.

87 **JONES:** But not with AZT, right?

88 **RICHMAN:** Yeah, but actually Boehringer-Mannheim is doing something with AZT  
89 that, in fact, ended up being covered by one of these patents.

90 **JONES:** So they're now licensing it?

91 **RICHMAN:** Well, I think they had to license it, yeah. Karl can tell you the details.

92 **JONES:** Well, after the drug delivery component was sold off, did that effectively end  
93 your participation in the company?

94 **RICHMAN:** No, when that was discovered, we had scientific advisory board meetings  
95 to discuss what to do. And I suggested that the best way to prove that this was  
96 effective was to show that you could immunize animals and protect them from dying.  
97 Prevention of death was the most convincing. And so I suggested that the influenza  
98 model would be the best way to do it. And actually I generated the reagents and the  
99 various constructs and viruses and models from various colleagues that I knew from  
100 when I was in influenza research, and assembled them, brought them to Vical, and  
101 designed the experiments that ultimately proved that the naked DNA protected mice.  
102 They sold that to Merck and in its various configurations, I was basically dropped  
103 from even the conception. You know, it was published without my name even being  
104 acknowledged, that Science paper that showed that it worked, and my comments to  
105 them about how they had performed and various other things probably led them to

106 choose to drop me, as well as Dennis Carson, from the Scientific Advisory Board. So,  
107 my history as a co-founder- that was the end of it.

108 **JONES:** That was something that you decided not to challenge?

109 **RICHMAN:** I told them what I thought of them and just left. I have work to do. I'm  
110 an academic.

111 **JONES:** Early on, were you involved in recruiting people to Vical?

112 **RICHMAN:** Yeah, I was involved in evaluating people like Danny King and Wick  
113 Goodspeed, and various other people who were hired. I was involved in interviewing  
114 them and talking to them.

115 **JONES:** And scientific people as well?

116 **RICHMAN:** Yeah, Phil Felgner, for example, right. So, early on, I was sort of more  
117 involved. I was actually on the Board for the first several months or whatever, but as  
118 venture capital came in, the venture capitalists took board positions.

119 **JONES:** Have you been involved in other companies locally, or elsewhere?

120 **RICHMAN:** I've been a consultant on scientific advisory boards for a number of  
121 companies.

122 **JONES:** Nexstar?

123 **RICHMAN:** No. Initially, Viagene. I'm on the board of company up in the Bay Area,  
124 Virologics, and then I'm involved with Triangle, which Karl and Dennis founded.

125 **JONES:** What were the connections with Viagene?

126 **RICHMAN:** That's sort of a gene therapy company, and they wanted to get into HIV,  
127 so they wanted somebody who knew something about HIV.

128 **JONES:** Who contacted you?

129 **RICHMAN:** Doug Jolly.

130 **JONES:** Did you know him when he was here?



131 **RICHMAN:** A little bit.

132 **JONES:** But mostly by reputation?

133 **RICHMAN:** Yeah, I guess so.

134 **JONES:** Are you involved with Dynavax?

135 **RICHMAN:** I'm on their SAB as well, because I've been working closely with Dennis  
136 and [?]. We have a paper in this month's Nature Medicine.

137 **JONES:** What was your impression when Vical started, you were aware of Hybritech?

138 **RICHMAN:** Yeah, actually Ivor and Sam Broder and I were all interns and residents  
139 together at Stanford, twenty-seven, eight years ago, and his lab was right next to mine  
140 at the VA.

141 **JONES:** Did you ever collaborate with him?

142 **RICHMAN:** I never did any research collaboration, but I knew what they were doing,  
143 and I knew Howard Birndorf, his lab tech in the lab next door at the VA on the sixth  
144 floor.

145 **JONES:** What was your impression of the Hybritech people and what was going on?

146 **RICHMAN:** It struck me as more entrepreneurial than science, but, you know, that's  
147 fine, I've got my work to do.

**END INTERVIEW**

**Recommended Citation:**

Richman, Douglas. Interview conducted by Mark Jones, August 4, 1997.  
The San Diego Technology Archive (SDTA), UC San Diego Library, La Jolla, CA.



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