



# Adventure with VENTURES

You need to launch a business. Which venture capital firm is the right one? | By Ted Agres

**B**ruce Weintraub is a cofounder and chief executive of Trophogen, a biotech startup in Rockville, Md., that develops protein therapeutics. Weintraub, a former chief of the National Institutes of Health's Molecular and Cellular Endocrinology Section, invented platform technologies for glycoprotein hormones with colleague Mariusz W. Szkodlinski, while at NIH and later at the University of Maryland.

While seeking to license the technology, Weintraub sought financing from individuals of high net worth, or so-called angel investors. But the investors he met weren't comfortable with the licensing fees, Weintraub says, and the deal didn't work. In 2000, while attending a university reception, Weintraub found himself seated next to Linda Powers, managing director and cofounder of Toucan Capital, a venture capital (VC) firm in Bethesda, Md.

"By the end of the program we had begun to develop a relationship that, after months, culminated in a serious offer from Toucan to start the company," Weintraub says. "We just felt it was a right match."

There are more than 900 major VC firms in the United States and more than 200 in Europe that are looking to invest in good science ideas. In 2004, American VC firms invested more than \$5 billion in life science companies, defined as those in biotech, health, and medicine, according to the National Venture Capital Association. Top investments went to companies developing cancer drugs, stents, pain management therapies, and insulin delivery systems.<sup>1</sup>

VC firms are typically private partnerships or corporations funded by public and private pension funds, financial institutions, and other companies. They are run by professional business and financial managers who invest in young and rapidly growing companies. But far from being passive investors, VCs take an active hand in running and managing the company. "The personal chemistry is very important," says Shazad Malik, a partner with Advent Venture Partners in London. "If you are going to grow a company, you may be spending seven years with the VC firm. You need to work with people whom you enjoy and trust."

In Europe, venture capital generally parallels that in the United

States. European VC firms raised slightly more than 6 billion euros (\$6.8 billion) in 2003, led by the United Kingdom (19.8% of the total), and followed by France (14.9%), Italy (13.9%), and Germany (10.1%), according to the latest numbers from the European Private Equity and Venture Capital Association.

Whether in the United States or in Europe, many life scientists find the prospect of starting a new business daunting; only 10% of new entrepreneurs have a company in place within 12–18 months. The rest either fail to define a sound business model or realize that their idea was flawed from the start.<sup>2</sup>

Those who do manage to get a business off the ground face a bewildering array of financing options and firms. "There is an absence of education among founders in the life sciences about finance," says John Holaday, chairman of Bethesda-based HarVest Bank of Maryland and founder of several biotech companies, including EntreMed of Rockville, Md.

Choosing a VC firm that is aligned with an entrepreneur's interests and objectives is critical to success, according to venture capitalists and scientists. "Both the venture firm and the scientist need to have the same timeline, expectations as to product, end result, management team, and ultimate exit strategy," says Victor H. Boyajian, a partner at the law firm of Sonnenschein Nath & Rosenthal in Short Hills, NJ. "If these are not there, go somewhere else," says Boyajian, who represents CEOs seeking venture capital.

**DO YOU NEED VC OR AN ANGEL?** After the VC bubble burst in 2000 and 2001, venture capitalists started shifting from startup and seed-stage companies to investing in later-stage companies, those with products closer to market and thus, presumably, less risky. That trend has not abated. During the third quarter of 2004, less than 2% of all US venture deals went to seed and startup companies, while expansion and later-stage companies received more than 78%, according to the MoneyTree survey conducted by PricewaterhouseCoopers, Thomson Venture Economics, and the National Venture Capital Association.

Because of this, new companies often turn to funding from angel investors. In the first six months of 2004, angel investors put

\$40-\$60 million into biotech startups, says Jeffrey Sohl, director of the Center for Venture Research at the University of New Hampshire, Durham. During that time, 21% of all angel investment went to biotech and the life sciences, second only to software at 37%. "Angels have traditionally been the largest source of seed and startup stage capital in the United States," Sohl says.

About 140 angel groups are active in the United States, but they are far outnumbered by individual angel investors, which number more than 250,000 by one count. Angels, who often have a personal net worth exceeding \$1 million, are often retired business executives. Whereas VCs expect to help manage the company with an eye to cashing out and recouping their investments within three to seven years, angels often give guidance as mentors and counselors to help grow the company over a longer time period. Angel investors can be found on the Web through such groups as the Angel Capital Association ([www.angelcapitalassociation.org](http://www.angelcapitalassociation.org)) and in local business publications.

While some life science companies, especially in diagnostics and medical services, have the potential to become financially successful, they may not be good candidates for VC firms because venture capitalists perceive them as being hard to exit or cash out through selling or taking the company public. Entrepreneurs in those fields often consider angel investing as an alternative. Either way, it can help to have a strong business plan that will tempt investors to take a chance on an idea.

**PREP WORK REQUIRED** Four years ago, Carol A. Nancy ran into a brick wall in her quest for investors for Rockville, Md.-based Sequella, a biopharmaceutical company she had founded to commercialize new diagnostics and treatments for tuberculosis and other infectious diseases. "I didn't have a good handle on the market opportunity," Nancy says. "I couldn't come up with the numbers to convince the venture capitalists there was an unmet medical need for the products."

Today, Nancy is ready. Not only does she have the market research to support her business plan, she also knows clearly what she wants from a VC firm. This time around, she will be auditioning the venture capitalists as much as they will be examining her business plan, patent portfolio, and company structure.

"You have to select your VC firm based on the particular stage of company development they finance, what their interests are, and where they are in their fund cycle," says Nancy, a former science manager at the Walter Reed Army Institute of Research in Silver Spring, Md., and past president of the American Society for Microbiology. "There's a lot of homework that goes into that analysis. It's almost as much a fulltime job as running the company."

Nancy is miles ahead of most other scientists-turned-entrepreneurs. Most fledgling CEOs, intent on convincing a VC firm that their business plan is the one out of a hundred, or even thousand, worth funding, fail to consider whether the VC firm will be a good fit for their business. By some accounts, only one in 12 scientist-entrepreneurs asks prospective VC firms for even such basic information as references from other CEOs with whom they have worked.

Mir Imran, a veteran entrepreneur in Menlo Park who has founded and sold several medical device companies over the past 20 years, advises first-time CEOs to find a trustworthy business partner or mentor. "Scientist-entrepreneurs often don't have financial or business backgrounds, and that can be a blind spot," Imran says. Boyajian advises scientists to retain a law or accounting firm experienced in working with VC firms in specialized fields. "They can act as a counselor and help evaluate the comparative aspects of possible venture capital firms," he says.

**EXPECT TO KISS A FEW FROGS** VC firms typically review hundreds of business plans before settling on one in which to invest. Frederick J. Beste III, a partner with Mid-Atlantic Venture Funds in Bethlehem, Pa., says his firm receives about 1,200 pitches a year but invests in only four to six.

## COMMON FINANCE TERMS

**ANGEL** —An investor who provides financing through loans or equity investments, most often during seed and startup stages of company development. Typically individuals of high net worth.

**BRIDGE FINANCING** —Funding for companies that plan to go public in 6–12 months. (See Initial Public Offering.)

**EARLY-STAGE FINANCING** —Financing for a company in business less than three years and with a product or service in testing or pilot production. In some cases, the product may be commercially available but may not be generating revenues. (See Seed-Stage, First-Stage, and Startup Financing.)

**EXITS** —The opportunity for the venture firm to cash out or realize the gain on its investments either through selling or taking the company public. (See Mergers & Acquisitions and Initial Public Offering.)

**EXPANSION-STAGE FINANCING** —Product or service is in production and commercially available. The company, usually in business more than 3 years, demonstrates significant revenue growth, but may not be showing a profit. Capital is needed to help a company grow beyond a critical mass to become more successful. (See Second-Stage Financing.)

**FIRST-STAGE FINANCING** — Funding needed to initiate full-scale manufacturing and sales.

**INITIAL PUBLIC OFFERING (IPO)** —The most visible type of exit in which the company becomes publicly traded and offers stock to outsiders. The venture fund distributes this stock or cash to its limited partner investors.

**LATER-STAGE FINANCING**—Product or service is widely available. Company is generating on-going revenue, and probably has a positive cash flow. More likely to be (but not necessarily) profitable. May include spinouts of operating divisions of existing private companies and established private companies.

**MERGERS AND ACQUISITIONS (M&A)** —The most common type of successful exit. In a merger or acquisition, the VC firm receives stock or cash and redistributes proceeds to its limited partners.

**MEZZANINE FINANCING** —Funding for companies that have begun to turn a profit and need to expand various functional elements.

**ROUNDS (OF FINANCING)** —Stages of venture capital or other financing, usually designed in order as Series A, Series B, and so on.

**SECOND-STAGE FINANCING** —Capital needed for expansion, usually when the company is shipping product. The company may not yet be profitable. (See Expansion-Stage Financing.)

**SEED-STAGE FINANCING** —Initial-stage financing, typically less than \$1 million. Funds usually spent on product development, market research, business plan development, and hiring of a management team. The company has a concept or product under development, but is probably not fully operational. Usually in existence less than 18 months.

**STARTUP FINANCING** —Early-stage financing when the company is ready to do business.

**VENTURE CAPITAL** —Funds assembled and managed by professionals who invest in companies having the potential for high rates of return within three to seven years. Sources of funds typically from institutions, pension funds, investment banks, and corporations.

*Sources: J. Holaday, HarVest Bank of Maryland; National Venture Capital Association; PricewaterhouseCoopers/Thomson Venture Economics/MoneyTree Survey; and J. Servo, Commercialization and Business Planning Guide for the Post-Award Period, Dawnbreaker Press, September 1998*

# SELECTED VENTURE CAPITAL FIRMS

Company	Location(s)	Total No. of Companies Under Investment		No. of Life Sciences Companies Under Investment		Investment Stage
		Total Capital Managed		Sector/Focus		
<b>3i Corp.</b> www.3i.com	London; Menlo Park, Calif.; 12 other countries	> €850 million	> 1700	70	Later-stage products in pharma, diagnostics, healthcare service, IT	All stages
<b>Abingworth Management</b> www.abingworth.com	London; Cambridge (UK); Boston, Mass.; Menlo Park, Calif.	> \$700 million	60	60	Biotech, medical devices, pharmaceuticals	Early stage
<b>Advent Venture Partners</b> www.adventventures.com	London	> £400 million	37	18	Biopharmaceuticals, medical devices, platform technologies	Early & expansion
<b>Alta Partners</b> www.altapartners.com	San Francisco	\$1.5 billion	120	82	Biopharmaceuticals, biotech, medical devices	Early stage
<b>Apax Partners</b> www.apax.com/EN	London; New York; Milan; Paris; Munich; Madrid; Zurich; Tokyo	€12 billion	387	53	Drug discovery, healthcare services, medical devices, therapeutics	All stages, but less on startups
<b>ARCH Venture Partners</b> www.archventure.com	Chicago; New York; Seattle; Austin, Texas	> \$1 billion	110	31	Bioinformatics, biopharmaceuticals, medical devices	Seed & startup
<b>Atlas Venture</b> www.atlasventure.com	Amsterdam; Boston; London; Munich; Paris	> \$2.1 billion	61	21	Pharmaceuticals, therapeutics, diagnostics	Early stage
<b>Canaan Partners</b> www.canaan.com	Menlo Park, Calif.; Rowayton, Conn.	\$2 billion	156	43	Diagnostics, medical devices, therapeutics	Early through expansion
<b>Delphi Ventures</b> www.delphiinvestments.com	Menlo Park, Calif.	\$600 million	69	69	Biotech, diagnostics, medical devices	Early stage
<b>Domain Associates</b> www.domainvc.com	Princeton, NJ; Laguna Niguel, Calif.	\$1.4 billion	160	160	Medical devices, pharmaceuticals	Early stage
<b>Essex Woodlands Health Ventures</b> www.essexwoodlands.com	Chicago; The Woodlands, Texas; Palo Alto, Calif.	\$1 billion	48	40	Biotech, medical devices, pharmaceuticals	Early, growth, & late stage
<b>Flagship Partners</b> www.flagshipventures.com	Cambridge, Mass.; Alameda, Calif.	~ \$800 million	78	29	Biotech, pharmaceuticals, genomics, medical technology	Seed & first round
<b>Healthcare Ventures</b> www.hcvc.com	Princeton, NJ; Cambridge, Mass.	\$1.2 billion	32	32	Biopharmaceuticals, drug discovery & delivery	Early stage, emerging growth
<b>Intersouth Partners</b> www.intersouth.com	Durham, NC	> \$500 million	50	22	Agricultural bio, biomaterials, bio- pharmaceuticals, medical devices	Seed & early stage
<b>InterWest Partners</b> www.interwest.com	Menlo Park, Calif.; Dallas	\$1.6 billion	104	43	Biopharmaceuticals, diagnostics, drug discovery, medical devices	Full range
<b>Merlin Biosciences</b> www.merlin-biosciences.com	London	> €450 million	29	29	Biotech, healthcare products, medical devices	Seed stage & beyond
<b>MPM Capital</b> www.mpmcapital.com	Boston; San Francisco	\$2.1 billion	51	51	Biotech, medical devices, pharmaceuticals	Early stage
<b>New Enterprise Associates (NEA)</b> www.nea.com	Reston, Va.; Menlo Park, Calif.; Baltimore, Md.	\$6 billion	173	56	Healthcare IT & services, medical devices, biopharmaceuticals	Early stage & beyond
<b>Oxford Bioscience Partners</b> www.oxbio.com	Boston; Westport, Conn.; Costa Mesa, Calif.	> \$800 million	96	96	Bioscience, healthcare	Some seed, start up, early state
<b>Pequot Ventures</b> www.pequotventures.com	New York; Menlo Park, Calif.; Wellesley, Mass.; Westport, Conn.	> \$1.7 billion	57	21	Biotech, healthcare IT, medical devices, pharmaceuticals	Full range
<b>Prism Venture Partners</b> www.prismventure.com	Westwood, Mass.	> \$1 billion	50	21	Drug discovery & delivery, medical technology	Early stage, first round
<b>ProQuest Investments</b> www.proquestvc.com	Princeton, NJ; San Diego, Calif.	> \$400 million	30	30	Drug discovery, therapeutics	Seed to late stage
<b>Prospect Venture Partners</b> www.prospectventures.com	Palo Alto, Calif.	> \$1 billion	32	32	Biomedical technology, life sciences	Incubation to late stage
<b>Rho Venture Capital</b> www.rhomanagement.com	New York	> \$1 billion	150	34	Biotech, medical devices, pharmaceuticals	Seed to mezzanine
<b>Schroder Ventures Life Sciences (SVLS)</b> www.svlsa.com	Boston; San Francisco; London	\$900 million	84	84	Biopharmaceuticals, biotech, medical devices	Startup & development
<b>Sofinnova Ventures (Europe)</b> www.sofinnova.fr	Paris	€500 million	66	34	Biopharmaceuticals, drug discovery & development, medical devices	Seed & startup
<b>Sofinnova Ventures (U.S.)</b> www.sofinnova.com	San Francisco	~ \$600 million	52	26	Clinical-stage drugs, drug discovery platforms, medical devices	Seed stage, first round
<b>Techno Venture Management (TVM)</b> www.tvmvc.com	Boston; Munich	€918 million	59	40	Drug discovery, development & delivery, specialty pharma	Early through later stages
<b>Toucan Capital Corp.</b> www.toucancapital.com	Bethesda, Md.	\$120 million	9	9	Biologics, cell-based therapies, medical devices, small molecules	Seed & early stage
<b>Venrock Associates</b> www.venrock.com	New York; Cambridge, Mass.; Menlo Park, Calif.	\$1.3 billion	81	30	Healthcare IT & services, medical devices, pharmaceuticals	Seed & first round
<b>Versant Ventures</b> www.versantventures.com	Menlo Park, Calif.; Newport Beach, Calif.	\$650 million	50	50	Biopharmaceuticals, healthcare IT & services, medical devices, platform technologies	Early stage
<b>Warburg Pincus</b> www.warburgpincus.com	New York; Menlo Park, Calif.	\$18 billion	490	25	Biotech, healthcare services, medical devices, pharmaceuticals	All stages

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They like to see everything already prepared for them on a plate.”**

**—Shreefal Mehta**

A scientist-entrepreneur should just as carefully evaluate potential VC firms. The firm should be experienced in the company's specialty, be it therapeutics, vaccines, pharmaceuticals, biologics, or medical devices. It should have access to institutional funds and be willing to invest in Series A (first-round) funding in early-stage companies, Boyajian says.

Geography can also be an important factor. “Most of us like to invest close to home,” says Bruce Robertson, managing director of Toucan Capital. While most of the larger venture companies have offices on both coasts and in major cities, a significant number prefer to invest regionally, making it easier for their fund managers to attend board meetings and consult regularly with company executives.

By nature, venture capitalists are risk-averse. “Venture capital has almost become an oxymoron,” says Shreefal Mehta, chief executive of Myomatrix Therapeutics, a biotech startup in Rensselaer, NY, that develops therapies for cardiovascular and skeletal muscle diseases. “They like to see everything already prepared for them on a plate,” says Mehta, who is also a professor of biotechnology management at Rensselaer Polytechnic Institute.

But because venture firms use pools of capital from which to make their investments, their funding cycles can affect their willingness to take risks. “They will invest in riskier projects in the beginning rather than at the end of their fund,” Nancy says. Many fund managers look for virtual slam-dunks for the last two or three investments, so it pays to ask where the fund is in its cycle even before applying.

In many ways, getting venture capital is a lot like finding a new job; it involves selectivity, asking colleagues for references, and avoiding the shotgun approach. “Don't put a business plan together and send it out to 100 firms,” says Alan Walton, managing partner at Oxford Bioscience Partners in Westport, Conn. “Ninety percent of VC firms don't invest in biotech to begin with, and even the most brilliant ideas don't come across on paper.” Instead, ask colleagues for references, call them, and ask for a few minutes of time. “If you can get them to listen to your idea, they are more likely to show it to their partners,” he says.

It boils down to doing your homework and figuring out where the likely candidates are, says Robertson. “But you'll still have to kiss a lot of frogs to find the prince.”

**LISTEN TO YOUR HEART** When presented with a proposal from a VC firm, scientists should examine the entire package rather than focus on specific items on the term sheet, says Lars Hanan, a partner at Mercator Capital, a merchant bank in Reston, Va. “VCs want to protect the downside, but as an entrepreneur, you should look at the upside,” Hanan told a BIO-MED Conference for life scientists in Baltimore in December 2004. Among other things, CEOs should look for milestones or benchmarks that, when met, will trigger the granting back of more equity in the company. “When the company is successful, you should get a bigger chunk of the

upside,” Hanan says.

If possible, CEOs should also interview several VC firms simultaneously, creating an auction-like environment. “It can be a powerful thing,” Hanan says. “There's nothing better than competition to get everybody to sharpen their pencils.” And having funding from a syndicate or group of investors for Series A often makes it easier to obtain Series B and subsequent rounds of financing. “If you're doing a good job, your investors will generally put more money in later,” Hanan says.

Harold E. Selick, CEO of Threshold Pharmaceuticals, a Redwood City, Calif.-based biotech company that develops small-molecule therapeutics, found the right mixture of expertise and personal chemistry in Pequot Ventures and the firm's lead partner, Patrick Enright. Pequot helped “in everything from making introductions to banks, potential pharmaceutical partners, and board of director candidates, to providing advice and guidance on many of the day-to-day challenges,” Selick said in a statement. He adds that Enright has become a “true friend and colleague,” which “makes our interaction that much more effective.”

“Listen to your heart,” is the way Beste puts it.

Carol Nancy is looking forward to the time when a VC firm gets involved in running Sequella. “I may not like the discipline when I get it, but it will be a good learning experience for me to listen very seriously to the VC,” she says. “They have the purse strings, and they have a lot of business experience.” ☒

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**TYPICAL STAGES OF GROWTH, FINANCING, AND EXPECTED RETURNS ON INVESTMENT FOR LIFE SCIENCE COMPANIES**

STAGE	INVESTMENT	EXPECTED VC RETURN
Proof of concept	\$25,000–\$100,000	
Pre-seed	\$50,000–\$500,000	
Seed	\$150,000–\$2 million	10x within 5 years
Early stage (1st stage and startup)	\$1 million–\$5 million	10x within 5 years
Expansion (2nd and other stages)	up to \$10 million	5x within 3–5 years
Mezzanine	up to \$20 million	2–3x within 2–3 years
Late stage	\$20 million and up	2–3x within 2–3 years

Sources: John Holaday, *HarVest Bank of Maryland*; Linda Powers, *Toucan Capital*