

Promoting an activist role for venture capitalists in Germany

A growing biotechnology industry depends on venture capital for more than money.

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Since the mid-1990s, Germany's rate of new biotech company formation has accelerated rapidly from its previously laggard pace. This is not too surprising, given the country's extensive research base. What is new, however, is that managers and scientists from both the pharmaceutical industry and academia are increasingly enamored with the concept of becoming entrepreneurs.

As a result, the number of biotech initial public offering candidates is rising, the number of venture capitalists is growing, and the overall pool of money for German life science investing is increasing. However, Germany still needs to demonstrate that it can produce larger numbers of quality businesses with worldwide, cutting-edge technologies and services. To increase the odds of this happening, venture capitalists must do more than contribute money. They must take an active role in creating a biotechnology company. By doing so, venture capitalists can provide value, as well as finance, benefiting the interests of both founders and investors alike.

Pinpointing investment opportunities

To provide such value-added services to a biotech startup, we have found it useful to focus on six areas that we believe reflect the characteristics of a "unique" investment target: Unmet global market needs; Novel products, technology, or services; Intellectual property protection; Quality people; Unquestioned feasibility; Exit orientation.

According to this model, venture capitalists should identify projects with high-risk-reward potential serving unmet global market needs with novel products, technologies, or services. The intellectual property position of the proposed venture should, at least, form a basis from which to establish a strong patent position in order to prevent intellectual piracy. The company should be built around teams of quality people—with complementary experience in scientific research and industry management—who will drive interesting projects. Such groups should be

capable of demonstrating proof of concept through research and products. Finally, a business plan exit orientation is necessary to allow for the departure of the venture capitalist with minimal, if any, disruption.

If a potential company meets these criteria, the venture capitalist will seek to negotiate a letter of intent or term sheet that includes a period of exclusivity, allowing the venture capitalist to perform more thorough due diligence. It is during this critical period that the venture capitalist can begin to add value to the proposed venture by hiring first-class market experts to both review and add to the business plan; by organizing scientific workshops designed to provide added input to the research agenda; by bringing in patent attorneys knowledgeable in the life sciences to review the intellectual property position and to develop a plan for fully developing the company's intellectual property portfolio; and by helping management complete its team through the venture capitalist's own contacts or by hiring headhunters.

This review is also important because it helps the venture capitalist work with management in choosing the right finance vehicle and the appropriate German or international investor syndicate. It helps both the company and the venture capitalist to better determine entry valuations, employee stock option plans, and future cash flow requirements. Finally, it also helps identify leveraging possibilities through various grants, subsidies or silent partnership funding, as well as potential milestones with which to judge the future progress of the company. All of this analysis can be decisive for setting the right course for the company before an investment is made, both by the venture capitalist and by a larger syndicate of investors.

Support from seed to successful exit

Participating in the startup of a new biotech company represents the beginning of the venture capitalist's job, as it is necessary to follow the young company's business development closely and offer support whenever needed. As a lead investor, the venture capitalist can provide such guidance through formal representation on the board of directors or, alternatively, for a co-investor, through proactive informal help. In both cases, the

level of involvement will depend on acceptance by the management team and on the course of business.

At all stages of development, however, the venture capitalist must attempt to identify and bring together complementary assets from around the world in order to maximize the value of the company and the return on investment. This assistance can come in the form of introductions to key business and scientific contacts, help in strategic decision making, assistance on approval procedures and the filing of patents, and aid in evaluating ongoing competitive positioning and corporate deals.

Overall, the venture capitalist can offer hands-off guidance from the time of the initial seed investment to a successful exit. In this last respect, the venture capitalist must prepare the way for multiple exit opportunities, which may be a sale to an acquirer—such as a pharmaceutical company or agricultural company focused on biotechnology—or an IPO at one or more stock exchanges.

Four case studies of German startups in 1997 and 1998 that benefited from this "unique" concept follow in the next section. The financing of two companies, Evax Technologies (Munich) and Munich Biotechnology, were led/co-led by the Global Life Science Limited Partnership, which is advised by our firm, Life Science Ventures. The other two companies, DeveloGen (Göttingen) and Artemis Pharmaceuticals (Cologne and Tübingen), are supported by a syndicate of investors, of which Global Life Science is a member. These examples demonstrate our commitment to bringing together key skills to create and capitalize on new life science opportunities.

Case studies

Evax Technologies develops vaccines and adjuvants for animals and humans based on proprietary technologies, including bacterial ghosts, and targets the worldwide vaccine market, an underserved area with major unmet needs. At its inception, the company owned two patent families. The founders' concept was to create bacterial ghosts—empty but intact bacteria shells that trigger a normal immune response—as vaccines and

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adjuvants, a novel approach to vaccine development. The company is headed by the technology's Austrian discoverer and a former student who had gained significant pharmaceutical industry management experience. At the suggestion of venture capitalists, the company hired a chief scientific officer within six months of startup. The company demonstrated proof of concept by signing several partnerships with established pharmaceutical companies.

Munich Biotechnology owns an exclusive license from the University of California San Francisco covering the proposition that cationic lipids will preferentially fuse with angiogenic endothelial cells of tumor vessels, destroying their vascular system by cutting off their blood supply and starving them to death. It is currently developing cancer diagnostics and therapeutics based on angiogenesis inhibition. A former international project manager at Boehringer Mannheim Therapeutics, who has teamed with a department head at the UCSF School of Medicine, runs the company. The company used stock as an incentive to contract with an experienced business development manager, who will consult with the company for its first year and then join the staff full-time during its next phase of development. To date,

Munich Biotechnology's proof of concept consists of preclinical models demonstrating the effectiveness of cationic lipids at stopping angiogenesis.

DeveloGen has exclusive licenses from the Max Planck Institute in the field of developmental biology and is working on gene therapies for diabetes and obesity. All initial patents have been filed by the MPI, which has granted the company exclusive worldwide licenses for the application of certain *Pax* genes, which play a crucial role in the control of endocrine cell differentiation in the pancreas, creating the potential for treating obesity and diabetes. Its founders are a serial startup entrepreneur and two scientists from MPI both known internationally in developmental biology. Thus far, animal data support the important role these genes play in obesity and diabetes.

Finally, Artemis Pharmaceuticals is a functional genomics startup performing systematic screens for validated targets in cancer, diabetes, and neurodegenerative and cartilage diseases using vertebrate model organisms. Artemis has secured exclusive worldwide licenses from and access to the two laboratories of its scientific founders in Tübingen and Cologne, as well as to the technology of its joint venture partner, Exelixis Pharmaceuticals (S. San

Francisco, CA). At Artemis, a top manager left the pharmaceutical industry to become an entrepreneur and join forces with the two scientific founders, one of whom is a Nobel laureate. Artemis's partnership with Exelixis demonstrates the commercial viability of this technology.

All four companies' founding management teams were convincing in their exit orientation, which, together with choosing syndicates of prime venture capitalists and the considerable leverage achieved through grants, subsidies, and soft loans, should facilitate optimum return on investments via trade sales or IPOs. Artemis, because of its existing corporate partnership, offers an additional exit alternative via a merger with Exelixis.

Conclusions

The examples given illustrate the important role a venture capitalist is expected to fulfill from seed or startup to successful exit. An exclusive concentration on life sciences by a dedicated venture capital team with complementary skills, including pharmaceutical industry and biotech experience, as well as management, finance, and venture capital know-how, will considerably benefit startup companies and optimize returns for founders and investors alike. ///