



Funding Sources for Biotech

Major funding sources

- 1) Federal and state government funding** – Multiple government agencies provide funding opportunities, such as Small Business Technology Transfer (STTR) and Small Business Innovation Research (SBIR) grants in the US. While this is a major source of **non-dilutive funding** (no equity is required in exchange for funding), these types of programs can take up to a year or more from grant submission to receipt of funding.
- 2) Venture philanthropy** – Disease focused foundations can provide funding for early-stage drug development in academia and biotech, with the intent of reinvesting potential returns into future drug development projects. These typically take the form of **program-related investments**, which are milestone-based payments that support the charitable mission of the foundation in exchange for the potential return of capital should the program be successful. Research foundations also partner with pharma and venture firms to fund high-risk programs and leverage internal expertise and resources.
- 3) *Angel investors and angel groups** – Angel investors and angel groups (formalized groups of active angel investors) make direct investments of personal funds into early-stage businesses in exchange for equity or debt. Angels are accredited investors and are often experienced entrepreneurs. They typically invest at the earlier stages when the risk is highest; however capital may be limited and regionally restricted.
- 4) *Venture capital (VC) firms** – Venture capital investments are generally made after seed funding (or startup capital). VCs make high-risk investments with expectation of generating high returns within a certain timeframe for their limited partners (high net-worth individuals or institutions that provide money to a venture fund).

*The best angels and VCs can offer invaluable guidance and therefore provide “smart money” investments. They will have extensive networks in the biotech industry and can connect you with consultants, key opinion leaders, and help identify executives for your management team and other investors.

- 5) Corporate venture capital** – Most of the major pharma companies have venture arms that strategically invest in biotech programs based not only on potential financial returns, but also on potential future product opportunities. The major



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trigger for corporate venture discussion is typically *in vivo* proof-of-concept data with a lead compound that has drug-like properties.

- 6) Partnering with big pharma/large biotechs** – Licensing in big pharma traditionally focuses on late-stage projects, usually Phase 2b clinical candidates that have already demonstrated both safety and some efficacy.

Alternative funding options

- 1) University and regional pitch competitions** – Many universities and organizations host business plan or pitch competitions that can lead to cash prizes and/or recognition for the company.
- 2) Regional economic development agencies** – Certain cities or regions have economic development agencies that provide funding such as awards, loans, or venture financing.
- 3) Crowd-funding** – Facilitated by the JOBS (Jumpstart Our Business Startups) Act, which was designed to ease securities regulations on small businesses, crowd-funding provides the opportunity for atypical investors to directly invest smaller amounts into a holding LLC that will invest in a biotech once the fund has reached a certain level. However, unlike Kickstarter-type crowd-funding, where contributors get a “thing” in exchange for money, using crowd-sourcing to raise investment funding is still subject to some fairly complex rules. Consult an attorney before considering this option.
- 4) Family offices** – Family offices (private organizations that manage investments and trusts for a single high-income family) are increasingly investing directly in biotech, and typically take on higher risk projects at earlier stages. They may be attracted to life sciences because of philanthropic or social aspects (often termed “impact investing”). There are, however, many other sectors competing for their investments.

Partnerships to accelerate development

- 1) Pharma innovation centers** – Pharma has been progressively partnering with academic programs at earlier stages to gain access to novel approaches and investigator expertise. Numerous new pharma partnership models exist that leverage pharma expertise, resources, and funding. Industry has also shown interest in helping to develop new startup biotech companies, as well as new platform technologies.



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2) Contract research organization (CRO) equity risk sharing models – More CROs are now offering different partnering mechanisms, including out-licensing shared-risk/shared-reward models and co-development synergistic approaches. For early-stage programs, some CROs will perform chemistry services in collaboration with the sponsor and share the intellectual property. For later-stage programs, some CROs will offer *in vivo* efficacy and investigational new drug (IND)-enabling services for an equity share in the company or milestone based payments. Many clinical CROs also have VC arms that will invest in the company.

References:

Ford, D. & Nelsen, B. *The view beyond venture capital*. Nature Biotechnology, 2014. 32, 15–23.