The Life Science Executive’s FUNDRAISING MANIFESTO

BEST PRACTICES FOR IDENTIFYING CAPITAL IN THE BIOTECH AND MEDTECH ARENAS

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The investor landscape within the life sciences has undergone significant change in recent times. There is a broad range of investors with varying appetites and approaches to allocations within the life science space, and in order to fully understand exactly why this is the case, it is critical to take a look at private investment trends before and after the 2008 recession (see Figure 4.1).⁶

Historically, venture capitalists (VCs) dominated investment in life sciences. There were a large number of sophisticated funds consistently allocating to emerging life science companies, from early to late stages of development. There was also an understanding among these venture capitalists that the life sciences constitutes a complex investment arena that requires a long-term orientation and a sophisticated understanding of the science involved, the regulatory risks, and the full process of innovation, from discovery to distribution.

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⁶ For more detailed information on changes to the categories of life science investors, see “The View Beyond Venture Capital” by Dennis Ford and Barbara Nelsen, published in Nature magazine on January 8, 2014, which appears in its entirety in the Addendum of this book.
Figure 4.1: The shift within the life science investor landscape and the entities filling the venture capital (VC) gap
This thoughtful investment approach and complex understanding of the life science arena produced some big-time successes in the form of initial public offerings (IPOs) and mergers and acquisitions. Consequently, a few decades ago, many opportunistic VC funds without a historical interest in the space were lured by the promise of outsized returns and a booming IPO market. By the time of the economic downturn of 2008, which affected the entire global marketplace, there was a lot of opportunistic capital allocated in a very high-risk asset class. As a result, these new life science VC funds became an underperforming asset class with poor returns, protracted exit timelines, and a very disappointed investor base. So what happened next?

The first thing to occur was that many investors that were once limited partners in VC funds began to withdraw their capital and debate whether to make these high-risk, high-return investments themselves. This is most prominently reflected by the rise in the number of family offices investing directly in the life science arena. This, in turn, caused a distinct thinning of the early stage life science VC funds, which consolidated into only a few dozen that continued to make allocations on a reliable basis, albeit with a focus toward mid- to late-stage life science companies. A void was left in the early stage life science investor space, leaving a lot of great technology underfunded.

However, at the same time, a plethora of new investors began to emerge alongside the family offices going direct. These included syndicated angel groups, those participating in the nascent crowdfunding phenomenon (which has received lots of hype but has not proven its worth to the life sciences at the time of this book’s publication), mid-level private equity firms, big pharma and corporate VC, foundations, endowments, pension funds, and venture philanthropy or patient groups, as well as hybrids of all of the above.

This chapter seeks to elucidate the new landscape of private investments in the life science space (see Figure 4.1), the way in which a life science CEO should think of both the traditional and new investor categories, and
some key points on how to approach these entities. The primary business of Life Science Nation (LSN) is to conduct private investor research in the life science space. LSN tracks 10 categories of active investors around the globe on an ongoing basis in the form of in-depth investor interviews. This gives LSN a forward-looking picture of investor intent for approximately 5,000 investors currently allocating in the space. Figure 4.2 shows a high-level overview of the early stage investor space for therapeutics.

The chart represents approximately 2,500 life science investors that LSN has tracked to date that are interested in early stage investment in therapeutics and devices; there are also 2,500 interested in later-stage clinical assets or on-the-market products and services. We examine the state of these categories on a high level to help you, as a fundraising executive, map a route to market.

**Friends and Family**

Although friends, family members, and high-net-worth individuals are important investors in the life science food chain, LSN does not cover these types of investors. LSN spends most of its research efforts going after “institutional” investors; the investors in this group typically manage assets ranging in value from $100 million to over $1 billion.

However, friends and family are often a primary source of capital during the early formation of an emerging life science company. These investors constitute those with whom you have personal relationships who have the ability to support the first steps toward commercializing your product. As such, they are worth mentioning briefly.

These are potential investors who might be willing to bet on your ability and take a risk on your success. They represent an opportunity for your company to make its first efforts at fundraising. Every situation is differ-

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7This number is accurate as of March 2014, but it is growing. We are constantly adding to the LSN database; the current rate is between 25 and 35 new investors per week.
EARLY STAGE LIFE SCIENCE INVESTORS*

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<td>Foundations &amp; Philanthropic</td>
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<td>Family Offices &amp; Private Wealth</td>
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<td>59</td>
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<tr>
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*This reflects the landscape of investors with a declared interest in early stage (seed or venture) investments in discovery-phase I biotech assets or prototype-clinical stage medical.

FIGURE 4.2: An overview of the new early stage investor landscape. Source: LSN Investor Database, 2014

...ent, but taking money from family and close friends is the way many entrepreneurs get off the ground. LSN is focused on the investor landscape past this point—when you launch your first institutional-style fundraising round. Let’s go through the categories of the investors you’ll encounter on this level.
Angel Syndicates

Angel syndicates are essentially groups of high-net-worth individuals with an interest in direct private investment who have affiliated themselves in order to leverage their collective expertise for due diligence purposes and to increase the amount of capital they can deploy, adding weight to their placements. Angel groups are often among the earliest investors in an emerging life science company (typically investing between $250,000 and $2 million), and they bring with them some significant advantages and disadvantages. On the upside, they have an appetite for risk and are undeterred by the challenges that emerging companies face. Early stage investments are what these folks focus on. However, angel syndicates are loose affiliations of individuals, which can make the processes of negotiation and investor relationship management seem like exercises in herding cats. Also, due to the regional nature of most angel groups, an emerging company is often restricted geographically in terms of which angels are a fit.

LSN tracks about 100 active angel groups and syndicates investing in biotech and medtech companies around the world. LSN has found that roughly 80% of these groups are interested in life science assets that are in a preclinical stage (such as therapeutics) or a prototype stage (such as devices). Now let’s get into how to approach this category.

Understanding what angels are looking for in companies—and how to set yourself apart from the crowd—can make or break your campaign. Angels, like other early stage investors, have been burned by bad returns over the past decade, and those that remain have a tight grip on their capital. In order to loosen that grip, your pitch must immediately catch the investors’ attention by engaging them—not drowning them in slides of text and data. Here are some general guidelines to follow:

• **Tell your story.** Who are you? Why did you start this company? How did the management team first get together? Where did the initial idea come from? These questions, which can be answered within the first few minutes of a presentation, are ones that angels
can relate to, regardless of their understanding of the science and technology that is driving the company. When investors have a foundational understanding of the roots of your organization, they get a better feel for the drivers of the company as a whole and can more easily put their trust in you.

• **Address the market.** Oftentimes, early stage entrepreneurs are caught up in the “cool factor” of their technologies and haven’t given enough thought to the actual marketplace. Discuss the medical need your product is addressing and what treatment options are currently available for it. Here you have the opportunity to capture the investors’ attention by showing them the potential revenue your firm may realize if your product reaches the market.

• **Hit them with the technology.** This is the section of the presentation that too often reminds investors of an academic chemistry lecture and prompts them to check out within minutes. When addressing how your device functions or the pathways your therapeutic is targeting, you need to show enthusiasm and passion. Having high energy and excitement when explaining the technology shows that you yourself believe in the product and that what you are working on is innovative and investment-worthy. (It will also keep investors awake.)

• **Know what you want.** Instead of only communicating how much capital you need to get to clinical trials, you should have diagrams in your presentation highlighting exactly how much of the requested funding is going to be spent on the various activities your company must perform.

Essentially, you need to make your appeal to angels as understandable, logical, and personable as possible, because at the end of the day, they’re going to be investing in you and your management team as much as your technology.
**Venture Capital**

As already discussed extensively, VC has consolidated substantially in recent history, and fewer funds remain reliably active at the early stage. LSN tracks less than 1,000 early stage VCs—and a small subset of these firms represent the majority of financings today. These are the large, big-name funds that are in every life science entrepreneur’s vocabulary. They are the survivors of the post-recession fallout, and for good reason. They are highly sophisticated, have a sound understanding of the marketplace, and employ top-tier operations talent.

However, if you are an entrepreneur courting these investors, it will benefit you to be wary. The remaining active VC funds know that they have an advantage in that they are the first investors in every entrepreneur’s mind, meaning they have the pick of the litter among early stage companies who are all jockeying for the same capital. This gives them the luxury of offering less-than-stellar terms to entrepreneurs when it comes to valuations and capital structures, and oftentimes they can leave a CEO in a tough position. Venture capitalists can be viable partners, but it is critical that an entrepreneur makes sure that visions are aligned, that the valuation and the terms are fair, and that too much equity and control isn’t surrendered too early in the process.

**Family Offices**

Family offices are among the most stealthy investor groups in the life science space, and many of the entrepreneurs with whom my company works are initially unfamiliar with this category. Family offices basically act as personal CFOs for ultra-high-net-worth families and individuals—their scope includes generational wealth management, philanthropic donations, legal issues, and management of tangible assets. Each family office is unique in that its services are a function of the demands, skills, and financial requirements of the families, family, or individual whose money they manage.

These organizations exist primarily in two basic forms: single family offices (SFOs) and multi-family offices (MFOs) (see Figure 4.3). SFOs,
as the name suggests, manage the finances for a single family or individual. LSN tracks SFOs with a net worth of at least $100 million, and some have over $1 billion. The average family office manages approximately $600 million. MFOs, which recently have been gaining popularity, cater to the needs of multiple families with a minimum net worth of around $20 million and an average of about $50 million. However, in aggregate, MFOs and SFOs are dealing with comparable asset pools. This allows families with lower net worth to collectively leverage the same advantages that an SFO provides.

The amount of capital held by family offices has been growing recently, as more traditional wealth managers (following the market demand for complete personalized financial management) are offering more holistic services, transforming their business models to become MFOs. Another reason for the increase in family office capital has been the recent tendency for MFOs to lower their asset requirements. Industry experts estimate that there are currently over 4,000 family offices in the United States alone, with well over $1 trillion in combined assets under management, making them a very significant source of private capital.

Historically, family offices have allocated a portion of their capital to

**Figure 4.3: Visualizing the family office**
alternative assets, such as VC funds, hedge funds, and private equity funds. Many family offices involved in the life science direct investment trend are utilizing the skills and knowledge of the particular sector that made the family its fortune to identify strong investment opportunities, where they also have the ability to add value beyond capital. This authority, combined with the fact that many family offices see life science investment as an opportunity to participate in the development of therapy for an ailment prevalent in the family, is making them an incredibly powerful presence in the life science investment space.

What’s more, as long as family offices have been in existence, the majority (over 50% globally, and an even higher percentage in the U.S.) have maintained a portion of their clients’ capital for the purpose of philanthropic allocations. Recently, there has been a trend for philanthropy to be less of a donation and more of an investment, with a focus on a measurable, positive social impact on society as a gauge of the ROI (return on investment). With this mind-set, family offices are investing directly into industries such as the life sciences, where a scientific breakthrough could have massive, lasting positive impact on a global scale. Family offices looking for an impact with their investments do not have the same standards for ROI as traditional investment firms, who are under immense pressure to generate consistent returns by shareholders, and are therefore offering better terms with less stringent restrictions on time-to-exit than traditional private investors.

LSN has identified close to 1,000 family offices globally that constitute a potential investor base for life science entrepreneurs. Approximately 400 of these have established activity within the life sciences or are actively seeking investment opportunities to move science forward via direct investment.

**Hedge Funds**

There is a broad range of hedge fund types, which could constitute their own book, but an easy way to think of them is as managed portfolios of stocks, bonds, derivatives, commodities, or any other such set of assets. Hedge funds are traditionally thought of as players active only in public markets. However, as fund managers have come under increased pressure
to generate outsized returns on behalf of their investors, many managers have turned to more esoteric strategies and have gotten more creative when it comes to making allocations. For example, some hedge funds incorporate a PIPE (Private Investment in Public Equity) strategy, which allows them to make a private placement into a publicly traded company (typically at a discount and in exchange for some other additional benefits).

Others have employed a special situations strategy, which takes advantage of opportunities that are out of the public equity and into the private investment arena. This can either be in the form of one-off “side pocket” investments on an opportunistic basis or an integrated piece of an investment strategy. LSN has identified over 80 hedge funds that have begun to make this sort of “crossover investment” in the life science arena.

**Mid-Level Private Equity**

Private equity (PE) is also challenging the historical map—PE is traditionally thought of as the capital used in the restructuring of large, post-revenue companies. However, this is changing—especially in the life science space. Biotech and medtech opportunities have a high potential for returns, and PE firms have a higher tolerance for the long timeline to commercialization. Many firms have therefore begun implementing strategies to aggregate assets and shepherd them through the pipeline. This portfolio of assets can then be passed to a large strategic partner as a one-stop solution to a pipeline gap, where a full portfolio of drugs is worth more than the sum of its parts. LSN tracks about 1,700 PE funds investing in the life sciences around the world and roughly 400 that are active in emerging biotech and medtech companies.

**Big Pharma and Big Biotech**

Increasingly, over the past few years, large pharmaceutical and biotech companies have been slashing basic in-house R&D budgets at a fast clip. Coming at a time when the industry is performing remarkably well and basic R&D is more critical than ever, this trend might confuse observers. However, what many do not recognize is that the primary motivation for
this trend is not only to cut costs (though it is saving considerable money for many firms). Rather, it is reflective of a novel means by which the R&D pipeline is being approached from the ground up, reflecting major changes in the industry over the past decade. In the past, pipeline gaps were filled with the intent of maintaining market share, and in order for a biotech company to be a fit, their product needed to be relatively far down the pipeline. Now all of that is changing.

The reason for this has been a massive paradigm shift in the collective “big pharma” psyche. The nature of the marketplace has changed in that the best researchers with the best ideas are no longer seeking out positions within big pharma but instead are starting their own companies, largely due to the fact that CROs and other outsourcing partners in the space have made it possible to do groundbreaking research with minimal investment in infrastructure. Some might see this as a problem, as big pharma seems to be starved for innovation and desperately needs to refill dry pipelines. However, this isn’t necessarily bad news—the opportunity for big pharma to selectively buy into independently developed projects on a global basis allows for a geared ROI on the R&D budget and introduces an enormous amount of fresh capital to the marketplace at the early stage.

Traditionally, big pharma wasn’t even on an emerging biotech company’s radar screen until a product was entering late-stage clinical trials and required a strategic partner to enable it to enter the marketplace. Additionally, the big pharma and biotech firms’ search and evaluation teams tended to focus their energy on discovering opportunities to plug existing pipeline gaps closer to market and not on early stage assets that could form the basis of the forward-looking R&D pipeline. This is changing rapidly and the implications are massive; big pharma is increasingly focusing efforts on investing in small and emerging biotech firms. LSN tracks close to 100 of these entities around the world.

The majority of corporate investments are structured in four forms: direct investments from the parent company, wholly owned subsidiaries, independent organizations with dedicated funds, and limited partners in other funds. Understanding the type of corporate investment a company is interested in making will be critical in determining your ability to catch their interest.
Corporate Venture Capital

Corporate venture capital (CVC) is a strategy that has been adopted by a number of large corporations to enable them to have a hand in emerging technologies that are either directly or indirectly aligned with their primary business. CVC funds are essentially VC funds backed by the capital of a primary corporation. LSN tracks approximately 100 corporate venture capitalists with a declared life science interest.

CVC funding is particularly beneficial for new ventures in the life sciences that operate in uncertain environments, because this funding often comes with specialized assets and knowledge. Over one-third of active corporate venture capitalists that LSN tracks are healthcare focused. Additionally, studies have shown that financing rounds with CVC involved tend to be significantly higher than non-CVC funded rounds. The innovation output of CVC-funded companies is also higher, as measured by the number of their publications and patents.

Recently, corporate venture capitalists have actually started co-investing in rounds with each other. At first, this might appear to make little sense, as the parent companies are directly competing for the same technologies. However, as the CVC firms have become more familiar with each other, they have begun to understand how each structures their deals and are becoming more comfortable sharing the table with another big name player. The shift toward independently operating venture funds is big pharma’s method of keeping the innovation pipeline flowing in response to the decline of truly early stage in-house R&D funding. This is good news for early stage ventures and should be carefully considered when planning a fundraising strategy.

Pensions and Endowments

Pensions and endowments are typically highly sophisticated institutional investors backed by very large asset pools. Increasingly, these large institutional investors with the flexibility to be somewhat opportunistic in their investment mandates have begun making direct placements into life science companies. LSN tracks close to 100 pensions and endowments with an active interest in direct investment in the life sciences.
When dealing with these entities, it is critical to ensure that your company’s risk profile is explained as clearly as possible. Though these investments are typically made outside of the chartered investment mandate, most of these groups will still maintain a high degree of risk scrutiny while evaluating your proposition. Pensions are usually interested in late-stage companies, but some are willing to look at pre-revenue companies and even companies that have preclinical assets.

In the endowments space, investors are also starting to make direct investments. Endowments are oftentimes heavily invested in the PE space, as they have longer-term investment horizons than other investors. They are thus comfortable with the lengthy lock-up periods that many direct investment opportunities stipulate. Endowments in the life sciences are certainly beginning to go direct, but on a smaller scale when compared with pension funds. Endowments are particularly interested in investing in companies that are harnessing technologies that were spun out of their own institution, but are increasingly investing in companies that are developing technologies from outside universities as well.

Pensions and endowments tend to be guided by highly sophisticated process and procedure, so making the correct first impression with them is vital. Clarity, transparency, and a willingness to collaborate with resources made available by the investor (especially in the case of university endowments) are extremely helpful assets. A good starting point is to find a navigator who can explain the desired format for submission of an investment proposal, specific requirements in terms of data, and any other conditions that must be met.

Foundations, Venture Philanthropy, and Patient Groups

Foundations have been a fixture of the life science space for a long time, but historically they were primarily grant-writing organizations. However, recently they have joined the ranks of venture philanthropists and patient groups to comprise some of the most interesting equity investor categories to emerge in recent history. LSN tracks approximately 250 of these entities
around the world. Though they target different diseases in different ways, they all share a unified mission—to help researchers move the science along in a particular area.

Foundations and venture philanthropy groups have significant overlap in that they are using an equity investment model that is focused on driving commercialization to push a philanthropic agenda. It has become evident that for a therapy to reach the market, philanthropic organizations need to have skin in the game and an incentive to keep moving the science forward. This model is rapidly gaining momentum and has the dual advantages of making foundations focus on a long-term relationship with funded companies as well as providing a source of returns that scales with the organization over time to enhance impact.

A patient group is a collection of individuals afflicted by a disease who come together and mobilize to find a cure for their particular affliction. In the past, patient groups oftentimes partnered with foundations (or venture philanthropists) in order to make an investment. One example of this was the Cystic Fibrosis Foundation partnering with a number of patient groups and Aurora BioScience. Now, however, the industry is seeing more and more of these patient groups mobilizing other groups in order to make a strategic investment to more directly improve patient outcomes.

Patient groups are taking an innovative approach to investing in the life science space. To push research along in a certain area, patient groups will often take a strategic approach and attempt to bring many parties together, such as scientists who are researching different elements of the disease—usually the best and most well-known scientists in the space to ensure legitimacy—in order to foster a collaborative environment. Patient groups then establish their clinical network, which is a network of patients that can be utilized for clinical trials for companies in which they invest (made up of members of the patient group who are afflicted by the disease). The final step for these patient groups is to bring biotech and big pharma companies into the picture; these companies help the scientists to commercialize their research.

Patient groups are also dynamic because they almost create an ecosystem
within their particular disease focus. Generally patient groups are huge advocates of sharing as much information as possible, and they help researchers, even those outside of their network, to gain access to research and data more quickly and easily than they would otherwise. Patient groups also help patients to educate themselves and allow them to see the various treatment options that are available to them that may not yet be FDA approved. Thus it is expected that patient groups will start to become major players in the life science investment space.

Venture philanthropists, foundations, and patient groups are eager to meet their goal of accelerating the development of treatments and cures for the world's most challenging diseases. One group actively moving this agenda forward is FasterCures, a center of the Milken Institute. This organization's mission is to facilitate a collective alliance among venture philanthropy groups, patient advocacy groups, foundations, family offices, regulatory authorities, and big pharma companies. Their TRAIN group (The Research Acceleration and Innovation Network) is made up of approximately 75 active philanthropic entities that are focused on moving science into the hands of patients for a broad range of diseases. These organizations provide over $600 million in medical research capital annually. About half of the TRAIN group has supported at least one clinical trial, more than half incorporate advocacy efforts into their work in fighting disease, and nearly 9 out of 10 TRAIN entities partner with biotechnology and pharmaceutical companies.

There is a high degree of direct involvement with these groups; these are hands-on investors. They are more open than many other investors, and therefore flexible deal terms with multi-year allocation timelines can be negotiated. They know how to get things done, so expect milestones and carefully scrutinized metrics, along with action plans and organizational input.

These entities provide funding for scientists and young life science companies in order to move along the development of therapies for certain diseases. Unlike traditional philanthropic organizations, they expect the companies and individuals they invest in to achieve certain preset goals and focus on accountability. They aren't only funding basic
research; they are helping to drive products to patients as quickly and efficiently as possible.

These investors are becoming increasingly important, especially due to the inability of many scientists to translate discoveries into compelling market opportunities and because of impending cuts in the NIH budget, which could cripple future therapy development. Currently, venture philanthropy only represents less than 3% of the spending on medical R&D in the U.S., but this figure is expected to rise as the need for funding from scientists and early stage biotech firms continues to grow.

**Crowdfunding**

Crowdfunding (as already mentioned in Chapters 2 and 3) is a paradigm shift. It bears mentioning here since, in theory, it represents a new category of investors: the general public. However, the ante required to get into the game is one of the most important elements to question. Some sites are demanding fees or a portion of the capital raised, which can be 5% to 20%—that's a pretty steep price of admission for a virtual company profile and a three-minute video. The first crowdfunding portals and their associated business models are varied in their policies, so do your own research. The mantra used by the entrepreneurs who run these portals is essentially as follows: *the risk to the investor is low because the investment dollar amount is low, and the people will decide what makes its way into the market.*

Translating this into iterative, experiment-based life science technologies may be tricky, as the general public isn't necessarily going to fully understand the subtleties of therapeutic biomarkers, mechanisms of action, or physics-based, next-gen medical devices. Therefore, the obvious candidates for this kind of funding are healthcare IT companies and easily comprehensible medical devices; if start-ups in therapeutic technologies are to pursue crowdfunding, then they must ensure that their product and technology is framed in terms that are easily understood by a layperson.

Keeping it simple and using crowdfunding as a tactic for part of the strategy for early stage capital fundraising may be fine. However, it won't be *the* full-blown solution to the industry’s capital needs.
Summary

As you can see, the fundraising landscape for early stage life science companies reflects a broad range of investors with different priorities, investment interests, and levels of activity. Recent years have brought many changes to the life science investment arena; for example, the differences between VC, PE, and hedge funds are starting to blur, and all three of these entities have established themselves as having constituents that are investing in early stage life science companies. This is good news, because these players have large capital reserves and can bring a significant amount of cash back into the early stage marketplace.

Though transformations such as these have already altered the playing field, the landscape has likely not completed its shift—more change is yet to come. This demands that life science executives, now more than ever, do their homework as to which investor categories represent a potential fit over the full life of the company. Only after this road map has been established will you be ready to begin formulating an outbound fundraising strategy to raise capital.