

Access all areas

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A life science business plan competition designed to catalyze young bioentrepreneurs shows the way for other regions seeking to galvanize biotech startups.

Creating a successful life science startup is a long, daunting, complex endeavor. In many parts of the world, institutional hierarchies, systemic regulations and culturally ingrained risk aversion limit opportunities for first-time entrepreneurs to access the advice and resources necessary for success. Last year, Oxbridge Biotech Roundtable (OBR), an international network of researchers, academics and industry professionals, and SR One, the corporate venture capital arm of GlaxoSmithKline, based in London, launched the biotech business plan competition OneStart with these problems in mind. The Europe-wide competition, open to anyone under 36, offered a grand prize of £100,000 (US\$166,640) plus free lab space and ongoing business and intellectual property support to the winning team.

Here, we discuss the strategic choices and key structural features of the competition that made it a success. We also suggest ways this success might be replicated in other parts of the world not known for their entrepreneurial zeal.

Why a business plan competition?

Europe possesses a wealth of world-class academic research but lacks an entrepreneurial ecosystem that efficiently connects experienced investors and biotech industry veterans with innovative young researchers. Combined with the dwindling available venture financing pool following the 2008 financial collapse and ongoing Eurozone crisis, the traditional funding avenues for risky early stage spinouts are increasingly scarce. The lack of access to funding for all but the most celebrated scientific researchers and the absence of invest-

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ment in truly innovative early stage ideas, as opposed to proven pathways and 'me-too' products, has imposed a painful funding gap on nascent biotech startups.

The OneStart competition was conceived as a response to this funding gap and chasm between the investment and research communities. By bringing together investors, industry professionals and entrepreneurial young scientists, OBR and SR One hoped to create an environment conducive to successful commercialization of laboratory research.

The founders

OBR is an international network with the mission of strengthening the connection between academia and industry in order to move ideas forward. We organize events for students, postdocs and life science professionals to meet and collaborate. In addition, our consulting arm recruits top graduate students to deliver high-impact analysis for industry from big pharma to nascent startups. There are cur-

rently eleven OBR chapters across the United Kingdom, the United States, Hong Kong and Singapore, with the global network continually expanding.

SR One invests globally in innovative life science companies that are pursuing techniques meant to significantly impact medical care.

At the conception of OneStart, OBR and SR One identified what we believed to be the main obstacles to successful execution. Our fundamental challenge was to generate enthusiasm for a biotech business plan competition and get people excited about entrepreneurship in a sector and region not known for its risk-taking culture. But we also knew that the caliber of researchers and students we sought to engage would need an attractive value proposition to incentivize them to invest their time and energy. In this respect, the grand prize provided an attractive reason for entrants to engage with the competition rather than pursue more established career trajectories. Although £100,000 is comparable to the initial seed funding received

by many new biotech enterprises, it is also one of the largest prizes ever offered for a business plan competition anywhere in the world.

We knew that we would need to battle the perception that participating in our business plan competition would compromise the independence or intellectual property position of company founders. Also, we knew that we needed to attract sufficient high-quality investor and industry involvement and sustain it throughout each phase of the competition; this would make participation worthwhile for all applicants, not simply the winners, and it would help build the community of burgeoning entrepreneurs and established professionals necessary for a dynamic startup ecosystem.

These challenges guided our strategy and motivated the five pillars of the competition structure, each of which is described below.

The five pillars of OneStart

Few barriers, few conditions. To generate enthusiasm, we sought to make the competition accessible to as many people as possible. By lowering barriers to entry and emphasizing the benefits for all 35 selected semifinalists (**Supplementary Table 1**)—including mentorship, exclusive professional development workshops, industry exposure and the opportunity to pitch to real investors—we hoped to substantially broaden the applicant pool and attract talented individuals who might not have otherwise taken the plunge. Relatedly, it was important for us to emphasize the caliber of the ideas and applicants rather than issues of intellectual property and dilutive investment.

With this in mind, we structured the competition to have no strings attached; the only condition was that the winners use the prize money to advance the development of their idea. Most important were the conditions omitted: the prize money did not constitute an equity investment and no right of first refusal (or equivalent) in future funding rounds was imposed on the winners by SR One or OBR. We wanted to fund a group with the right mix of technical knowledge, hustle and a great idea, and let the group maintain control.

All stages of development. Continuing in the spirit of openness and accessibility, we welcomed ideas at any stage of development provided they had not already received private investment of more than £50,000 (US\$83,328). To avoid discouraging more speculative and risky applications, we crafted a first-round entry form that emphasized promise and brevity, demanding that applicants exhibit the potential of their team and idea at a conceptual rather than highly detailed level. Although this

ran the risk of encouraging frivolous applications, the approach successfully broadened the pool of applicants and brought a plethora of young researchers into OneStart who, for various reasons, had not thoroughly explored the commercialization of their idea.

The ‘Co-Founders Hub’. Another way that we broadened the pool of participants was the Co-Founders Hub. Recognizing that many talented young students and researchers have an interest in biotech entrepreneurship but do not possess a commercialization-suitable idea or application, we developed a mechanism that facilitated their participation as well.

The Co-Founders Hub allowed individuals without an idea of their own to post a profile detailing their background and interest in biotech entrepreneurship. OneStart applicants could then peruse the database and contact individuals with the skills they required, whether it was programming capability, financial modeling expertise or specialist knowledge of a certain cellular pathway. Ultimately, almost half of the 35 semifinalists added team members through the Co-Founders Hub.

Targeting young researchers. Perhaps the most difficult and controversial decision was to restrict the competition to applicants younger than 36. Although this may appear contrary to our goal of broadening the applicant pool, we believe that young bioentrepreneurs face unique challenges and can disproportionately benefit from an opportunity of this kind.

Practically speaking, older scientists have had more time to develop a network of contacts that can open doors and guide their efforts to fund and pursue ideas. Relatedly, over a longer career researchers can develop a track record, making them more likely to win grants, awards or positions that can help them develop their ideas. Younger bioentrepreneurs are often not eligible or simply not competitive for these opportunities. In addition, the ambitions of young researchers, postdocs and graduate students may be subverted by the goals of their principal investigators, giving them less time and fewer resources to develop their own ideas.

From a cultural perspective, we believe that catalyzing the shift toward entrepreneurship and risk taking that we desire would be more effective with a younger cohort of applicants. Younger applicants, who generally have fewer institutional, family and financial commitments, are more capable of pursuing the risk of entrepreneurship if equipped with the required knowledge and network. Crucially, to align with our emphasis on generating value for all semifinalists, not simply the win-

ners, we believed that building a community of young researchers oriented toward entrepreneurship would lead to many new biotech businesses in the future.

Finally, in a job environment especially difficult for young people, we wanted to present an alternative opportunity for building their own career.

Mentorship. All of the decisions already discussed were designed to increase participation and accessibility, but the critical feature of OneStart, the one that generated the most energy, interest and enthusiasm from both applicants and industry professionals, was the mentorship component. By assigning each of the 35 semifinalists a mentor with experience relevant to their innovation, we made the process truly valuable for everyone involved, not just the winning teams.

To attract high-caliber industry mentors, we emphasized that mentorship provided professionals with a chance to interact with some of the brightest young bioentrepreneurs in Europe while increasing their company's exposure to the most innovative next-generation ideas. In addition, mentors had the personal satisfaction of transmitting some of their hard-earned industry knowledge to a younger generation.

We ensured that our mentors brought a wealth of diverse, high-quality experiences to the competition. Our 2013 partners GlaxoSmithKline and Roche provided many experienced professionals from across our four application tracks: drug discovery, devices, diagnostics and health information technology. In addition, SR One and OBR reached deep into their respective networks, recruiting successful life science venture capitalists, serial entrepreneurs, intellectual property specialists and industry consultants. The result was an eclectic mix of knowledge, experience and insight that offered the semifinalists an unparalleled pool of information and skill to help guide their development.

On top of receiving individual mentorship, the semifinalist teams also had the unique opportunity to participate in the OneStart Biotech Bootcamp, a day-long working program including lectures, seminars, mock pitches, networking and one-on-one mentorship sessions. Workshop topics included venture capital funding, an in-depth discussion of the path to commercialization and advice on starting their own company, with expert panelists from companies like GSK, Roche Venture Fund, McKinsey & Company, Apposite Capital, SV Life Sciences and *Nature Biotechnology*.

Using these five pillars, we were able to make OneStart 2013 a success. To build on this, we

decided to revamp the competition for 2014 by simultaneously launching an independent, parallel OneStart Americas competition. Although the United States, and Silicon Valley in particular, are often touted as paragons of entrepreneurial spirit, we had a few key reasons for expanding to North America. First, the United States and Canada have many world-class universities and ample scientific talent. Second, despite a strong entrepreneurial culture, biotech and life science startups are more difficult to launch relative to other fields (particularly technology) because of large up-front costs for lab space, research equipment and materials. Third, OBR's US chapters are constantly hearing from young members about their frustration at the lack of opportunities for postdocs and graduate students to break into the commercial space relative to more established professors or research professionals. These factors, combined with the networks provided by OBR chapters in four US cities, made North America the next logical choice for a OneStart competition.

The 2014 competition, involving more than 250 teams from across Europe and North America, recently concluded. We were also pleased that our 2013 winner, Puridify, recently raised their first round of venture financing. This success, in just one year, suggests the structure of the competition can effectively help teams bridge the initial gap from academia to industry.

With OBR chapters now operating in Singapore and Hong Kong, we are hoping to expand OneStart to Asia in the future. Asia has its own set of challenges as well as opportunities for innovative life scientists, making it an exciting region for fostering a culture of entrepreneurship.

Conclusions

Beginning with launch events held at target campuses throughout January 2013, at which interested individuals came together to learn about the competition and its features, OneStart crafted a comprehensive business development experience for a broad pool of talented applicants. All semifinalists benefited from the intensive Biotech Bootcamp, during which industry professionals and

Table 1 2013 OneStart top ten finalists.

Team name	Description	Location
anywhereHPLC	User-friendly, portable, disposable high-performance liquid chromatography for high-quality clinical and research testing	London
BioAmp	New miniature sensor for integration with mobile electronics to allow patients suffering from chronic diseases to self-manage their conditions in their own homes	Cambridge
FoetoH	New combination of wireless ultrasound and sophisticated signal processing run on a user's smartphone for robust, portable, fully automated monitoring of fetal health	Oxford
Hackett Biologics	Storage and transport vehicle for stem cells that does not require freezing, thus increasing viability and maintenance of surface markers	Cambridge
LipoPep	Drug delivery system to target drugs directly and selectively to the placenta, allowing treatment of placental abnormalities with minimal risk to mother or child	Manchester, UK
MPDx Technologies	Automated sample processing for 'sample-to-result' diagnostics to take diagnostic testing out of the lab into the point of care	Cambridge
Picoto	Complete networked system of intelligent sensors that monitor neonatal health parameters and empower actionable healthcare delivery to provide a new standard of care	Oxford
Puridify	FibroSelect—a new chromatography reagent structure that utilizes existing purification chemistries more efficiently for the reduction of therapeutic manufacturing costs, addressing the global demand for cheaper drugs and increased patient access	London
Pym	Mobile diagnostic platform based on digital holographic microscopy for rapid and cheap diagnosis of body fluid samples	Oxford
Tecrea	New, nontoxic nanodelivery platform for intracellular delivery of biopharmaceuticals	London

seasoned bioentrepreneurs shared knowledge gleaned from years of experience, and an extensive individual mentorship period. The ten finalists (**Table 1**) had the opportunity to expand on their business plan, benefit from ongoing mentorship and pitch to a panel of experienced venture capital and biotech professionals.

None of these strategic decisions could have been implemented without the fortuitous partnership forged between SR One and OBR. SR One offered industry expertise and a network of executives willing to lend their support through mentorship and boot camp participation. OBR provided a network of thousands of members self-selected for their interest and talent in biotech and entrepreneurship, providing unique exposure to talented and relevant individuals.

The key to OneStart's success was the combination of young researchers from OBR's

network and the commitment of an industry partner, SR One. We feel that others who want to catalyze entrepreneurship can learn from OneStart's successful model and the unique collaborative aspect of the competition to foster innovation in the life sciences, particularly in countries with weaker entrepreneurial ecosystems. From the number and caliber of applicants received, it is clear that Europe, a region not currently known for innovation, is full of young, ambitious bioentrepreneurs who want to make their ideas a reality. It is likely that other areas of the world are harboring such aspiring young individuals as well.

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COMPETING FINANCIAL INTERESTS

The authors declare no competing financial interests.