

## A German Initiative for Start-Ups in the Life Sciences and Chemistry

by Uwe Gerlach

**S**cience4Life started in 1998 with the idea of providing unique support for potential entrepreneurs in the life sciences and chemistry fields. Now, after eight years it has become an established institution and brand in the entrepreneurial scene. Science4Life is focused on two main activities: the annual business plan competition (Science4Life Venture Cup) and the expert and alumni network (Science4Life Business Forum).

The Science4Life business plan competition enjoys an excellent reputation and is firmly established in the start-up community throughout Germany, not only in the Federal State of Hesse where the competition started. In the eight years since it began, more than 350 business plans have been submitted, more than 200 companies have been founded, and, most important, more than 1600 highly qualified positions have been created. On 1 September 2006, the sponsors of this initiative, the government of the Federal State of Hesse and Sanofi-Aventis, launched the ninth round of this successful competition.

### From Idea to Brand

In 1998, Science4Life was launched as a nonprofit organization with the aim of advising young German entrepreneurs in the life sciences and chemistry. In specific workshops and seminars, Science4Life advised these potential business founders about the complexities involved with starting a successful enterprise and establishing it on the market. The main goal was to help these start-up companies write a business plan that would convince investors to invest in their business.

Initially, the initiators of the program, the board of the German chemical and pharmaceutical company Hoechst and the Prime Minister of the Federal State of Hesse, together with the VCI (the German

Chemical Industry Association) and the DECHEMA (the German Society for Chemical Engineering and Biotechnology), were not confident that the idea to “support potential founders by an honorary operating network” would work. In addition, it was not known if there would be enough bold and intrepid entrepreneurs with appropriate ideas in Germany. Today, the former experiment can be viewed as a resounding success, not only in the Federal State of Hesse but also in Germany and beyond. Young founder teams from neighboring countries are also seeking the professional support of the initiative. In the recently completed eighth round of the Science4Life Venture Cup, eight business ideas from Austria, Canada, Hungary, and Switzerland were submitted.

### Sponsors and Honorary Expert Network

Science4Life is now a registered society with its own committee. It is financed by the Federal State of Hesse and Sanofi-Aventis, Europe’s leading pharmaceutical company. More than 100 notable organizations support Science4Life and its unique focus on the life sciences and chemistry. Among them are pharmaceutical and biotech companies, law firms, consulting companies, banks and venture capitalists, as well as associations and scientific institutions like the German Chemical Society. Former participants and winners are involved as well. These network partners coach the participants and answer their questions at meet-



The winners of the 8th Science4Life Venture Cup, held in 2006, pose after the awards show in the Deutsche Bundesbank in Frankfurt am Main, Germany. In the middle is Dr. Frauke Petry, the happy first-prize winner, holding a check for over EUR 30 000.

ings, on the phone, or by e-mail. They also judge the business concepts in step one and the business plans in step two. Their support does not end with their participation in the Venture Cup, but continues in the huge and active alumni network of Science4Life. Answers to frequently-asked questions in the early stages of founding a company, such as how to protect intellectual property, or which legal form the company should take, can be found quickly within the network, and on the Science4Life website. In addition, the free Science4Life handbook is an invaluable source of information on writing a business plan.

## Terms of Participation and Prize Money

Almost anyone who has an idea for a start-up company in the field of life sciences or chemistry can participate. Students, Ph.D. students and scientific co-workers at universities are just as welcome as entrepreneurs from industry. Due to the generous financial support of the two main sponsors and the voluntary work of the consulting experts, participation is free. The contributions range from scientific ideas to existing young enterprises. Participating start-ups may not be older than one year at the start of the new competition round. In addition to obtaining written feedback from experts, participants have the chance to win the EUR 30 000 first prize or a number of other prizes of the Science4Life Venture Cup, which has a total of EUR 72 500 in prize money available.

Of course, the prize money is not the only motivation. For many participants the main motivation is receiving advice and assistance from a network of high-level experts. The network provides high-quality consulting and intensive, informal contacts to scientific, technical, and industrial experts at virtually no cost. These experts pass on their knowledge to participants through written opinions, personal contacts, and useful tips for the development of a company.

## Three Steps to the Venture Cup

The Venture Cup consists of three steps. In the first step, a concept is submitted, including an executive summary, describing the business idea, the team, and the market. In the second step, a complete business plan is submitted and evaluated by at least three jurors. Due to the different backgrounds of the various experts involved, both the technical and the economic parts are evaluated. It must be emphasized that with all of the detailed discussions and information transfer

involved, the sensitive data of the entrepreneurs are handled with complete confidentiality. All coaches and jurors have to sign a confidentiality agreement before they can review the ideas and business plans, which is a crucial point for these intellectual property-driven start-ups.

### Step Three: Founder Workshop for the Top Five

During the third phase, the teams with the top five business ideas are selected to make presentations of their business ideas and concepts to a top-class jury from business, academia, and politics. Before the presentation, the teams attend a three-day workshop in which they learn about the many facets of being an entrepreneur. In intensive discussions with the expert network, participants learn to prepare for their customers and the capital market. Experienced consultants help put the finishing touches on the teams' presentations. The pressure and excitement mean that the teams hardly have time to enjoy the beautiful ambience of the hunting lodge in Rüdeshheim in the Rhine Valley where the workshop is held. Ultimately, it is the team with just the right mixture of technical facts, business knowledge, personal enthusiasm, and persuasiveness that can convince the nine-member jury.

Three Phases of the Science4Life Venture Cup 2007

Phase	Prize	Deadline
Phase 1—submission of the business concept	10 winners receive EUR 1 000, plus a one-day coaching session by experts in Berlin	7 February 2007
Phase 2—submission of the complete business plan	top 5 winners move to phase 3 6th–10th place winners receive EUR 1 500	4 May 2007
Phase 3—Founder Workshop and presentation to top-class jury	1st place: EUR 30 000 2nd place: EUR 15 000 3rd place: EUR 5 000 4th & 5th place: EUR 2 500	28 June–1 July 2007

The winner of this year's Science4Life Venture Cup was a team from Göttingen, Lower Saxony. Frauke Petry of PURinvent Limited, the first woman to head a winning team, convinced the jury with a chemical idea. The team's specially foamed polyurethane plastics, which consist of up to 50 percent water, have a number of potential applications thanks to its fire resistance.

## Science4Life

### Ideas for Products and Services from Many Regions

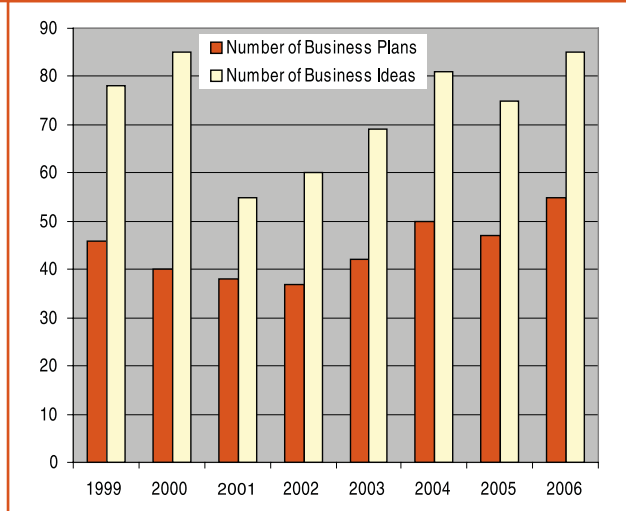
Of the 55 business plans submitted in 2006, 47 came from Germany and 8 came from abroad. A total of 42 product ideas with a focus on biotechnology, health care, medical technology, and chemistry were submitted. The remaining 13 business ideas address services, in which the focus was clearly on biotechnology and pharmaceuticals. In the years since the biotech bubble burst, the trend has been toward services among the start-ups participating in the Science4Life Venture Cup. Now, the trend is moving back to start-ups with product ideas.

Since 1998, when it began, participation levels in the Science4Life Venture Cup have been good. Last year, in the eighth round of the competition, a new record was set. The 55 submitted business plans represent a 10 percent increase compared to the previous top year, which was 2004. In addition, the 85 business ideas submitted in 2006 equals that of the stock market boom year of 2000. The difference between the number of business ideas and business plans arises because some teams choose to participate up to a certain phase of the competition. For example, a team with new, young ideas may only take part in step one, the concept phase. Existing companies with a mature business plan may choose to concentrate exclusively on step two of the competition, the business plan phase (see figure).

### Highlights of Eight Years

Without a doubt, the highlights of the Science4Life Venture Cup are the winners of the competition over the last eight years. Following are some examples (also see table, p. 11):

**N-Zyme BioTec GmbH**, a spin-off from the Darmstadt Technical University and the Darmstadt Technical College in the Federal State of Hesse, was the first winner in 1999. With its range of services offered in the sector of tailor-made enzymes, particularly with biocatalysts for the food industry, the young team made an excellent impression. Remarkably, in 2003 N-Zyme BioTec GmbH achieved the breakeven point. Today, the company has around 20 employees. It is currently pursuing the proprietary development of recombinant proteins against diseases with orphan status, which have low numbers of patients in a population. To continue its expansion, the company is seeking venture capital.



**Survey of eight years of the Science4Life Venture Cup: total number of submitted business plans and submitted business ideas.**

**Vasopharm GmbH** was the winner of the Science4Life Venture Cup in 2000. From the beginning, the company, which is based in Würzburg, Bavaria, has focused on the diagnostics and modulation of the action of biological nitric oxide (NO). After starting with assays covering the entire NO signal cascade and its function, they switched towards the development of new therapeutics in this field. With 10 employees, and a close connection to the University of Würzburg Medical School, Vasopharm GmbH discovered a new approach to preventing life-threatening increases in intracranial pressure, which is now under development. So far, venture capital of more than EUR 18 million from seven investors has flowed into the company. In January 2006, Vasopharm GmbH acquired EUR 9.7 million in venture capital to proceed with the clinical development of its compounds. Among the investors are well-known companies like EMBL Ventures, the Venture Funds of the European Molecular Biology Laboratory in Heidelberg, Germany, and the globally active investor 3i.

**Si4Health GmbH**, the winner in 2004, has taken a totally different path to success. The company develops, produces, and markets cell scaffold materials for tissue engineering based on silicon, hence the "Si" in the company name. Since 2004, the company has undergone many changes. Still settled in the Biotechnology Park Regensburg in Bavaria, Germany, Si4Health GmbH has become part of a large company. The CEO of Si4Health GmbH met his future investor, Bayer Innovation GmbH, during the investment forum Seed4Money (see p. 11). The pharmaceutical

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and chemistry company saw opportunities for a future business area in the innovative techniques of Si4Health GmbH.

### Investment Forum Seed4Money and Capital Meeting Point

The economic environment is not the only thing that has changed since the start of Science4Life. The initiative itself always has to be flexible and creative in what it offers to its participants and alumni. For example, since 2002 the 5 winners of the competition and 10 more life sciences companies from Germany and neighboring countries have been able to present their companies in a 10-minute lecture to invited investors at the Seed4Money investment forum. This year, Seed4Money took place for the fifth time. Many agreements and financial contacts have been made during, and initiated by, Seed4Money. The next logical step was to bring this idea onto a web platform. A "capital meeting point" was created on the secure part of the Science4Life website. Here, former participants of the competition who are seeking capital can meet accredited investors. In this way, Science4Life tries to facilitate contacts between start-ups and venture capitalists at an early stage.



### Science4Life Fair

The Science4Life Fair in April 2006 was a unique event for Science4Life. This was the first time that a German business plan competition organized a marketplace for former participants. During the event, more than 500 visitors met with more than 70 companies from seven Science4Life competitions in the Jahrhunderthalle in Frankfurt, to discuss their services and products and to make business contacts. In a special exhibition, 14 participants of the eighth round presented their ideas. The signal to all participants: Science4Life is an open, dynamic, future-oriented network for young entrepreneurs in the life sciences and chemistry.

### Science4Life: A Success Story

Not even the initiators of Science4Life eight years ago could have foreseen its remarkable progress. What started as an idea has become a brand within the start-up scene in life sciences and chemistry in Germany and beyond. Former participants report that their participation, with the competent scientific and economic appraisal received, has been an advantage when dealing with future clients, cooperation partners and venture capitalists. Science4Life has become a recognized seal of quality in Central Europe.

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Science4Life Venture Cup Winners, 1999–2006


Year	Company	Location, Country	Field of Activity	Status Quo
1999	N-Zyme BioTec GmbH	Darmstadt, Germany	Tailor-made enzymes as bio-catalysts and therapeutics	20 co-workers, profitable
2000	Vasopharm GmbH	Würzburg, Germany	Development of new therapeutics and diagnostics for cardiovascular diseases	10 co-workers, venture capital financed
2001	Nanosolutions GmbH	Hamburg, Germany	Self dispersing nano particles for medical diagnostic and prevention of forgery	2005, patents taken over by another nanotechnology company
2002	WonDrug Biosciences GmbH	Marburg, Germany	New natural materials as therapeutics via bio-combinatorial analysis.	2004, taken-over by a US-company
2003	AlcaSynn Pharmaceuticals GmbH	Innsbruck, Austria	Development of new morphine derivatives	2006, majority acquired by an Austrian pharmaceutical company
2004	Si4Health GmbH	Regensburg, Germany	Novel cell scaffold materials for tissue engineering	2005, taken-over by a corporate venture company
2005	Inoviscoat GmbH	Köln, Germany	Multi coating technology for development of, e.g., band-aids with controlled release of drugs	3 co-workers, founded and financed
2006	PURinvent Limited	Göttingen, Germany	Elastic polyurethane with very high water content as insulating material and for fire protection	2 co-workers, founded

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## Science4Life

Now, there are even participants from the USA. The Science4Life Venture Cup emerged as a contact point for Germans performing research in the USA who want to go into business for themselves. Participation and the appraisal of the business ideas by experts gives more security to those who are planning a start-up.

Everyone involved in this program, including the board of Science4Life and the sponsors, but also the many honorary experts from more than 100 compa-

nies, eagerly awaits the technical and entrepreneurial surprises that the next round of the competition will bring. The official start of the ninth Science4Life Venture Cup was 1 September 2006. The search for the best business ideas in the life sciences and chemistry for 2007 has begun. 

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