



THE COLOR OF SUCCESS

Atto-Tec, a 14-employee company located in Siegen, Southern NRW, was founded in 1999 by Karl-Heinz

Drexhage and three colleagues. That year, Drexhage reached retirement age, having spent the previous two decades as Professor of Physical Chemistry at the University of Siegen. There, he had become an internationally recognized expert in photochemistry and fluorescent dyes, designing and synthesizing functional dyes for many applications, including fluorescent markers for biomolecules. Before gaining tenure in Siegen in 1978, Drexhage worked for nine years as an associate of the Eastman Kodak Research Laboratories in Rochester, New York, developing novel laser dyes and investigating unconventional imaging systems.

"Atto-Tec had a distributor in place even before the company was fully formed."

The odds on Atto-Tec being successful were boosted by Drexhage's prestige within the scientific community, his extensive international connections and the wealth of patents he owned. The company began by marketing fluorescent dyes for medical diagnostics and biochemistry. A first portfolio of dyes was launched at ACHEMA in Frankfurt in 2000 and just one year later Atto-Tec had a presence at the BIO International Convention in San Diego. "We knew that 90 percent of our potential customers were outside Germany," explains Atto-Tec's managing director Jörg Reichwein, a biologist who joined the company in 2001 and helped to focus its strategy on biomedical applications.

Atto-Tec had a distributor in place even before the company was fully formed. Following Drexhage's presentation at a fluorescence microscopy conference in 1999, a manager from Fluka approached him. Fluka, which is a member of the Sigma Aldrich group, wanted to include fluorescent markers into its portfolio, and was looking for consultants. When they discovered that Drexhage was in the process of founding a company, a deal began to emerge: Atto-Tec would share part of its knowhow, in return for which the distributor would promote and sell the start-up's dyes, with one product manager devoted to Atto-Tec products. Thus began a collaboration which has been fruitful for both sides ever since.

"We also developed a customer-oriented web site to help increase our international visibility," Reichwein says. This has grown into an online store from which a large variety of

fluorescent labels and quenchers can be purchased directly. Besides its catalogue portfolio, Atto-Tec also offers to develop customized dyes.

Two big and some smaller companies compete with Atto-Tec at the international level. "We are the only fully privately owned company in the sector ," says Reichwein, "which gives us an enormous amount of flexibility and independence, for example in licensing negotiations." Another specific competitive advantage of Atto-Tec is its strength in markers optimized for the red region of the spectrum where the autofluorescence of biological samples is relatively weak, meaning that diagnostic signals can be better detected.

Today, Atto-Tec generates 80 percent of its sales abroad and is growing at a double-digit rate. "Our internationalization strategy, focused on life sciences applications, is paying off," says Reichwein. "We have been profitable for five years." The road to success was quite bumpy, however, as he recalls: "We had impatient investors in the beginning, and after the stock markets had crashed in 2001, we almost went bankrupt one year later."



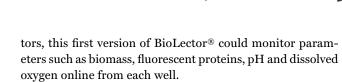
PRESENTING YOURSELF

Another company that survived a worldwide financial crisis, this time in

2008-9, is m2p-labs, a spin-off from RWTH Aachen University. "Ironically, international sales saved us," says Frank Kensy, m2p-labs co-founder and managing director. "German companies were initially so skeptical about our product that we wouldn't have survived infancy without American customers who were more open to innovation."

When Kensy founded the company in autumn 2005 together with three fellow students, he was still in the process of finalizing his thesis. He did, however, have the advantage of knowing the biotech business quite well. After his graduation from RWTH in 1997, Kensy worked as a biochemical engineer for Rhein Biotech in Düsseldorf. There, he realized that the speed and quality of fermentation often proved to be a bottleneck in pharmaceutical or chemical production. "I felt that it might be worth moving beyond traditional shaking flasks for microbial screening," he says.

Inspired by work of Jochen Büchs, professor at RWTH's Department of Biochemical Engineering, Kensy decided to return to the University in 2002 as Büchs' Ph.D. student. Together they invented a method for a quantitative online-monitoring of fermentation processes with microbes and cell cultures. This was the core technology for m2p-labs, which set up on the scientifically lively campus of the Fraunhofer Institute for Molecular Biology and Applied Ecology (IME), gaining both private and federal support. Within two years of its birth, the company launched BioLector® at the Biotechnica fair in October 2007 in Hannover. A micro-reactor system for high-throughput fermentation in 48 microreac-



Kensy and his colleagues decided to engage an experienced partner for international marketing rather than do it themselves. Drawing on advice from an investor and contacts that Kensy made during his time at Rhein Biotech, they came to an agreement with DASGIP AG, a leading manufacturer of parallel bioreactor systems located in their neighbourhood, as their distributor in the USA, Canada and the European markets. "DASGIP was a potential competitor, but at the same time our products complemented each other well," says Kensy. The first BioLector was sold to a research group from the ETH University in Zürich. By word of mouth from their Swiss collaborators, m2p-labs GmbH acquired further academic customers in the USA. In 2008, biofuel companies like Codexis and institutions interested in the bioeconomy, including the US Department of Agriculture, became customers. "We are able to monitor all the fermentation parameters their researchers wish to measure," Kensy explains. "That differentiates us from competitors."

Conveying this message effectively, however, requires more than just contract distributors. As m2p-labs learned, even with the like-minded partner DASGIP, contract distributors offer a whole vendor's tray of products and tend not to pay sufficient attention to an innovation from a start-up. "Yet, you need to address your customer very specifically to convince him of the advantage of your product. You have to share the spirit and the excitement of your innovation with him." To do so, m2p-labs established a US subsidiary in January of this year (see "The Two-Year Test, page 40), ending the four year agreement with DASGIP on good terms. The company now has an administrative office in New York, an experienced biotech expert as its American sales director and a technical manager for the West Coast. This initiative was made possible with the input of the international business administration company Intergest, which specializes in helping European biotech companies establish a presence in the US, and the advice from experienced consultants from the m2p-labs network.

The production of m2p-labs' devices wereoutsourced early on. "We wanted to focus on our core competencies in research and development rather than being distracted by ISO certifications and all that manufacturing stuff", Kensy explains. In Asia, m2p-labs initially left the marketing of its BioLector® to their manufacturer who contracted a number of distributors.

"This was a mistake because they did not really detail and support our technology," Kensy says. So, in January of this year, he travelled throughout China to foster business contacts. He found a suitable distributor with whom he signed a contract after on returning from China. In a continuation of the globalization process, Kensy is visiting potential customers and meeting a possible distributor in Brazil in May.

One cornerstone of m2p-labs strategy, which has proven more valuable to them than attending trade fairs, is active participation in scientific conferences. For example, Kensy was invited to present at RAFT (Recent Advances in Fermentation Technology) in 2009, raising awareness of BioLector® both in academia and industry.

The breakthrough in the US market, where m2p-labs generates 35 percent of its sales today, has been mirrored in Europe and Germany. Six systems have been sold in Denmark for instance, and three to the Jülich Research Center alone.

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And the company finally achieved a first sale of BioLector® to a German company in late 2010. After reaching the breakeven point in 2010, just five years after launch, sales increased further by 70 percent in 2011. The company also offers special microtiter plates (Flowerplate®) and culture media, but the BioLector® is clearly the major asset. It is a platform that is constantly being improved, and tailored to the customers needs, if necessary. "We are content," smiles Kensy, "We have sold more than 50 systems to date."

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THE TWO-YEAR TEST

A conversation with Boston-based Jane Clarke, US sales director of m2p-labs.

IS M2PLABS THE FIRST GERMAN COMPANY YOU HAVE WORKED FOR?

The second, actually. My first company was Amaxa from Cologne. One of the people there is a consultant for m2p. He suggested that they talk to me when they began to think about founding their own commercial organization in the US.

HOW MANY COMPANIES HAVE YOU WORKED FOR TO GET TO THIS POSITION?

(Laughs) Too many. I worked for Life Technologies and Affymetrix before Amaxa. I've also worked for a couple of start-ups, one or two years for each, depending on whether they made it or not. My last one didn't make it. That's part of the excitement.

HOW LONG DOES IT TAKE TO REALIZE WHETHER A START-UP WILL MAKE IT?

Two years gives you a good indication. If they are not successful in that period, it is unlikely that they ever will be. That's a good timeframe to shows whether a company has a product that people care about—and whether they have been smart enough to talk to the right people.

WHO ARE THE RIGHT PEOPLE TO TALK TO WHEN YOU ENTER THE US MARKET WITH AN ATTRACTIVE BUT UNKOWN PRODUCT?

You need to know what the benefits of different kinds of customers are, as in other markets too. Industrial customers may be big users of your technology and bring you a substantial revenue stream. m2p-labs is proud to have BP biofuels and Dupont as their customers, for example. But these companies are quite secretive and do not publish. To get your name out as a newcomer, it is necessary to have partnerships with renowned academic labs that are anxious to publish and present the results of their research. That helps you make connections to industry again.

ISN'T IT EASIER FOR A SMALL COMPANY TO WORK WITH A DISTRIBUTOR THAN TO HIRE ITS OWN EMPLOYEES IN THE US?

Contracting to a distributor is a low risk way to get started. You don't really have control over what they do with your product, however. They may represent several different companies, and how well they promote your product depends on how well educated they are or how comfortable they are talking about it. If another product is easier to sell, even if it may not have the same potential as yours, they will prefer to sell that. So if you feel that there is strong potential for your product in the US market, it makes sense to have your own sales force who focuses strictly on your product.

IN CASE OF M2P-LABS, THE SALES FORCE ENCOMPASSES JUST TWO PEOPLE, YOU AND A SALES MANAGER ON THE WEST COAST. ISN'T THAT TOO SMALL A PRESENCE TO SUCCEED IN SUCH A HUGE MARKET?

We're very busy, of course, but we leverage our energies in the right hubs. When small life sciences companies start with a sales force in the US, they usually start with one person in Boston, one person in the San Francisco Bay Area and one person between Maryland and North Carolina, close to the NIH and Research Triangle Park. The concentration of academic and commercial labs is very dense in these areas and if you hire local persons there, this will facilitate your efforts to break into new markets.



TOUR DE FORCE

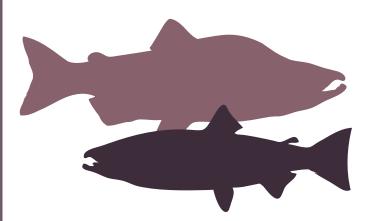
Evocatal, a spin-off from the Heinrich-Heine University in Düsseldorf, is just a few months younger

than m2p-labs and is also closely linked to the bioeconomy. It is a prominent player in NRW's industrial biotechnology scene—a founding member of Germany's Industrial Association of White Biotechnology (IWBio) and of the Cluster Industrial Biotechnology (CLIB2021). Evocatal's core competence is in biocatalysis. With 23 employees, the company produces enzymes and optimizes enzymatic processes for the pharmaceutical and chemical industry, especially when chiral purity is sought for stereoselectively-acting drugs. "Our technologies also comprise methods for the identification of new enzymes by metagenomic screening, assay development and cloning techniques, and the development of suitable production strains," says Managing Partner Thorsten Eggert. "We stand for effective and sustainable chemistry based on renewable resources."

"When we started the business," Eggert remembers, "we did not immediately have international outreach in mind." Very soon, however, evocatal realized that it could not stop at the German border. "As a provider and project partner for the pharmaceutical industry, we need business relationships in the United States and in Japan," he explains, "and in India too, which is increasingly important in the production of generics."

The delegate tours organized by BIO.NRW to promote international cooperation have been decidedly beneficial for evocatal. "The trips to India and Japan in which I participated were real door-openers. I could fully concentrate on business because all details of the trip were so well organized." At the Bio India conference, for example, Eggert concluded a deal with a major Indian generics manufacturer on the spot. Attending international biotechnology trade fairs has also facilitated personal interactions in ongoing contract research projects out-sourced to evocatal. These projects, that can last up to three years, account for two-thirds of evocatal's turnover.

Another way of internationalizing is to participate in trans-national scientific projects. Evocatal is a contributor to MAMBA, an EU-funded project on "Marine Metagenomics



for New Biotechnological Applications" that brings together eleven partners from Europe and Canada. The company contributes expertise and proprietary technologies to identify novel enzymes from unique Mediterranean ecosystems and to produce them using bacterial host organisms. These enzymes will be used in the chemical and pharmaceutical industries to design more sustainable and effective production processes.

Up until 2009, income from contract research was the basis of evocatal's business. At that point, the company began to offer ready-made products via international catalogues and databases, commissioning Sigma Aldrich as its main international distributor. "Sometimes our industry partners prefer to receive the completed chemical compound rather than just the enzymatic tool that helps to create it," Eggert explains. Evocatal specializes in chiral building blocks, thus extending its value chain from project to product. A growth financing round in 2010 put the company into the position to realize this strategy and propelled it into new avenues of international business.

Joining forces with industrial biotech companies from other countries is another important part of evocatal's evolution into international markets. In February 2012, for example, the company entered an alliance with RohnerChem, a Swiss custom manufacturer specializing in organic syntheses of complex molecules. The focus of this strategic partnership is to offer highly innovative routes to enantiomerically pure products and to reduce commercialization timelines.

"Today, 50 percent of our customer inquiries come from abroad, but foreign sales account for less than 30 percent of our business," Eggert says. The reason for this imbalance is that contract research projects are based predominantly in Germany. "We are striving to balance the project and product businesses, which is necessary to break-even," says Eggert, emphasizing at the same time how fruitful the projects have been for evocatal's maturation. "They give us a chance to get acquainted with the problems of our customers," he notes.

CILIATE SUPERIORITY Cilian, a company founded in the university

are active worldwide."

town of Münster in 2001, employs 14 associates focused on the expression of therapeutic proteins in ciliates. They are driven by the vision of founder and chief scientific officer Marcus Hartmann that ciliates are ideal microorganisms for the safe and effective production of biopharmaceuticals. The company has developed a proprietary production platform on which 14 proteins, specifically monoclonal antibodies and vaccines, have been expressed. "We have been conducting contract research for pharmaceutical companies since 2004 and concluded our first licensing agreement in 2008," reports Hartmann, "and with each collaboration we have taken a step to being global, because these companies

As a pioneer in ciliate biotechnology, Hartmann belongs to the small but well connected international community of scientists who are committed to unleashing the recombinant potential of ciliates. "Besides Cilian, there is only one

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American company active in this field," he says, viewing the niche that Cilian is operating in as providing a competitive advantage. Ciliates are characterized by unique genetics. Their nuclear dimorphism results in high gene doses, their high AT-content and non-canonical codon usage protects them against viral contamination and their specific glycosylation patterns may enhance the effectiveness of the antibodies they express. This makes them attractive for biopharmaceutical production, and Cilian has established the applicability of its expression system in several feasibility studies. The flip-side of the coin is the high cost of these studies and the low availability of risk capital in Germany. "US-based start-ups normally raise ten times more money", says Hartmann. "Sometimes I wish we had chosen Boston or the Bay Area as the site of our company."

On the other hand, Münster is a great place for Cilian to recruit a highly skilled and motivated workforce, he says. And the strong patent position of his company, combined with its growing share of the global market for monoclonal antibodies and other biopharmaceuticals, are good reasons for optimism, irrespective of location. As is usual for biotech companies with its business model, Cilian still has some way to go to become profitable. "A targeted business development strategy that gives us direct access to decision-makers within the big companies is of utmost importance," he says. Christian Scheiner, whom Cilian appointed as its CEO in 2011, has the responsibility to execute this strategy and to take Cilian to the next level. With 25 years of experience in the pharmaceutical industry, he appears well prepared to do just that.

Hartmann himself made valuable business contacts as a participant in BIO.NRW's delegate tour to last year's BIO International Convention in Washington, DC. "Cilian's platform for the production of 'Bio betters' generated quite some interest," he says. "We are confident to soon expand the utilization of our technology in new international collaborations."

That's how four companies have succeeded. There is a diversity of ways to reach the global market and opportunities in abundance for companies to succeed and grow.