Where innovation starts

Meet the start-ups and spin-offs of acib
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Innovation Incubator and Spin-Off Center

As innovation incubator the Austrian Centre of Industrial Biotechnology (acib) accompanies its spin-offs, start-ups and center-related companies on their first steps towards business success. acib offers tailor-made services, substantial know-how and access to an extensive network of industrial and academic partners.

You are a scientist and have a splendid idea?

We can help you to make your know-how ready for the market. You think the first steps towards entrepreneurship are tricky? We can accompany you on your route towards your own start-up company.

If you already have founded a company, we can help you to gain added value for your business through a broad spectrum of hand-picked measures. Our access to most recent research results of the acib network partners makes entering the market or even breaking into new markets easier and less complicated. Thus, our spin-offs and start-ups benefit from first-hand international expertise and can better focus on day-to-day business.

The following companies – from all fields of industrial biotechnology – give an overview of our accomplishments and are examples for a successful cooperation with future industries.
bisy e.U.

THE STORY

Prof. Anton Glieder took a sabbatical from his position as CEO / CSO of acib to spend an extended period of time in the „Biotech Valley“ in San Diego to brainstorm and collect new ideas. Inspired by the innovative research environment made up by more than 400 companies, Anton was able to establish vital new contacts with industrial enterprises, and he caught the „entrepreneurial bug“. Back in Graz, he leveraged the comprehensive expertise of acib and Graz University of Technology and used it as a stepping stone to establish a spin-off company dedicated to „translating“ patents and research achievements into concrete products, direct contract research projects and services for enterprises. This was not the only motivation for Anton to set up his business, however, he was also determined to strengthen Graz as a place of biotechnology research and develop new areas of application for life sciences.

ABOUT THE COMPANY

Biochemistry needs tools to produce medication, hygiene articles and materials. The spin-off from acib and Graz University of Technology provides these molecular tools to all areas of industrial biotechnology. The raw materials in this case are enzymes that are „adjusted“ for specific tasks by means of bioengineering. bisy intends to create a bridge between applied research and productive industry so that users will in future be able to develop more efficient tools and processes that are gentle on the environment for the manufacture of sustainable products. Customers from research and industry include the animal feed, textile or paper industries, waste water management, pharmaceutical and come from Europe, Asia and the USA.

» The foundations for many of our ideas have been laid in acib and are now industrially applied by bisy. Being a network center acib bundles comprehensive expertise and is flexible enough to create and support innovative solutions. «

<table>
<thead>
<tr>
<th>Founding year</th>
<th>2014</th>
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<tr>
<td>Connected with acib</td>
<td>since 2014</td>
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<tr>
<td>Locations</td>
<td>Graz, Gleisdorf</td>
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<td>Employees</td>
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<td>Industry sectors</td>
<td>Industrial biotechnology</td>
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<tr>
<td>Managing director</td>
<td>Anton Glieder</td>
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What we do

Development of molecular and enzymatic tools for the biochemical industry for the production of pharmaceutical, agricultural or biochemical products.
Chorus GmbH

THE STORY

CHO-host systems are presently the most essential production system for the production of biopharmaceutical agents. A strong general drive to bring down production costs and continuously improve the quality of products is found everywhere in industry today. Chorus works on optimising these two key objectives. The spin-off Chorus was established in 2011 starting from research achievements of the University of Natural Resources and Life Sciences, Vienna in the area of CHO cells that were further developed at acib. Cooperation with acib began in 2012. acib scientist Prof. Nicole Borth provided vital input for the development of the strategy of Chorus.

ABOUT THE COMPANY

Chorus develops new CHO-host systems for the production of biopharmaceutical agents (CyberSpeed Cell Platform), and to this end compares the sequences of the genome of the Chinese hamster and a variety of industrially used CHO-host systems. Significant have been discovered (which can be exploited for industrial needs.) The aim is now to modify genes that are responsible for growth and genetic stability to generate better CHO host systems.

The highly developed genome sequence data platform that is based on CHO cell lines and the comprehensive expertise of acib in this field of research are essential parameters for the development of our CyberSpeed Cell platform.

» acib’s highly developed genome sequence platform based on CHO cell lines and the extensive know-how in this field are important factors for the development of our CyberSpeed Cell Platform. «

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<tr>
<th>Founding year</th>
<th>2011</th>
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</table>
| Locations | Untergrafendorf 17  
3071 Böheimkirchen |
| Employees | 1 |
| Industry sectors | Biotechnology |
| Managing director | Otto Kanzler |

What we do

Chorus develops new CHO-host systems for the production of biopharmaceutical agents.
DirectSens GmbH

THE STORY

DirectSens GmbH was established to put the research findings of its founders Roland Ludwig, Wolfgang Harreither, Christoph Sygmund, Roman Kittl and Alfons Felice to commercial use. The shareholders have always attached great importance to translating research into something tangible, into a useful product. Starting from a patent of researchers of the Vienna University of Natural Resources and Life Sciences, Lund University and acib, the biosensor development was launched in 2009 with financial support from tecnet. The company was established in 2013 in the framework of a PreSeed funding scheme of Accent and AWS. The corporate capital was increased by private investors in 2015.

ABOUT THE COMPANY

Within 18 months from the establishment of DirectSens GmbH, the company developed a biosensor for the detection of minimum lactose concentrations in lactose-reduced dairy products from prototypes. The biosensor has been marketed globally by Chr. Hansen (Denmark) since 2016. In addition to the further development of this product, the research team also works on glucose sensors for blood glucose monitoring and other new biosensors for application in food analysis and biotechnology. DirectSens cooperates most efficiently and across disciplines with university and industrial cooperation partners to develop new biosensors with market potential.

>> acib’s focus on industrial research taught us to always consider the applicability of a new development, to detect new fields of application and to assess the market potential. This, combined with the extensive acib network, is an invaluable asset. <<

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<td>Managing directors</td>
<td>Christoph Sygmund, Roman Kittl, Alfons Felice, Wolfgang Harreither, Roland Ludwig</td>
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<tr>
<td>What we do</td>
<td>Development of 3rd generation biosensors for food analysis and medical applications</td>
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Evercyte GmbH

THE STORY

Evercyte GmbH was founded in 2011 as a spin-off of the Institute for Applied Microbiology of University of Natural Resources and Life Sciences, Vienna by Prof. Regina Grillari (CTO), Prof. Johannes Grillari (CSO) and Otto Kanzler (CEO). The business concept is based on the scientific findings of Prof. Regina Grillari in the field of the development of human cells as alternative test models for the pharmaceutical, chemical and cosmetic industries, and the findings of Prof. Johannes Grillari in the research of regulatory mechanisms of cell ageing. Prof. Regina Grillari and Prof. Johannes Grillari also work at the University of Natural Resources and Life Sciences, Vienna (BOKU) and are involved in various acib projects.

ABOUT THE COMPANY

Evercyte develops and markets immortalised human cell lines and/or induced pluripotent stem cells (iPS) derived from human urine, plus the respective cell culture media. In addition, Evercyte also acts as a contract research organisation and carries out development projects tailored to customer demands. These projects can be accomplished using both established cell lines (cell-based assay development, for example) or with new, immortalized cell lines. Depending on customer demands, new immortalized cell lines can also be ordered (customer tailored cell line services). The company sees its strengths in the development and reliable implementation of new technologies and specialised research contracts.

» Being an international competence center in industrial biotechnology
acib offers important scientific incentives for many of our applications and products. «

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<td>Connected with acib</td>
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</table>
| Locations           | Muthgasse 18  
1190 Wien |
| Employees           | 6    |
| Industry sectors    | Biotechnology |
| Managing directors  | Otto Kanzler, CEO  
Regina Grillari, CTO  
Johannes Grillari, CSO |

What we do

- Research & development cell biotechnology
- Marketing of immortalised human cell lines and/or induced, pluripotent stem cells (iPS)
- Marketing of cell culture media and cell culture components
- Contract research
Innophore GmbH

THE STORY

- acib and Graz University developed the basic concept in 2012 (patent application/inventor registration)
- Science Park foundation project 2015
- Investor pitching SFG – Performance99 Q4 2016
- Investor negotiations with EOSS Industries Q1-Q2 2017
- Pilot phase – establishment of Innophore GmbH with investor support in 2017

ABOUT THE COMPANY

“Enzyme-Google” was developed in the course of a research project of the Austrian Centre of Industrial Biotechnology GmbH and makes possible the search for enzymes in a dedicated new database. The bio-tech start-up company Innophore, a spin-off of acib and University Graz, commercialises this technology. Innophore aims to establish this new method on the market to identify and predict enzymatic activities based on the three-dimensional structure of proteins. By this means both new enzymes for industrial biocatalysis and alternative enzymes for medical applications are to be identified.

» As a spin-off company from the Austrian Centre of Industrial Biotechnology and the University of Graz we are embedded in a highly active academic and industrial network covering more than 100 national and international partners in the field of biotechnology. «

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<td>Biotechnology</td>
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</table>
| Managing directors | Christian Gruber
Georg Steinkellner
Christoph Blaschitz |

What we do

Innophore uses computer algorithms for identifying enzyme alternatives to existing or new processes in the pharmaceutical and chemical industries. Innophore looks for specific enzymes that have no similarity with enzymes used so far, either in terms of their structure or the sequential basis.
Qualizyme Biotechnology GesmbH

THE STORY

The issue of wound infections first triggered the interest of Dr. Eva Sigl and Dr. Andrea Heinzle, both former acib employees, in the framework of the „Lidwine“ EU project (2006-2010) dedicated to wound healing, and the two scientists started researching this field. Convincing data were soon generated (in 2008); and in 2009 the first patent on detection of wound infection was filed, followed by the publication of data. The „InFact“ project in which acib was one of the partners was launched after their victory in the Ideas Competition 2008, organized by the Science Park Graz and received aws PreSeed funding. Experienced businessman and entrepreneur Dr. Michael Burnet joined the team, and in 2014, the company rented a laboratory and office in ZWT Graz. In 2016, Qualizyme received core funding from the Austrian Research Promotion Agency (FFG). At the end of 2017, a production line including clean room for the production of biochemical substrates was completed, which are part of the quick test developed for the detection of infections.

ABOUT THE COMPANY

Qualizyme Diagnostics is a high-tech start-up company offering point-of-care infection diagnosis (POCT). A quick test for simple and reliable identification of wound infections was developed and will have a roll-out in various models. Besides the focus on R&D and the development of technology, we have been working on establishing our own production site for the biochemical substrates we develop. This process was concluded with the set-up of a clean room at the end of 2017. Qualizyme has been company partner of acib since 2011 and appreciates the good infrastructure and the exchange with its competent colleagues and heads of department.

Qualizyme has been a company partner of acib since 2011 and appreciates the good infrastructure and the scientific exchange with competent contact persons and area leaders.

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<th>Founding year</th>
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<tr>
<td>Managing directors</td>
<td>Andrea Heinzle Eva Sigl Michael Burnet</td>
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What we do

Qualizyme has many years of experience in enzyme kinetics, enzyme production and protein expression. Enzyme assays are developed for various applications (mainly in the field of medical diagnostics) and enzyme substrates are developed and produced.
The company was founded in 2014 and emerged from a joint research project of Graz University of Technology and RCPE (Research Center Pharmaceutical Engineering). The original research project discovered beneficial microorganisms on the Styrian oil pumpkin that may counteract pathogens leading to crop failure. Oil pumpkins use these natural microorganisms to protect themselves from rotting. Bioactive substances that are produced by these microorganisms were then transferred to industrial processes.

About the company

roombiotic produces tailored formulations for food production, feed production and health care. Selected biogenic substances are developed jointly with the customers to meet their specific applications. These substances can act as natural disinfection agents for surfaces and food. roombiotic currently achieves highly effective germ control in all areas. In combination with the appropriate dosage equipment, the agent is precisely applied and thus ensures permanently sanitised production environment. Depending on the area of application (e.g. bakeries), roombiotic determined the necessary concentration and composition required to optimise the sensory influence while maximising the efficacy at the same time.

Fundamental knowledge of the mode of action for specific bioactive substances was developed within a cooperation scheme with acib.

Within a cooperation with acib fundamental insights in the active principles of certain bio-active substances could have gained.
Syconium Lactic Acid GmbH

THE STORY

The founders of Syconium Lactic Acid (SLA) wanted to develop innovative solutions to reduce the global problem of plastics by means of recombinant microorganisms. After funding had been secured, SLA was founded in 2014 and the research and development work began. Transform Science Management & Consulting GmbH, a former spin-off company of Boehringer and project partner, was merged into SLA. The acib scientists Prof. Diethard Mattanovich and Dr. Michael Sauer made vital contributions to drawing up SLA’s corporate concept.

ABOUT THE COMPANY

SLA has set itself the goal of producing lactic acid in a cost-efficient manner and to provide a building block for the production of biodegradable plastic made out of poly-lactic-acid (PLA). The plan is to license the technology to globally acting companies when the development has been completed (2019).

Knowledge transfer, innovative research and most recent know-how in the fields of metabolic and bioprocess engineering are common denominators of SLA GmbH and acib. We are proud to have acib as an important partner on our side.

Founding year 2014
Connected with acib since 2015
Locations Muthgasse 18
1190 Wien
Employees 2
Industry sectors Biotechnology
Managing director Otto Kanzler

What we do
Development of a new cost-efficient method for the production of D and L-lactic acid.
The Austrian Centre of Industrial Biotechnology

ABOUT ACIB
The Austrian Centre of Industrial Biotechnology (acib) is a top-class international research institution in the field of industrial biotechnology. Since its foundation in 2010 the center of excellence has specialized on the development of innovative, eco-friendly and economical processes for the biotech-, chemical- and pharmaceutical industries using the methods and tools of nature. Presently 200+ coworkers are carrying out research in more than 175 research projects.

OUR RESEARCH DOMAINS
acib carries out research in all field of industrial biotechnology. Its extensive expertise covers 12 research fields from biocatalysis and recombinant protein production to modelling and engineering and bioprocessing.

OUR NETWORK
The non-profit organization with its headquarters in Graz has additional sites in Innsbruck, Tübingen, Vienna, Linz (AUT), Bielefeld, Heidelberg and Hamburg (GER), Pavia (ITA), Barcelona (ESP), Rzeszów (POL), Canterbury (NZL) and Hsinchu (TWN) and bundles a consortium of 200 academic and industrial partners. Among the partners are renowned companies such as BASF, DSM, Sandoz, Boehringer Ingelheim RCV, Jungbunzlauer and VTU Technology.

and watch our blog on www.acib.at/public/acib-blog