

Building on a culture of innovation



A tangible symbol of Actelion's progress

Our young company has already achieved a number of significant milestones: from the founding of Actelion in December 1997 to launching our first drug, Tracleer®, in December 2001, to launching a second, in-licensed drug, Zavesca®, in March 2003. We have entered into a joint research alliance with a global pharma company, expanded our marketing and sales presence to all major markets and become a profitable biopharmaceutical company in record time.

Our new Research Centre is another important milestone. It is a tangible symbol of our continued growth and success as well as an expression of faith in our future. The strategic decision to aug-

ment the existing research facilities at our headquarters in Allschwil will allow us to expand our current workforce of some 200 researchers to more than 300 and bring together all our scientists at one location. These scientists will have the most modern and functional facilities, designed to improve the productivity of drug discovery.

Expanding on a foundation of scientific excellence

Our investment in this new state-of-the-art facility is also a vote of confidence in the Basel region as a center of scientific excellence and a reservoir of talented people to help us meet our ambitious goals. The rapid completion of the project is a tribute to the good collaboration between Actelion and the local community.

From the first concepts to the final plans we have incorporated input from our scientists into the design. This is a facility built by researchers for researchers. This is more than a building – it is part of our identity as a company. Original artwork espe-

cially commissioned for the entrance area and a number of customized details with special meaning to us make this facility unique.

We are very proud of our new Research Centre. Take a look for yourself at the facility and the people who work there, and perhaps you will understand the enthusiasm we have for our work and our optimism about the future of Actelion.



Jean-Paul Clozel
Chief Executive Officer and
one of the company
founders



 **ACTELION**

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A place where things take on a new meaning

For more than 30 years, my works have consistently expressed five distinct levels of meaning. The first level is what I call “materiality”. Take an ordinary keychain as an example. If you melt the plastic and metal, then deconstruct it even further to individual atoms, you have elemental material without subjectivity.

The second level is what surrounds us in our daily life – I call it the “world unframed”. We are not conscious of the keys in our pocket until we need to start a car or open a door. They simply perform a function. At the third level, the “world framed”, these objects take on a symbolic importance. Keys used by Elvis Presley may be valuable, even though

they no longer even function as keys. These objects have been transformed and taken on a new meaning.

There is a similar transformation happening at Actelion. Through their work, the company’s scientists are discovering chemical and biological compounds that may have already existed in nature, but they are changing the context and giving them new meaning as drugs.

At the fourth level, “language”, the objects no longer need to be physically present. They have become words and images – imagine a catalogue of keys. The fifth level, subjectivity, is simply my personal relationship to the object.

On the three-storey mural created for Actelion, the elemental theme of materiality can be found at the entrance level. The second floor deals with the world unframed and framed, and the third floor handles subjectivity and language. The patterns of black- and -white images, produced by a process

called rubbing, include alchemic symbols and illustrations from the 18th century French encyclopedia by Diderot. Modern science has become too abstract for most people. By using centuries-old images, I have iconicized science to make it more accessible.

The people of Actelion will see this mural every day. I hope they become engaged with the work, develop their own interpretations and share their ideas with colleagues. That kind of interaction is what breathes life into art.

Matt Mullican (US, born 1951) is an internationally known artist whose works have been exhibited in such venues as the Museum of Modern Art (New York), the Hirschhorn Museum (Washington), the Staatsgalerie Stuttgart, the Irish Museum of Modern Art (Dublin) and the Centre for Contemporary Art (Warsaw).



Artist Matt Mullican was commissioned to create the multi-storey mural inside the entrance of Actelion’s new Research Centre.



**Matt Mullican's view
of company culture**

What's striking about Actelion is that the people who understand the business and do the hands-on work in the laboratories are actually running the company. There is no artificial hierarchy – it's like artists running an art gallery or a museum. My other lasting impression is the palpable enthusiasm of the people. You can feel their excitement for scientific investigation and discovery. They really believe in what they are doing.

The Research Centre is a reflection of who we are

The Actelion Research Centre is a building constructed by scientists for scientists combining high-tech, customized functionality with an atmosphere that is bright and inspiring. The project went from conception to completion in three years, merging research operations in Basel with our research units at headquarters in Allschwil. With all our researchers together at one site, we will have more frequent face-to-face interaction – an important part of our culture of innovation.

An internal project team worked hand in hand with the experienced architects of Burckhardt & Partners and engineers of Gruner AG to incorporate the requirements of our researchers into the

design. Patrick Ziltener, responsible Research Safety Officer at Actelion, and Gruner engineers spent hundreds of hours collecting and integrating the multitude of desired functionalities.

Finding a solution to allow enough natural light and casual encounter spots in the large, monolithic building remained a major challenge. This was a priority, as exchange of ideas and continuous discussion are central to our research culture. We finally arrived at the idea of an inner courtyard or atrium. This vertical light source not only allows light and fresh air into the inner core of the building but also creates a transparent public space.

Two internal staircases lead from the ground floor to the fifth floor opposite each other along the façades of the inner courtyard, creating short internal access routes. We have also created a horizontal light source with a three-storey glass public zone where the reception, the library lounge and the cafeteria are assembled. A glass elevator

underscores the emphasis on light and visibility. This glass front of the building symbolizes the transparency of Actelion toward the outside world.

Personalized touches make the building unique

The cabinet doors along the building's corridors are designed with enlarged image fragments (534 images in total) of a molecular model created by our 3-D modelling department. That molecule is bosentan (Tracleer®), our first approved drug and the driver of our success. Another personalized touch is the fountain made of stone blocks in the atrium. The height of each block represents the respective number of employees at Actelion in a given year – starting in 1998 and becoming larger each successive year.

The molecular model of bosentan complements the mural from artist Matt Mullican at the building's entrance. There is a strong connection between art and science, since both rely on a high level of creativity.

Some large companies have their own architects and engineers. At Actelion, the researchers were the heart of this project. We have invested not only our time and energy but also a part of ourselves in this building. The Research Centre is a reflection of who we are.



Walter Fischli, Head of Drug Discovery, Molecular Biology and Biochemistry, leader of the Actelion Research Centre planning team, and one of the company founders



Fostering the spirit of innovation in drug discovery

What drives the spirit of innovation at Actelion is the enthusiasm we share for discovering new drugs that address unmet medical needs. Those of us who have practiced medicine know what it means to be able to offer a patient new hope for a previously untreatable condition.

We empower our people and encourage them to explore new ideas. We do not always succeed, but that is the nature of discovery. If we are convinced about being on the right scientific track despite initial setbacks, we push on.

Lab and office doors are usually open. It's a part of our culture to walk into a room, get updated on the

latest experiments and exchange ideas. Spontaneous discussions occur among interdisciplinary project teams. We work in a state of permanent communication.

The new Research Centre will strengthen our focus on drug discovery as we expand through controlled growth. We are carefully recruiting the best scientific talent.



Martine Clozel, Head of Drug Discovery, Pharmacology and Preclinical Development, and member of the company founding team

Discovering and developing a new drug is a long process. To motivate people on a daily basis, it's important to recognize the small steps that lead to success, such as achieving in vivo activity with a new compound. That kind of dialogue also helps when projects don't go as planned.

Another factor in creating an innovative research environment is giving the project teams – biochemists, molecular biologists, pharmacologists, medicinal chemists and other disciplines – a sense of ownership. Every individual on this team has to feel that his or her expertise, creativity and commitment will make a difference to the ultimate success of the project.

We work with state-of-the-art equipment every day. Nevertheless, there are some exciting technical developments in structural biology, research informatics and electrophysiology emerging at Actelion.

Along with our new facility, we are launching a Process Research Chemistry Group to identify the

most simple, cost-effective and environmentally friendly way to produce new compounds for further development. Going from small amounts of a substance in the laboratories to producing enough of a compound for clinical trials can be difficult. Our new group makes the scale-up process easier and less expensive by being part of the discovery process as early as possible.



Thomas Weller, Head of Drug Discovery, Medicinal Chemistry



Competitive edge through customized informatics

Some people told us that it couldn't be done or that a company should not even try. Our experience in developing our own software proves otherwise. Most of the scientific software used by Actelion's researchers in their daily work – programs such as e-lab journal, DataWarrior, IC₅₀Witch and 3-D Ligand Docking Simulator or programs for data evaluation and data mining – were developed from scratch by our seven-member team.

Off-the-shelf programs often work well for a particular purpose. In order to cover the entire discovery process, however, a multitude of commercial programs and databases would be needed that are rarely compatible. That means you need to patch

together programs and databases on different operating systems to make it run. It's expensive, prone to crashes and difficult to update.

From the beginning, we have done all our programming in Java, which runs on all platforms. It is ideal for building reusable components in creating our own applications and is compatible with database engines such as Oracle.

In terms of hardware, we don't need a dedicated room of large computer servers. All the desktops in the Actelion research department are connected to one master. That allows us to utilize the idle computing power – typically 90% for most users – for our scientific calculations. It's an elegant solution that gives us all the computational power we need at practically no extra cost.

Merging programming talent with scientific knowledge and a sense of shared purpose

The critical issues in developing in-house programs for research go beyond hardware and software – you need an understanding of scientific concepts and discovery processes. That's why most of our programmers have a scientific degree.

To keep in touch with the evolving needs of Actelion's researchers, we schedule frequent meetings with bench scientists as well as in-house training using actual data sets. On both sides there is a sense of shared purpose.

We see ourselves as true partners to the scientists in the labs, from the moment a chemist first synthesizes a new compound to the handoff of a promising drug candidate to our colleagues in Clinical Development.

Our long-term goal is to develop intelligent software that automates decision-making processes in discovery. We would like to predict biological activ-

ities, pharmacokinetic profile and synthesis complexity of potential drug candidates. It is still a vision at this point, but we won't accept the idea that it can't be done.



Thomas Sander, Head of Research Informatics



An attractive place to work and live

You can learn a lot about how your company is perceived during job interviews. Many candidates say they are attracted to Actelion because it is small and science-driven, a place where each individual can have an impact. That is exactly what Actelion stands for. We focus on breakthrough medicines for high unmet needs, not me-too drugs, and this gives our employees a strong sense of purpose.

The unique culture of Actelion is another attractive attribute. The working atmosphere here is informal but professional, with minimal bureaucracy and hierarchical thinking. What is important for us is scientific rigor, creative thinking and teamwork across disciplines. Our people enjoy being part of this dynamic culture where decisions are taken and implemented quickly.

In terms of compensation, Actelion offers its researchers packages that are very competitive with industry standards, including stock options that allow them to share in the success of the company. We have flexible working hours and selective opportunities to work from home within the constraints of job requirements.

Nearly 50% of our researchers are women, and we continue to attract more female talent. Our benefits include maternity leave above the legal requirements and part-time opportunities on a case-by-case basis for working mothers.

There are 22 countries represented among our scientists, with 60% of our researchers from outside Switzerland. To help international arrivals adjust, we offer relocation assistance, introductory tours of the region and language training. We continue to grow at a fast pace and attract very talented people.



Christian Albrich,
Head of Human Resources

An unusually high quality of life

Situated in the northwestern corner of Switzerland, on the border with France and Germany, Basel has a timeless charm and a sense for the future. The picturesque town overlooking the swift-flowing Rhine, founded by Celts and expanded by Romans, became an important European ecclesiastical, humanistic and commercial center. Today, Basel successfully fuses the old with the new. Gleaming towers of global pharmaceutical leaders coexist with medieval architecture, Internet cafés with the ancient carnival of Fasnacht. Multinationals add to the international flair of Basel, which has a growing mid-sized airport and excellent rail and road connections for exploring Europe. The region offers attractive jobs, efficient public transportation, international schools, cultural and recreational opportunities, and a safe urban atmosphere on a human scale. For those who call Basel home, it all adds up to an unusually high quality of life.



www.basel.ch



Researchers put values into practice



**Sylvia Richard,
Parallel Chemistry**

In parallel chemistry, **efficiency in action** is our guiding principle. The purpose of our work is to rapidly synthesize as many lead compound candidates as possible.



**Markus Rey,
Technician Biology**

For me, **dedication to success** means thinking positive and doing everything in my power to help us achieve our goals.



**Juliane Bernholz,
Head of Project
Management**

Innovation for patient benefit means driving the development of research in directions that address the actual cause of disease as well as improving patients' quality of life.



**Christoph Boss,
Medicinal Chemistry**

The **excellence of our people** comes from leveraging each individual's talents and creating a stimulating, motivating working environment. It comes from attracting and retaining the best people and giving them reasons for extraordinary performance.



**Nadia Ekambaram,
Molecular Biology
Leadership by example**

at Actelion means motivating and supporting people, being communicative and honest.



**Oliver Nayler,
Head of Molecular
Biology**

At Actelion, **entrepreneurial spirit** is a sense of personal responsibility for results and a feeling that each individual's contribution is essential. It means combining exceptional professionalism with enthusiasm for new concepts and thinking outside the box.

A continuing story of success and growth ...

Actelion's new Clinical Development Centre, slated for completion in 2007, will help speed promising new molecules from Drug Discovery through the clinical testing and regulatory approval process.

The six-floor facility, with a volume of over 31,000 square metres, continues the architectural theme of the Research Centre. In addition to office space and functional meeting rooms, the Clinical Development Centre features an internal, glass-covered courtyard that brings light and fresh air into the building. This public area, which houses the cafeteria, will increase face-to-face communication, a key element of Actelion's culture of innovation and scientific excellence.



Actelion Ltd (Headquarters) Gewerbstrasse 16 | CH-4123 Allschwil | Switzerland | Phone +41 61 565 65 65 | Fax +41 61 565 65 00 | www.actelion.com | info@actelion.com