



Valais

Your competence center
for biopharma

Life sciences: a long-standing tradition of excellence

The canton of Valais is generally known for its magnificent landscapes, exceptional climate and rich folklore heritage, but it also has a strong industrial tradition. It is home to large multinational companies and SMEs active in the fine chemistry, pharma and biotechnology sectors. They testify to the canton's entrepreneurial nature, as well as to the great quality of the local workforce.

At the heart of Europe

Situated in the south-west of Switzerland, the canton of Valais shares borders with France and Italy, which provides a privileged access to the European commercial market and its 500 million consumers. The opening of the Lötschberg tunnel, added to the fact that both French and German are spoken in Valais, is an indisputable advantage that facilitates access to the German market.

Swiss Made: a competitive advantage

Switzerland is one of the world's leading locations for high-value-added manufacturing: Swiss products are universally associated with quality, precision, safety and reliability. The excellent reputation they enjoy is a clear competitive advantage for manufacturers and service providers, who can position their Swiss made products and services in a higher price segment.

Protecting your intellectual property

Switzerland is the ideal place to own and manage intellectual property. It boasts an extensive IP treaty network, an attractive IP-related taxation and one of the world's highest levels of legal protection. It provides full flexibility in terms of patent international filing strategy. In 2016, the country filed the largest number of patent applications per million inhabitants, i.e. 892, of any country in the world.

Attractive tax regime

Switzerland has a modern system of taxation designed to respond to the needs of the economy. Consistent with the country's federal structure, taxes are imposed at the federal, cantonal, and municipal levels. The combined tax rate is much lower compared to other industrialized countries. Companies which establish operations in Valais and create jobs can take advantage of complete or partial tax relief under certain conditions.

Fantastic quality of life

Switzerland is well known for its natural beauty and high standard of living, and the canton of Valais is no exception. It offers an environment in which work, leisure and family life can be balanced in perfect harmony. High-quality infrastructures, stunning scenery and affordable housing make it a great place to live.

Valais at a glance



6,000
highly skilled life sciences employees



\$315,000
value added per life sciences employee



100
life sciences companies



unique expertise
in **hard-to-make products**



Your one-stop shop for biopharma

The canton of Valais offers solutions at every stage of the drug development process. From education and training to industrial production, its academic and industrial know-how covers the whole value chain. Thanks to the presence of major players such as Debiopharm, Lonza, Bachem, BASF and Siegfried, the canton has developed a unique expertise in products that require complex manufacturing capabilities.

Meet your future partners

Institute of Life Technologies (ITV)

The Institute of Life Technologies at HES-SO Valais/Wallis is your partner of choice if you are looking to achieve major success with future-oriented innovations in the pharma, biotech, medical diagnostics, agri-food, cosmetics and chemistry sectors.

The **peptide and protein technologies (P2T)** program focuses on the discovery and optimization of peptides and proteins for therapeutic, diagnostic and food applications. As industrial partner, you will benefit from the development, characterization and production of peptides and proteins.

Researchers working in **biotechnology and sustainable chemistry** focus on bioprocess engineering, biomaterials, bio resources, (bio) analytics, biocatalysis, sustainable energy and chemistry.

The **food and natural products** research

group works on food microbiology and food safety across the entire food chain, bioactive compounds and health as well as processing of food and natural products.

The **diagnostic systems** research group combines theory with practice in immune diagnostics, molecular and cellular diagnostics, instrumental analytics and biosensor development, as well as compound and phyto extract activity screening.

As to education and training, the Institute of Life Technologies offers a practice-oriented bachelor's course with consolidation in food technology, biotechnology and analytical chemistry. Within the master of sciences HES-SO in life sciences, a specialization in applied biosciences helps students pave the way to a cleaner future with sustainable biotechnology, develop analytical tools for the diagnostic industry and discover how to manufacture drugs, acquire knowledge in the field of genome analysis and discuss cases of quality management and regulatory affairs.

www.hevs.ch/en/rad-institutes/institute-of-life-technologies

BioArk Monthey

BioArk Monthey is the ideal place for developing your business or transforming your projects in the field of biotechnology and diagnostics into industrial and commercial realities. It offers an attractive infrastructure with clean rooms, shared equipment facilities and plug and play labs. Companies

on site include ASSCO Engineering, Augurix Diagnostics, BioKaizen, Excellgene, SimplicityBio and WAMA Diagnostics. BioArk Monthey is also home to the Intercantonal School of Chemistry Laboratory Assistants.

www.bioark.ch

BioArk Monthey at a glance

- Fully equipped plug and play laboratories
- Office space
- Clean room facilities for biotechnology activities (Class C), cGMP
- A controlled atmosphere unit (temperature and hygrometry)
- Shared equipment (including an autoclave and a washer for the laboratory glassware)
- Fully equipped conference rooms
- Archiving and storage space
- A cafeteria
- Parking spaces

BioArk Visp

BioArk Visp brings key competences, education, technology, companies and support to innovation under one roof. The 4,000 m² building offers flexible office and laboratory space for start-ups and SMEs. It also includes a fill-and-finish facility

(swissfillon). The close proximity of the Visp industrial site stimulates innovation and the development of new ideas.

www.bioarkvisp.ch

BioArk Visp at a glance

- Fill-and-finish facility
- Office space for start-ups and SMEs
- Competence center for chemistry and biology professions
- Fully equipped conference rooms
- Parking spaces



BioArk in Monthey.

swissfillon

swissfillon is your one-stop shop partner for all fill & finish related activities, through all clinical phases to early commercial supply. It offers fill-and-finish project consulting and project management services from process development to secondary packaging.

swissfillon provides the following services for your 1-100lt GMP batch:

- Compounding
- Liquid aseptic filling (lyophilisation in second phase) with the possibility of inert gas purge and overlay:
 - Syringe filling: 0.5ml to 5ml
 - Vial filling: 2ml to 20ml
 - Cartridge filling: up to 3ml
 - Up to 20,000 units/batch/day
- Custom blistering and secondary packaging services

www.swissfillon.com



swissfillon's filling line is innovative, fully automated and highly flexible.



Connected to the world

Centrally located in Europe, the canton of Valais is an ideal place to establish a production facility. Five international airports – Geneva, Bern, Zürich, Basel, and Milan – can be reached in less than two hours, and there are direct trains to Geneva, Zurich, and Bern. The motorways and railroad networks are among the most well-developed and maintained in Europe. The proximity to BioAlps, the life sciences cluster of Western Switzerland, guarantees easy access to potential national and international customers.

Daniel Kehl, CEO, swissfillon



The plant in Visp is Lonza's largest site.

Lonza

A leading supplier to the pharmaceutical, biotech and specialty ingredients markets, Lonza has more than a century of experience in connecting biotech expertise with fine chemical know-how. The company has more than 40 major manufacturing and R&D facilities and approximately 10,000 full-time employees worldwide.

With 2,700 employees (as of April 2017), the plant in Visp is Lonza's largest site and one of the most significant for production and R&D. For the Life Science Ingredients division, the Visp site produces a number of chemical intermediates and ingredients for a broad range of end-applications, including pharmaceuticals, vitamins, nutrition products, agrochemicals, dyestuffs, adhesives, as well as for the electronics, aerospace and automotive industries. In the Custom Manufacturing division, the Visp site specializes in the production of microbial biopharmaceuticals, as well as in the production of regulated intermediates and active pharmaceutical ingredients (APIs), highly active pharmaceutical ingredients (HAPIs), antibody drug conjugates (ADCs) and peptides for pharmaceutical applications.

www.lonza.com



Our employees are our strength

Whenever the highest technology is needed, Lonza Visp is the right partner. Thanks to our highly qualified and motivated employees, we can face the toughest challenges. Their loyalty is a big plus for us: it counts among our success factors, together with the security, quality and innovation of our site.

Jörg Solèr, Visp Site Manager, Lonza



Lonza's services and products include active pharmaceutical ingredients and stem-cell therapies.

Lonza and Sanofi to build new \$285 million biologics facility in Visp

February 2017 – Swiss contract manufacturer Lonza and French drugmaker Sanofi announce that they will invest in a new large-scale mammalian cell culture facility that will produce monoclonal antibodies by 2020. 200 new jobs are expected to be created in the process.

Debiopharm Research & Manufacturing

Debiopharm Group is a family-run biopharmaceutical company specialized in drug development, GMP manufacturing of proprietary drugs and diagnostics. Its main therapeutic areas are oncology, infectious diseases and orphan drugs. The group licenses and develops promising compounds such as small molecules or biologics, generally in early-stage development, in order to transform them into valuable drugs for the patients.

Debiopharm Research & Manufacturing, based in the canton of Valais, is a world leader in poly(lactic-co-glycolic acid) (PLGA)-based injectables, with expertise in R&D, chemical synthesis, formulation improvement and hard-to-make pharmaceutical products. It also focuses on nanoparticulate drug delivery systems. It employs 140 people coming from 10 different countries.

www.debiopharm.com



The Debiopharm site in Martigny.



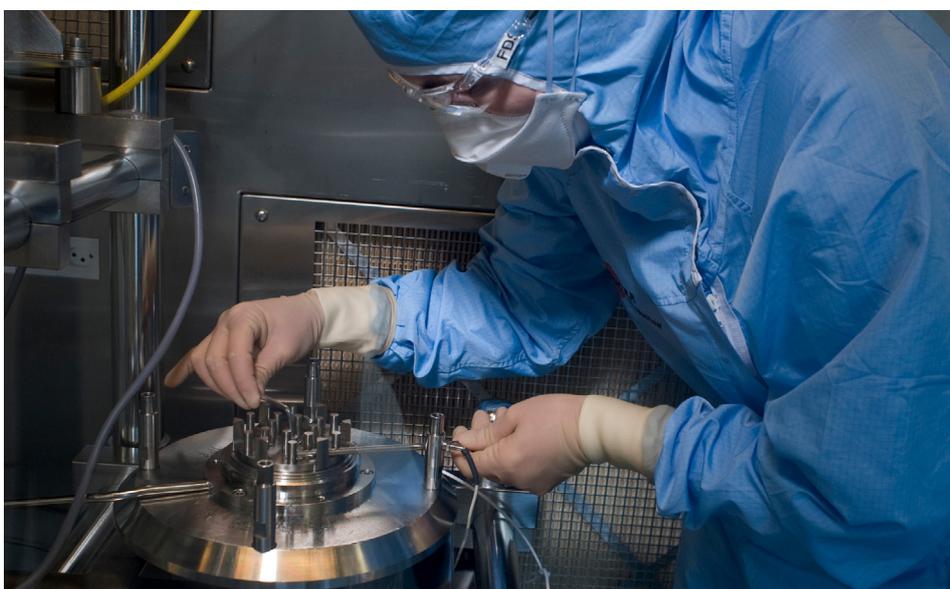
Unparalleled, long-standing expertise in biopharma

The social harmony and political stability of Switzerland, together with the safety and reliability of utilities, provide the best possible conditions for the positive development of Debiopharm. In addition, our company can build on the unique expertise in small molecules and biologics that the canton of Valais has developed over the decades, and that was preserved and enhanced thanks to the stability, commitment and dedication of employees.

Cédric Sager, CEO, Debiopharm Research & Manufacturing

Debiopharm to expand industrial operations in Martigny

September 2016 – Following the acquisition of GenePOC, a Canadian start-up specialized in the development of rapid diagnostic tests, Debiopharm will deploy a new production line at its manufacturing facility in Martigny. Since 2000, the group has invested around \$130 million in the modernization of its Martigny site.



Debiopharm's labs in Martigny. © Etat du Valais | Jean-Yves Glassey

Bachem

Bachem manufactures high-quality biochemicals and pharmaceutical drug products. At its Valais site, both small organic molecules and generic APIs are produced.

www.bachem.com

Bachem Valais facility at a glance

- Development and manufacturing of active pharmaceutical ingredients (APIs)
- Complex organic molecules
- Registered with and inspected by the FDA, Swissmedic and other Swiss authorities
- Amino acid chemistry, electrochemistry, enzymatic reactions, chiral synthesis
- Pyrogen-free production and high temperature reactions

Swiss Biotech Center at a glance

BioLab – For your biopharma needs

- Manufacturing activities of biologics:
 - Recombinant proteins and monoclonal antibodies for therapeutic uses in human or in animals for clinical trials (Phases I-II)
 - Cell-based therapeutics for clinical trials
 - Activities in the field of Biologics that would require a specific environment
- cGMP certified upstream/downstream bioprocess
- 127 m² Class C clean room
- 2 disposable bioreactors
- Capacity up to 200 liters in batches

DxLab – For your diagnostics needs

- Full capacity to design, develop and manufacture lateral-flow assays:
 - Clinical/human diagnostics
 - Veterinary
 - Environment
 - Food
- Production capability in batches up to 10,000 units (batch 0)
- Class D clean-room, hygrometry control
- Dedicated Kinematic™ lateral flow equipment
- ISO13485-compatible Quality Management System

ExcellGene

ExcellGene's service offer covers the value chain from DNA vector to purified protein made by CHO or any other animal cells in bioreactors, ranging from milliliters to the multi-hundred liter scale of operation.

www.excellgene.com

ExcellGene's services at a glance

- Rapid protein production
- Generation and optimization of stable mammalian cell-lines
- Process development and scale-up
- Protein recovery and analysis
- Consulting



100% single-use

Our small biopharma platform is flexible, multiproduct and 100% single-use. The changeover is extremely rapid: only three days of cleaning are needed between bioprocesses with different molecules. We are the only ones in Europe able to manufacture up to 200 liters of GMP batches in a facility of less than 130m².

Massimo Nobile, CEO, Swiss Biotech Center

Swiss Biotech Center (SBC)

The SBC offers the infrastructure and development expertise to bridge the gap between research and industrial production for **Biopharmaceutical products** and **Point-of-care In-Vitro Diagnostics**.

www.swissbiotechcenter.com

TRB Chemedica

TRB Chemedica focuses on the research, development and marketing of innovative niche products in specific therapeutic areas, including rheumatology, ophthalmology and neurology.

www.trbchemedica.com

IHMA

IHMA provides customized products and services (in vitro studies of new and existing antimicrobials, in vitro reference and collection laboratory for phase II, III, and IV programs) to clients fighting against infectious diseases.

www.ihmainc.com

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