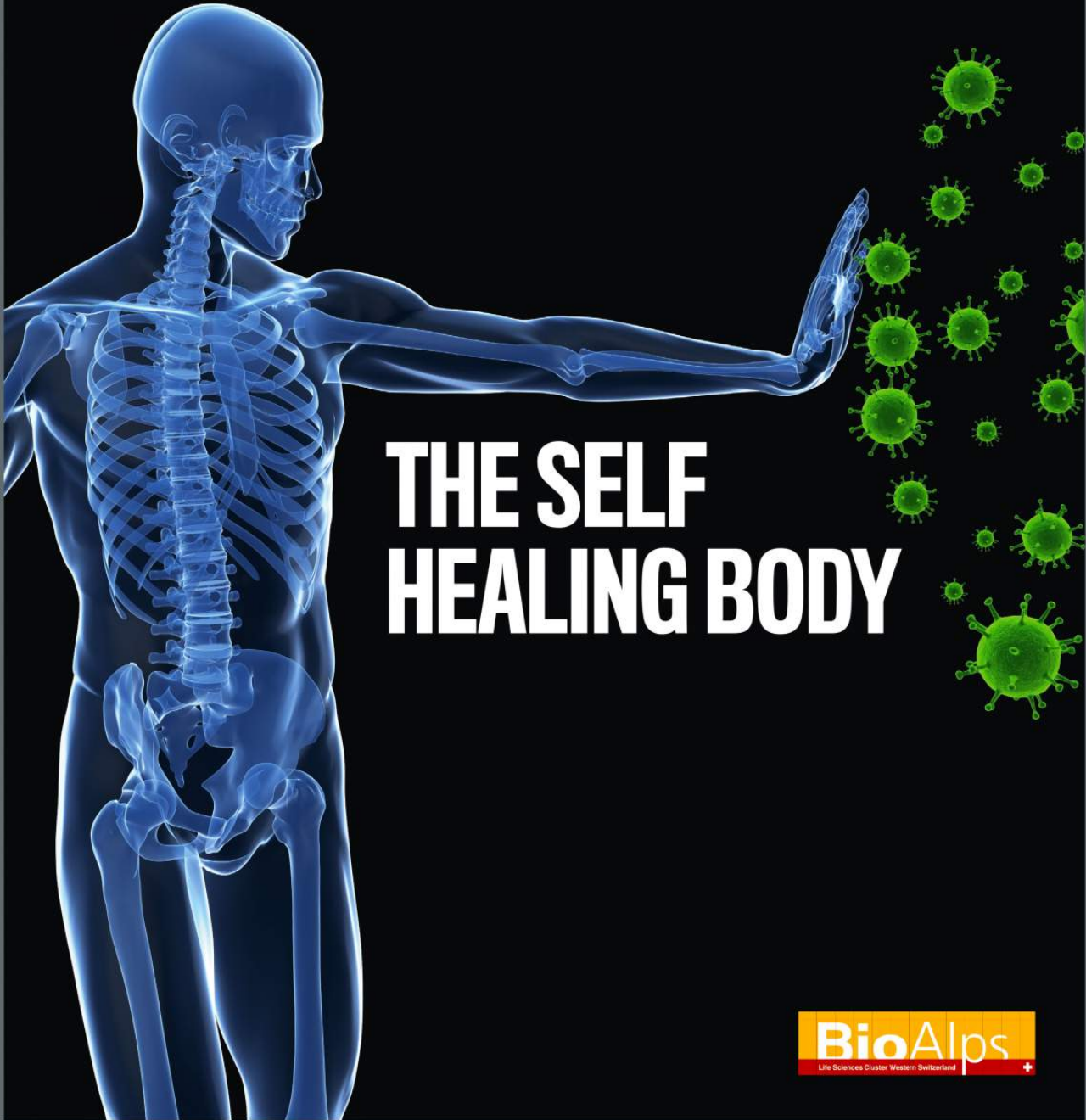


SPECIAL ISSUE ON BIOALPS, THE LIFE SCIENCES CLUSTER OF WESTERN SWITZERLAND

technology

BY **Bilan**

2018



THE SELF HEALING BODY

BioAlps
Life Sciences Cluster Western Switzerland +



The BioArk Technology Park is a link between two major industrial sites in the canton of Valais.

BioArk bridges industries with innovation

The canton of Valais, accounting for one in four life sciences jobs in Western Switzerland, has big plans for growth in the sector, and BioArk is playing a major role.

BY JACQUELINE PRIM, PROJECT MANAGER, AND MASSIMO NOBILE, SITE MANAGER AT BIOARK

Diversifying and driving the regional economy through new high added-value activities with strategically aligned innovation projects is the mission The Ark Foundation received from the canton of Valais authorities in 2004. In addition to day-to-day support of innovation projects, The Ark invested in building a holistic approach, strengthening and combining the best from companies, academia and government to create a truly regional innovation system. One building block of this system includes dedicated technology parks in the areas of digital sciences and services, energy and environment and life sciences. Spread across different sites in Valais, they form an economic development backbone for the region. Three of these sites, BioArk in Monthey and Visp, and

PhytoArk in Conthey, are dedicated to life sciences activities.

BioArk... a dedicated life sciences technology park

The BioArk Technology Park bridges the two industrial sites of Monthey and Visp, combining training, technology and entrepreneurship to nurture and grow innovation. A new four-storey, 4,000 m² building was opened 2016 in Visp, increasing BioArk's infrastructure to 10,500 m². By 2020, this will more than double with additional buildings in Visp and Monthey.

BioArk Visp is ideally located next to a biotech-pharma industrial site and train station. It hosts a school of chemistry and biology laboratory assistants, offers flexible office and laboratory space for start-ups and

SMEs, and added-value services like fill and finish. Swissfillon (see below), a successful public-private partnership, operates the cutting edge fill and finish facility.

The first two start-ups to join BioArk Visp are Medirio and Curio Biotech (see p.49). BioArk supports the development of new innovative projects bringing together the best of industry and academia. The demand for a skilled and trained workforce in the biotech-pharma sector is increasing – together with industry, professional education and academia. BioArk will answer this need with a dedicated training platform located in the new Visp building opening 2020.

Life sciences in Valais

The life sciences sector in the canton of Valais represents about an eighth of the canton's GDP and provides more than 6,000 jobs. One in four life sciences jobs in Western Switzerland are in Valais. These figures will strongly increase with large investments such as the Ibx biomanufacturing complex from Lonza that will start operations in 2020 (see p.49). There is also a broad range of smaller biotech-pharma companies and industries doing very well as fresh young talents create start-ups. Today, Valais offers the full value chain with innovative platforms boosting biopharma product development.

The agile advantage of Ibox from Lonza

Ibox from Lonza is an innovative new concept aimed at biopharma customers looking for ultimate flexibility as they address their next development and manufacturing challenge. Comprising a group of modular, technology-agnostic development and manufacturing complexes, Ibox solutions give customers complete freedom in facility design and implementation, and the ability to respond rapidly as their needs evolve. These companies can also exploit a significant time-to-market advantage by using the Ibox pre-built option, which is further accelerated thanks to the integration of Ibox into Lonza's state-of-the-art site in Visp, Switzerland. Ibox solutions are also available with highly flexible business and ownership models, to match and adapt to each customer's expectations and forecasts.

BY TORSTEN SCHMIDT, SENIOR DIRECTOR, HEAD OF IBOX OPERATIONS, LONZA



Lonza is investing CHF 400 million to develop its production complex in Visp (Wallis)



3D cell culture at Curio mimicks in vivo conditions.

Curio Biotech

Curio Biotech looks forward to growing and expanding in 2019 by introducing its current R&D pipeline of products aimed at providing clinical solutions.

Curio Biotech, founded in 2017, is a start-up CRO company providing services to clients in the life sciences sector of the pharma, cosmetic, nutraceutical and diagnostic industries. We are focused on using primary human cells for physiologically relevant in vitro 3D and ex vivo culture models. Service areas are human - dermatology, immunology and stem cell biology - with a broad range of epithelial cell types from various organs. Primary human cells are isolated and specialised reagents manufactured in our own laboratory.

Curio Biotech constantly improves existing 3D cell culture systems and further develops novel in vitro models. We aim to create products mimicking, as far as possible, the mechanisms and physiological environment of the in vivo condition, without the need for animal-derived components like serum or non-physiological chemicals or inducers. These novel 3D cell cultures can be used not only for in vitro drug discovery, screening of compounds and pre-clinical investigation, but can also be translated for various clinical applications.

Our focus is on cells, their communication and interactions. Curio Biotech works in human cell biology, aiming to understand surface markers, cell-to-cell interactions and intercellular signalling molecules cells use for their communication. These provide important insights for the development of novel therapeutics such as cell-based therapies, improved drugs, tissue transplantation materials and predictive disease-onset diagnostics.

BY CHENNAKESAVA CUDDAPAH, FOUNDER, CURIO BIOTECH LIMITED

Swissfillon, the Swiss fill and finisher

Swissfillon is a very agile aseptic fill and finish service provider to pharmaceutical and biotech companies ensuring highest quality, highest security, fully cGMP compliant CMO services for high value, complex, difficult to fill products. With the innovative, fully automated and highly flexible filling line, we provide manufacturing capacity for vials, syringes and cartridges from 1l to 100l batch size, when the product is too complex for small (manual) fill and finishers and when the big fill and finishers are fully booked for large quantities. Together with our partners, we are your ideal CMO partner for all fill and finish related aspects from clinical phase I to early commercial supply.

- Primary packaging development: container, glass and rubber specification, including state-of-the-art product-specific primary packaging validation
- Compounding
- Fully automated liquid aseptic filling in isolator technology
- Visual inspection
- Full QC services from income testing of raw materials to drug product release together with our QC partner Solvias/Conforma

BY DANIEL KEHL, FOUNDER AND CEO, SWISSFILLON