ONCOLOGY
An innovation domain of the canton of Vaud
DEVELOPING THE CANCER TREATMENTS OF THE FUTURE

The Swiss Cancer Center Lausanne represents the pinnacle of Swiss oncology and will keep Vaud at the forefront of cancer research and treatment for decades to come.

Oncology research focuses on developing new knowhow and applications for cancer treatment. The canton of Vaud is a hub for Swiss oncology, with strong international ties. The region offers a unique multicultural and multidisciplinary ecosystem ideally located at the center of Europe.

Swiss stakeholders possess expertise and experience that can be leveraged by those looking to invest, develop their own business or hire talent adapted to this fast-developing domain. Swiss know-how is universally associated with quality and reliability. This excellent reputation is a clear competitive advantage for manufacturers and service providers.

“Thanks to the high density of life science companies, research labs and clinical centers, the canton of Vaud hosts an outstanding pool of highly qualified and international life sciences talent. This is what brought me here.”

PROFESSOR GEORGE COUKOS
Director Ludwig Institute for Cancer Research, Lausanne and Head of the CHUV Oncology Department
Tumor immunology and immunotherapy research investigates mechanisms by which tumors thwart immune attack as well as the development of novel immunotherapies. Special emphasis is placed on treatments specifically tailored to a patient’s cancer – such as dendritic cell vaccines, and therapies that involve the manipulation and reinfusion of a patient’s T cells. SCCL also focuses on developing technologies to standardize and streamline such personalized therapies, which is essential to wider deployment.
A FAVORABLE ECOSYSTEM

After years of heavy investment in education, innovation and public-private partnerships, the canton of Vaud is reaping the rewards.

The Lausanne region has a remarkably dense network of educational and research institutions; foundations providing key financial support; and a multitude of biotech and medical technology companies. Around 16,000 people are employed in the life sciences sector in the Vaud region, which represents one-quarter of the total number of life sciences workers in Switzerland. Among all the life sciences companies of the region, around 37% are active in the oncology sector.

At national level, grants are available through Innosuisse, Switzerland’s federal innovation promotion agency, to promote application-oriented R&D projects carried out jointly by companies and universities. At cantonal level the Foundation for Technological Innovation (FIT) provides support to many startups. Innovaud, the cantonal innovation promotion agency, has launched the Scale-Up Vaud initiative, which can provide support to companies as they develop their businesses. Vaud’s Office for Economic Affairs and Innovation (SPEI) provides financial assistance intended to support the creation and establishment of enterprises, as well as the development of Vaud-based SMEs and startups looking to innovate or expand.

The Vaud region hosts 450 biotech and 300 medtech companies, more than 500 biomedical labs and eight incubators, as well as top-level university hospitals and multiple first-class regional healthcare centers. This network of closely connected life sciences experts provides a unique one-stop-shop offering that meets the needs of oncology and healthcare companies setting up in Europe.

Ambitious technological projects are well supported and direct financial incentives are available to support specific business projects for companies operating in industry, production-related services and leading-edge technologies.

Connected to the world
The canton of Vaud is strategically situated at the crossroads of the major Swiss and European airways, motorways and railways, open on the world and easily accessible. Ultra-modern and punctual trains frequently connect Lausanne with Geneva (30 minutes), Bern (one hour), Basel and Zurich (two hours). European capitals can be reached conveniently from the international airport of Geneva, easing the burden of business travel for international managers.

Safety and stability
Switzerland has one of the most liberal and competitive economies in the world. The country enjoys remarkable financial stability, a thoroughly business-friendly climate, a solid social and political system and a strong tradition of confidentiality. Switzerland’s overall safety and stability allows investors to plan personal and business projects on a long-term basis with peace of mind.

Fantastic quality of life
Switzerland offers an environment in which work, leisure and family life can be balanced in perfect harmony. High-quality infrastructure and make it a great place to live. Swiss public and private schools have a well-deserved reputation for excellence.

You will feel at home
Unsurprisingly, Switzerland is a favorite destination amongst expatriates: one in four people living in the country does not have a Swiss passport. Foreign companies and workers make a significant contribution to Switzerland’s prosperity.
AN EXCEPTIONAL ARRAY OF RESEARCH AND CLINICAL CENTERS

The canton of Vaud is host to an array of leading institutions spearheading innovation in cancer research and treatment.

Since opening the European branch of the Ludwig Institute for Cancer Research in Lausanne in 1975, the canton of Vaud has invested heavily in oncology, becoming the top ranking Swiss canton in terms of investment in this field. Today, the results of this investment are apparent. Combined with the close proximity of so many top academic institutions, Vaud is in no danger of losing its position at the forefront of oncology.

RESEARCH CENTERS

École polytechnique fédérale de Lausanne (EPFL)
EPFL offers training programs in oncology, as well as partnerships opportunities to industry players. In 2008, it integrated the Swiss Institute for Experimental Cancer Research (ISREC) with its School of Life Sciences.
epfl.ch

Institute of Bioengineering at EPFL (IBI)
At the frontier of life sciences and engineering, IBI focuses on translation of innovative technologies into therapeutics and diagnostics.
bioengineering.epfl.ch

Ludwig Institute for Cancer Research of the University of Lausanne – LICR@UNIL
Following the creation of the Ludwig Lausanne Branch in 1975, the Ludwig Institute for Cancer Research was launched in 2011 with the support of UNIL. In 2015, Ludwig Cancer Research designated Ludwig Lausanne as the third global center for research on cancer, joining San Diego (USA) and Oxford (UK). The organization is investing CHF 300 million over the next 30 years to develop a new leading-edge competence center in immunotherapy.
ludwigcancerresearch.org
unil.ch/licr

LUDWIG INSTITUTE FOR CANCER RESEARCH
The Lausanne Branch is primarily dedicated to tumor immunology and immunotherapy. This includes the mechanisms by which tumors thwart immune attack and the development of novel immunotherapies, especially those in which treatment is tailored to a patient’s cancer, such as dendritic cell vaccines and therapies that involve the manipulation and reinfusion of a patient’s T cells.

Key research areas:
› Tumor immunology
› T cell therapies
› Cancer vaccines
› Bioinformatics and engineering
› Translational and clinical research including clinical trials
ludwigcancerresearch.org

AGORA – CANCER CENTER: THE FUTURE OF ONCOLOGY IS HERE
The Swiss Cancer Center Lausanne (SCCL) is a highly integrated, multidisciplinary and collaborative research community resulting from a partnership between CHUV, UNIL, EPFL, Ludwig Cancer Research and the ISREC Foundation. Set to become a major player on the international stage of cancer research and therapy, SCCL conducts cutting-edge basic, translational and clinical research in personalized molecular therapies and immunotherapy with the aim of developing innovative care for cancer patients. The focal point of its operations is the AGORA – Cancer Center building, a 11,500m² facility located on the CHUV campus accommodates 300 researchers and clinicians since 2018. This project is fully financed by the ISREC Foundation.
LAUSANNE UNIVERSITY HOSPITAL (CHUV)
The CHUV Oncology Department is headed by Professor George Coukos, an internationally recognized pioneer of cancer immunotherapy with more than 200 significant publications in peer-reviewed journals.

The Oncology Department hosts
› A Medical Oncology Service dealing with the medical aspects of cancer treatments and research
› A Radiation Oncology Service at the forefront in Europe
› A Hematology Service providing the diagnosis for hematological diseases in bone marrow and peripheral blood
› An Experimental Therapeutics Center allowing the most effective transition of new treatments and care techniques from the lab to clinical practice

Swiss Institute for Experimental Cancer Research at EPFL (ISREC)
ISREC focuses on tumor development and metastasis, tumor angiogenesis, tumor immunity and cancer immunotherapy, tumor microenvironment and mouse models of human cancer.
isrec.ch

Swiss Institute of Bioinformatics (SIB)
SIB is a federation of bioinformatics research and service groups from leading Swiss universities. It focuses on bioinformatics applied to oncology and personalized medicine and has developed the world’s most widely used source of information about proteins (UniProtKB/Swiss-Prot).
sib.swiss

University of Lausanne (UNIL)
The University of Lausanne hosts the UNIL-CHUV Oncology Department and the Ludwig Institute for Cancer Research (LICR). It focuses on fundamental and clinical research in the fields of medical oncology, radio-oncology, hematology and experimental oncology.
unil.ch

“The city of Morges and the canton of Vaud offer an international environment and a pool of highly skilled professionals that foster medical innovation and research. Furthermore, the proximity of CHUV and the numerous investments of the canton of Vaud in developing cancer research are major advantages for us.”
FIRST-CLASS CLINICAL CENTERS

Vaud hosts seven public and private oncology departments ensuring high quality medical care, thanks to modern facilities, experienced staff, and state-of-the-art treatments.

Centre de Chimiothérapie Anti-Cancéreuse
Chemotherapy, radiotherapy, immunotherapy. ccac.ch

Lausanne University Hospital (CHUV)
Tumor surgical removal, chemotherapy, radiotherapy, immunotherapy, hormonotherapy, targeted molecular therapy, and bone marrow transplantation. chuv.ch

Clinique de Genolier
Surgical tumor removal, chemotherapy, radiotherapy. genolier.net

Clinique de La Source
Tumor surgical removal, chemotherapy, radiotherapy. lasource.ch

Groupement Hospitalier de l’Ouest Lémanique (GHOL)
Surgical tumor removal, chemotherapy. ghol.ch

Hirslanden Clinique Bois-Cerf
Surgical tumor removal, chemotherapy, radiotherapy. hirslanden.ch

Hôpital Riviera-Chablais
Surgical tumor removal, chemotherapy, radiotherapy, immunotherapy, hormonotherapy, targeted molecular therapy, bone marrow transplantation. hopitalrivierachablais.ch

Source: GGBa

in 2015, Ludwig Cancer Research designated Ludwig Lausanne as the third global center for research on cancer, together with those in San Diego (USA) and Oxford (UK), and decided to invest 300 million francs over the next 30 years to develop a new leading-edge competence center in immunotherapy (CHF).
A new home for your company?
Biopôle brings together partners developing innovative solutions in the fields of oncology, immunology and personalized medicine. These solutions can cover a wide spectrum, from diagnostics to therapeutics, medical devices, nutrition and digital health. Industry and academia co-exist within the park, thereby ensuring active knowledge sharing, appreciation of the various projects being pursued, and an understanding of where opportunities for synergy and collaboration exist.

More than just bricks and mortar
Biopôle is an 80,000 m² park providing more than 134,000 m² of office and laboratory space – the largest in Switzerland devoted to life sciences. It offers every day amenities (hotel, a conference center, shops, a medical center, etc.) as well as a gamut of added value services in the areas of purchasing, finance, law, business development, communications and executive coaching. This means that you can focus on what you do best: developing innovative solutions for oncology challenges.

An inspiring environment
World-class academic and research institutions are a draw for industry anywhere in the world. The Biopôle campus houses UNIL’s Center of Immunology, leading groups from UNIL’s Biochemistry Department and CHUV’s Oncology Department, as well as the Ludwig Institute for Cancer Research. Leading multinationals on-site include ADC Therapeutics, Incyte and Nestlé Health Science. They collaborate with Biopôle’s dense network of startups and SMEs, all of which are active in oncology and immunology and have diagnostic and therapeutic solutions on the market or in clinical development. In the near future, Biopôle will welcome around 200 researchers from the Ludwig Institute for Cancer Research in a new 9,000 m² building dedicated to applied research in the field of oncology.

A network of highly specialized life sciences service providers
Vaud BioMed is an association of service providers hosted at Biopôle. It gathers more than 40 service providers active in multiple sectors, with the single objective to support in the most professional manner life sciences companies and organizations already present in the Health Valley or intending to deploy their activities in this area.

vaudbiomed.ch
ESTABLISHED BUSINESSES AND STARTUPS

AC Bioscience
Therapies against infectious and inflammatory diseases and solutions for the treatment of tumor and immunological diseases.
ac-bioscience.com

Accuray
High-precision radiation therapy systems and radiosurgery treatment.
accuray.com

ADC Therapeutics
Antibody Drug Conjugates (ADC) for the treatment of both solid and hematological cancers.
adctherapeutics.com

Beckman Coulter
Diagnostic tools to identify many hematological and solid cancers, such as prostate cancer, colorectal cancer and several kinds of leukemia.
beckmancoulter.com

Becton Dickinson
Development of novel molecular oncology products.
bd.com

Biocartis
Fully automated platform to enable clinical detection of melanoma and other cancer types.
biocartis.com

Biosafe
Biomedical device for cell therapy and regenerative medicine applications.
biosafe.ch

Cellestia Biotech
Innovative anti-cancer drugs.
cellestia.com

Debiopharm
Drugs for the palliative treatment of advanced prostate cancer, breast cancer and ovarian cancer, and the treatment of colorectal cancer.
debiopharm.com

DermoSafe
Diagnostic tool for early melanoma detection and management.
dermosafe.com

ECS-Screening
Early cancer-screening platform for the detection of Progastrin, a specific cancer biomarker.
ecs-screening.ch

Ferring Pharmaceuticals
Prostate cancer drug.
ferring.com

Fresenius-Kabi SwissBioSim
Copy of biological drugs for which the patent has expired.
fresenius-kabi.com

Gene Predictis
Cancer biomarker analysis and discovery.
genepredictis.com

Glenmark
Cutting-edge research for the discovery and engineering of antibodies and proteins.
glenmarkpharma.com

Hologic
Premium diagnostic products, medical imaging systems, and surgical products for gynecologic cancers.
hologic.com
Incyte Biosciences
Biologics and small-molecule medicines for the treatment of difficult-to-treat cancers.
incyte.com

Intrace Medical
Bioluminescent and near infra-red fluorescent molecular imaging probes for in vitro and in vivo use.
intrace-medical.com

Intuitive Surgical
Minimally invasive robotic-assisted procedures.
intuitivesurgical.com

IQVIA
Clinical research organization and services for clinical trials.
iqvia.com

Legacy Healthcare
Development of innovative botanical drugs in oncology supportive care and dermatology.
legacyhealthcare.ch

Lunaphore
New cancer biomarkers.
lunaphore.ch

Med Discovery
Highly specific treatments for urogenital cancers.
med-discovery.com

MedEuropa
Treatments against cancer, notably radiotherapy.
me.deuropa.org

Medtronic
Electrosurgical products to assist surgeons during a variety of cancer surgeries.
medtronic.ch

Merck Biotech Center
Targeted cancer therapies.
bio.pharma.merckgroup.com

Neogenomics Laboratories Europe
Cancer diagnostics and pharma services for oncologists, pathologists, pharmaceutical companies, and academic centers.
neogenomics.com

Nestlé Health Science
Nutritional therapies to help patients during cancer therapy.
estlehealthscience.ch

Novigenix
Screening and diagnostic tools for the early detection of cancer.
novigenix.com

Phi Pharma
New class of peptide drug conjugates.
phi-pharma.com

Precision for Medicine/SimplicityBio
In silico biomarker discovery.
simplicitybio.com

Preclin Biosystems
In vivo preclinical testing platform for the identification and validation of lead candidate therapeutics.
preclinbiosystems.com

QGel
Cell-based assays for cancer drug testing campaigns.
qgelbio.com

SamanTree Medical
Digital microscopy scanner to acquire and display microscopic resolution images of fresh tissue during cancer surgery.
samantree.com
**Saphetor**  
Genome analysis for informed selection of the best therapies to treat cancer and difficult-to-diagnose diseases.  
saphetor.com

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**SmartGene Services**  
Analysis of complex genetic data.  
smartgene.com

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**SOPHiA GENETICS**  
Bioinformatics analysis for a better clinical diagnosis of many congenital disorders and cancers.  
sophiagenetics.com

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**Vaxeal**  
Therapeutic vaccines in combination with immuno-modulatory drugs for cancer therapies.  
vaxeal.net

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**Zestagen**  
Novel monoclonal antibodies for cancer treatments.  
zestagen.com
NETWORK OF SUPPORTING PARTNERS

**BioAlps**
Promotion agency for French-speaking Switzerland as a world-class life sciences location and promoting growth in this industrial sector.
[bioalps.org](http://bioalps.org)

**Economic Development – Canton of Vaud (DEV)**
DEV is a private association funded by the canton of Vaud and its members. It acts as an official partner of SPEI to welcome and assist foreign companies who establish their activities in the region.
[dev.ch](http://dev.ch)

**EPFL Innovation Park**
Host to technology focused companies within a rich environment, with access to leading-edge research and a wide network of startups and established companies.
[epfl-innovationpark.ch](http://epfl-innovationpark.ch)

**Innosuisse**
Switzerland's federal innovation promotion agency, with an emphasis on application-oriented R&D projects carried out jointly by companies and universities.
[innosuisse.ch](http://innosuisse.ch)

**Innovaud**
Supports startups, scale-ups and SMEs with coaching, financing, hosting and promotion.
[innovaud.ch](http://innovaud.ch)

**Office for Economic Affairs and Innovation (SPEI)**
The SPEI is the political body responsible for the creation, development and establishment of companies in the canton of Vaud.
[invest-vaud.swiss](http://invest-vaud.swiss)

**Y-PARC**
Covering roughly 50 hectares, Y-PARC is one of the largest technology parks in Switzerland. It is home to a business incubator and offers a range of solutions adapted to both startups and more mature companies.
[y-parc.ch](http://y-parc.ch)