

# SWISS BIOTECH SUCCESS STORY



Basel

Geneva



Founded in 1998 by the renowned immunologist Bernard Mach, University of Geneva.

Privately held company with focus on discovering and developing primarily fully human antibody-based drugs to fight autoimmune & inflammatory diseases and cancer.

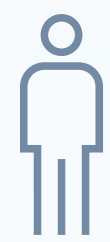
Headquarter in Plan-les-Ouates, Geneva and in December 2016 opening of Branch Office in Basel.

Since its inception, the company successfully created 16 mono- and bi-specific human antibodies.

Today it employs around 60 people spanning 7 different nationalities. The team is highly skilled in discovery, preclinical research, and manufacturing and clinical research.

In 2019 NovImmune has successfully divested EmaCo AG a newly established company owning emapalumab (the anti-IFN $\gamma$  monoclonal antibody, Gamifant®) and related assets to SOBI.

Novimmune recently moved to state-of-the-art facilities located in Geneva and operates under the brand "Light Chain Bioscience" to develop its bi- and multi-specific antibody technologies and associated programs, focusing on immuno-oncology and other indications.



## CORE TEAM



**Professor Bernard Mach, MD, PhD**  
Founder and Chairman Emeritus



**Cristina de Min**  
Chief Medical Officer



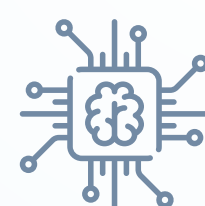
**Nicolas Fischer**  
Head of Research /  
New Technologies



**Eduard E Holdener**  
Chairman and CEO



**Marie Kosco-Vilbois**  
Chief Science Officer



## TECHNOLOGY

Novimmune has developed a proprietary next-generation drug platform for the creation of monoclonal and bi-specific antibodies.

Three different monoclonal antibody technologies in-house:  
Diversity Trap, UltiMab and Humanization.

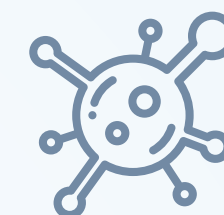
With  $\kappa\lambda$ -body, Novimmune generated unmodified, fully human antibodies with two separate and unique antigen binding regions (bi-specific program).



## KNOWLEDGE

These antibodies allow for the inhibition of multiple disease targets.

A mouse model (Cincinnati Children's Hospital, Ohio) for primary Hemophagocytic LymphoHistiocytosis (HLH) demonstrated that only by blocking IFN $\gamma$  the test mice showed significant survival benefit in contrast to blocking other cytokines.



## INDICATIONS

- Having a fully human anti-IFN $\gamma$  monoclonal antibody in house, emapalumab, Novimmune decided to focus on developing it as a treatment for both primary and secondary Haemophagocytic LymphoHistiocytosis (HLH).
- Prior to the development of emapalumab, no drug was ever studied specifically for the treatment of HLH, and no drug was approved by regulatory authorities.
- HLH occurs as a familial autosomal recessive disorder (ie, primary HLH) or as an acquired, reactive condition (ie, secondary HLH).
- Primary HLH is an ultrarare disease which occurs mostly in infants and early childhood, with the disease manifesting in most patients between 1 and 6 months of age.
- It is invariably fatal with a median survival without treatment of less than 2 months. Conventional therapy foresees the use of immuno-chemotherapy, despite this mortality remains high (approx. 40%).
- HLH signs and symptoms and their different severities combine to form a broad spectrum of disease presentation that varies from patient to patient.
- Development efforts led to the approval of emapalumab by the FDA (November 2018) for the treatment of adult and pediatric (newborn and older) patients with primary HLH with refractory, recurrent or progressive disease or intolerance with conventional HLH therapy. The regulatory process for the approval of HLH in Europe and Switzerland is ongoing.
- Disease with IFN $\gamma$  signature: the development of emapalumab in other diseases characterized by the presence of an IFN $\gamma$  signature are being explored.



## AWARDS

- Winner of the European Biotechnica Award 2009.
- EU Commission awards a EUR 6 Mio FP7 grant to support clinical development of emapalumab in primary and secondary HLH (FIGHT HLH program).
- Orphan Drug Designation US and EU.
- Breakthrough designation and PRIME designation granted by FDA and EMA, respectively.
- Priority Review Voucher.
- SOBI and Novimmune selected as Honourees for 2019 National Organization for Rare Disorders (NORD) Rare Impact Award in Industry Innovation for Gamifant® (emapalumab).

## SUCCESS CATEGORIES

- ★ Completed achievement with lasting impact
- ★ Scientific breakthrough
- ★ Strong impact on society
- ★ Product approval and sustainable revenues

- ★ Involvement of one or more Swiss citizens
- ★ Swiss based company / institution
- ★ Creation of jobs in Switzerland
- ★ Swissness: Think global, made in Switzerland