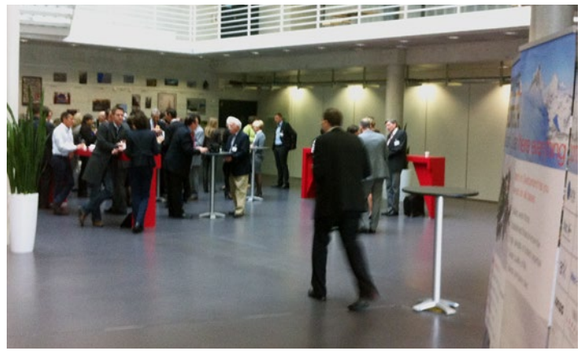
The **Nordic Life Science Days** held in Stockholm featured Swiss companies and a special panel co-organised by Swiss Biotech in partnership with the SERI (State Secretariat for Education, Research and Innovation).

The Swiss Pavilion at **BIO 2014 in San Diego** was well received. The open layout allowed easy connections. Swiss Biotech organised a special get-together prior to the conference start. ExcellGene and BioArk presented at one of the Global Market Briefs.

BioPharmAmerica held in Boston in September was again a highlight for Swiss and US companies. Swiss Biotech co-organised a special event at swissnex Boston with the topic of Financing. Swiss based companies Numab, Piqur, Preclin Biosystems, NBE-Therapeutics amongst others attended the well visited event.



Swiss Biotech Fall Day was held at the Y-Parc in Yverdon-le-Bains. More than 80 persons enjoyed the session and the networking on Orphan Diseases and Biomarkers & Diagnostics.

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SWISS BIOTECH™

NTN News Bulletin

In cooperation with the CTI

KTT-Support
National thematic networks

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Commission for Technology and Innovation CTI

One Nation, One Biotech Cluster

No. 7, Oktober 2014

Editorial

Nic Alexakis

The KTT initiative carried out by biotechnet and the Swiss Biotech Association, part-funded by the national innovation agency CTI, is starting to bear fruit.

Whilst 2013 was the pilot year where the National Thematic Network NTN achieved all set goals, an element of uncertainty remained.

Now as we move towards the final quarter of 2014, the NTN Swiss Biotech would like to share in this bulletin, the experiences made so far during the program.

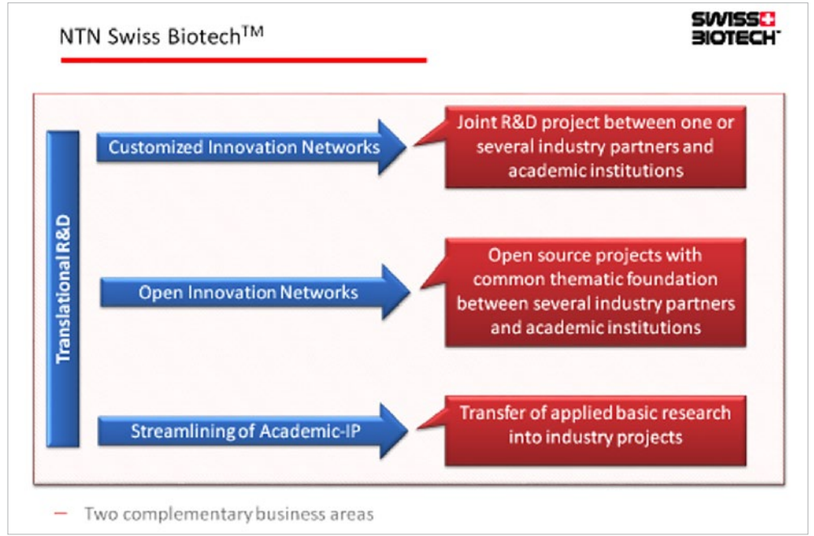
BioTech2014 – Chemical Sensors Forum

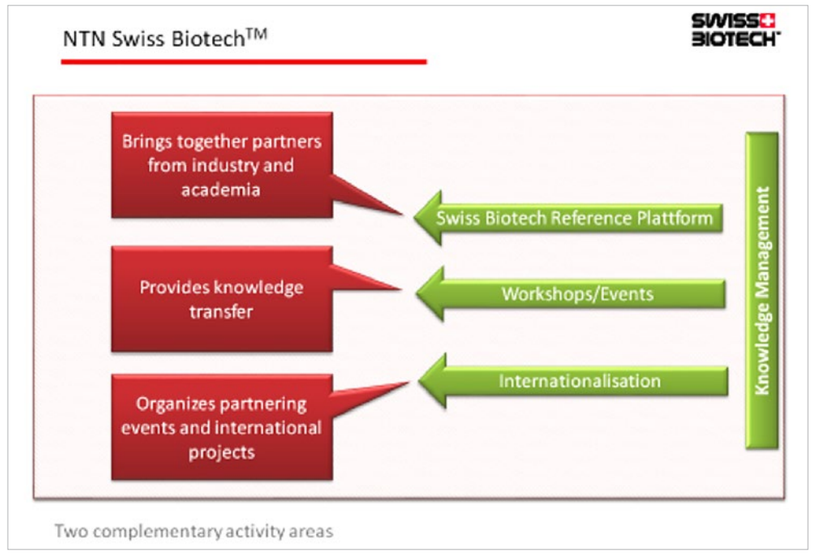
This years's symposium focused on topics such as: Optical technologies for sensing and imaging, Online analytcis in bioprocesses, next generation pH sensors and Single-use sensing solutions. More information on this successful event: www.bioetch2014.ch

Contents

Mission and Achievements of NTN Swiss Biotech™ 2014

The National Thematic Network NTN Swiss Biotech profits from the well known brand and has generated a lot of credibility in a short time. Powered by the Swiss Biotech Association and biotechnet, the program has quickly led to success. Depicted below are the main activities of NTN Swiss Biotech.





NTN partners:

Swiss Biotech Association

biotechnet switzerland

Project partner:

SWITZERLAND GLOBAL ENTERPRISE
enabling new business

Summary of Achievements

Aim of Swiss Biotech™ is to support innovations and hence technology transfer. This goal can be achieved by active project scouting between academia and industry and awareness building. The partners of Swiss Biotech™ have a long standing experience in this field. In August 2014, a pilot event called ‚Swiss Biotech™ Innovation Day' was carried through in Basel. The event took place in the old ‚Markthalle'. This added quite a buzz to the day. Speakers from academia and industry shared their experiences on projects. The audience, in excess of 100, visibly enjoyed the day as evidenced by the huge number of questions posed to the presenters. More information at: www.swissbiotech.org/ntn_swiss_biotech

PLATFORM – NEWS

Competence Center TEDD

Swiss Biotech™ actively supports competence networks such as TEDD (Tissue Engineering for Drug Development). Given the widespread field of Life Sciences, specialists need to be involved to enable exciting innovation. Swiss Biotech™ decided early on that the creation of platforms and/or support of existing initiatives could bring overall value to the biotech-ecosystem.

Organ-like human tissue models are an important tool for drug development and evaluation of active substances. The TEDD national competence centre pools and transfers knowledge and technologies in order to promote the further development and application of in vitro cell and tissue culture.

Through concrete research projects and knowledge transfer within a network of partners from various interest groups, a platform has been created which actively contributes to the development and application of alternative test methods for routine use in industry. More information at: http://project.zhaw.ch/en/science/tissue-engineering-for-drug-development.html

Platform Biochemical Engineering and Cell Cultivation Technique

The section Biochemical Engineering and Cell Cultivation Technique of the Zurich University of Applied Science (ZHAW) in Wädenswil is engaged in study, research and development as well as services. The following areas belong to the main focus:

Cultivation of animal and plant cells in different scale-up levels with standard and disposable Bioreactor systems for production of biomass and/or for essential recombined extra- and intracellular proteins for the pharmaceutical industry.

Fermentation of E.coli in different scale-up levels with standard and disposable bioreactor systems for the production of biomass and/or for recombined extra- and intracellular proteins being essential for the pharmaceutical industry.

Characterization of cell behaviour and their response to different process strategies.

Evaluation of new disposable bioreactor systems.

Procedural Characterization of innovative standard and disposable bioreactor systems with computational fluid dynamics (CFD).

Validation of the computational fluid dynamics (CFD) is conducted by non-invasive measurement of the velocity patterns by use of Particle-Image-Velocimetry (PIV) and by comparison with available bioreactor system.

International Research Projects:

Biotechnology is not all about the pharmaceutical industry. Increasingly, industrial biotech applications find the way into production. Swiss Biotech™ is part of an European FP7 research project funded by the EU called ECOBIOFOR.

The EU solvents market totalled 5.0 Million Tons in 2010. ECOBIOFOR project aims to prepare solvents for coatings with three main characteristics: bio-based (coming from renewable resources), synthesized according to the principles of Green Chemistry and new formulations with lower VOC emissions. Few large companies are devoted to the transformation of biomass into basic chemical products with established industrial uses. But the business model of a great number of chemical and biotechnological SMEs is based on the development of products ready to be used in specific markets. ECOBIOFOR supports this large group of EU SMEs, working in the goal to shift conventional productive processes into new ones based on renewable resources. Moreover, it profits from SMEs involved in the production of coatings, which are ready to introduce greener products in their own formulations. Succeeding in such a project requires a multidisciplinary and talented consortium. It consists of 11 organizations from 6 EU countries:

5 SME-AGs (3biotech & 2paints) with 1349 members (1009 SMEs),

3 SMEs: 1 Solvent Producer & 2 paint manufactures,

3 RTDs with previous experience in green chemistry, organic and biotechnological synthesis and in coatings formulations.Amongst the RTD's, the Swiss Biotech Association is one oft he partners.

Successes – 2nd year NTN Swiss Biotech™

The following new CTI projects were approved during the first period of the NTN Swiss Biotech™.
The CTI support mechanism is open to all innovators. For more information please contact: alexakis@swissbiotech.org

Titel/Thema	Duration	Partner Economy	Partner Acdemy
PiFPaF - Pipettiersystem mit Flusssensor und Mikroelement zur passiven Flussregelung	18 months	Integra Biosciences	
VALIPLATE - Calorimetric tool for validating the liquid volume dispensed by liquid handling instruments	16 months	SIAS AG	CSEM
Development of novel bacterial sortase enzymes for site-specific conjugation of payloads to antibodies	3 years	NBE-Therapeutics	FHNW
Bioprinting - A novel multiwell device for drug development with bioprinted 3D human tendon and skeletal muscle tissues	2 years	Weidmann Plastics Technology AG, Medical Division	ZHAW, FHNW
Fibrose - Establishment of a platform for the study of liver disease (fibrosis) in vitro	1.5 years	InSpheroAG	FHNW
SCADA -Intelligentes SCADA basierend auf Expertensysten für anwenderfreundliche Prozesssteuerung	3 years	Infors AG	ZHAW
Extreaktion - Automatisierte Extraktion von Trockenblutproben für das Neugeborenenscreening	2 years	CAMAG AG	FHNW
Dioxygenase - Human Indoleamine 2,3-Dioxygenase (Innovation Cheque)	1 year	Adipogen AG	FHNW
Point-of-Care - Entwicklung einer Point-of-Care Applikation zur Bestimmung von Immunsuppressiva nach Organtransplantation	3 years	Bühlmann Laboratories	FHNW
Prognose Prostatakrebs - Determining Patient Risk by Differentiating Aggressive from Non-aggressive Prostate Cancer Using a Serum Protein Risk Stratification Test	2 years	Proteomedix AG	ETHZ, USP, FHNW
Self-assembling peptides for regeneration of the periodontal ligament.	2.25 years	Credentis AG	ZHAW, FHNW

Short profile NTN Innovative Surfaces (www.innovativesurfaces.ch)

Without innovative surfaces, our modern world would be very different. No smart phones, no e -watches, no biologically active implants, no powerful biosensors or extremely-hardened tools would exist. The application areas and the economic potential of innovative surfaces are enormously large. In Switzerland they concern around 42,000 companies with over 600,000 jobs in more than 70 industrial branches.

The NTN Innovative Surfaces is a nationally active industrial network. The NTN is driven by the demand of the industry and is led by representatives of the private sector. The mission for the NTN Innovative Surfaces is to offer companies in Switzerland a support to introduce or enhance new innovative surface technologies in their industrial processes and products. The basic funding on the NTN Innovative Surfaces is provided by the Swiss Confederation, specifically the CTI.

Next to an annual national meeting, the activities of the NTN Innovative Surfaces focus primarily on the operation of group processes in the context of innovation platforms.

- In research-driven innovation platforms, members of companies and universities meet and work together to find solutions of research-related issues of the industry. This is done for example using technology transfer and R & D cooperation within the framework of CTI projects. Presently, this approach concerns the two platforms "Functional Interfaces" with pharmaceutical/chemical companies as well as "Smart Systems" with representatives of life sciences, microelectronics and plastics industry.
- In application-driven Innovationplatforms, members of companies and universities operate together along a value chain in order to develop new industrial processes or products using innovative surfaces. Currently, this is done in the platform "Antimicrobial Surfaces" with representatives of hospitals/medicine and the medtech industry.

All interested companies or higher education institutions in Switzerland can participate in the NTN Innovative surfaces. Additional information is available on www.innovativesurface.ch or info@innovativesurfaces.ch or phone 071 277 93 46.