SciLifeLab

LIPUM

SciLifeLab industry users: >100 yearly

SciLifeLab user case: **Industry**

Drug development

Custom made biomarker assay from SciLifeLab supports development of a novel antibody drug for chronic inflammation

Lipum developed the antibody SOL-116, a candidate drug targeting the protein Bile Salt-Stimulated Lipase (BSSL), together with the Drug Discovery and Development (DDD) platform at SciLifeLab. The next step involved evaluation in a clinical phase I study, where safety and tolerability is tested, with the help of an assay developed by the SciLifeLab Affinity Proteomics unit.

Lipum engaged with Affinity Proteomics, aiming to develop a protocol for an assay to measure the concentration of BSSL in clinical samples, as the concentration of BSSL in blood is associated with the disease activity score in rheumatoid arthritis, an autoimmune and inflammatory disease. This is an example of how infrastructure-users, from academia, industry or healthcare, in collaboration drive technology development and access at SciLifeLab.

> *In collaboration with the DDD Platform we identified a synthetically generated human antibody using the information from the binding sequence of the murine antibody that we already had. For our initial project when we were still 100% academic scientists, we would not have been able to move on without SciLifeLab. Today it is clear that at that early stage, we did not know what we did not know", says Susanne Lindquist, CSO, Lipum.*

Curious to learn more? Access full case text through the QR code!

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SciLifeLab infrastructures related to the case

Drug Discovery & Development platform

The platform offers integrated drug discovery efforts to the Swedish academic research community. The offer includes industry-standard infrastructure, expertise, and strategic support for technology development or to help progress projects toward a preclinical proof-of-concept. In the case with the project that became the Lipum company, the platform was able to select a few binders as candidates to investigate further from a project-specific antibody library.

> *The assay that was developed is based on electrochemiluminescence, a technology developed by Meso Scale Discovery (MSD). It is a well-known technology and an open platform with possibilities of running both in-house and commercial assays in single and multiplex format. We have used this technology within SciLifeLab for many years in studies ranging from measuring cytokines in plasma to IgA antibodies in nasal swabs", says Mikael Åberg, head of unit, Affinity Proteomics Uppsala.*

Affinity Proteomics

The unit offers expertise in the analysis of human body fluids, cells, and tissue lysates. It provides analysis of protein-protein interactions and activation in situ or in tissues.

The services aim to support researchers in the fields of clinical, translational and personalized medicine by providing access to a state-of-the-art infrastructure for singleplex and multiplex protein detection and quantification.

Support in biomarker studies from discovery to validation is the form of study design, selection of antibodies and data processing is also offered.

Applications

- High-throughput, exploratory protein profiling of human body fluids
- Biomarkers discovery and validation in large sample cohorts
- Robust protein quantification for candidate biomarkers
- Analysis of proteins interactions and/or post-translational modifications in cells and tissues
- Development of novel immunoassays concepts
- Antibody validation and selectivity analysis

Get in touch!

scilifelab.se/units/ddd-platform/
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