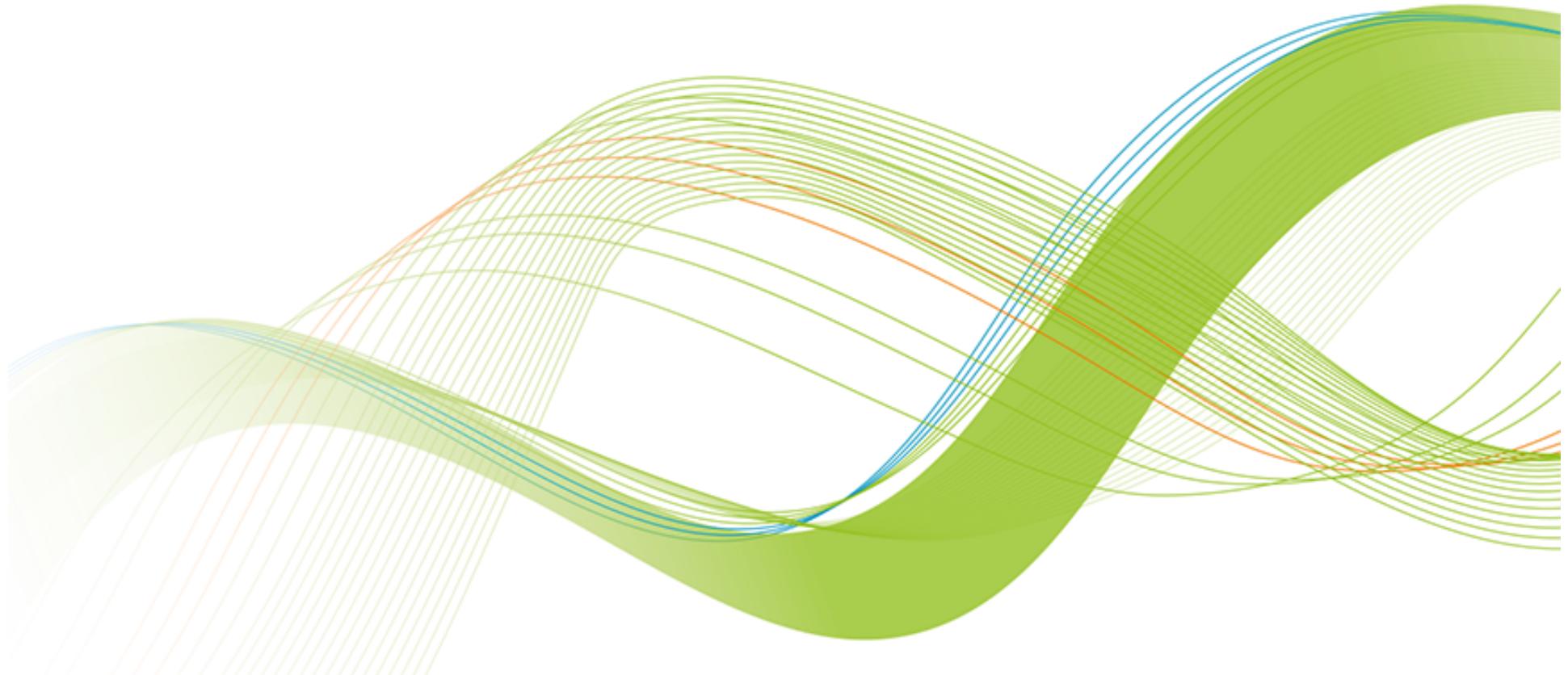
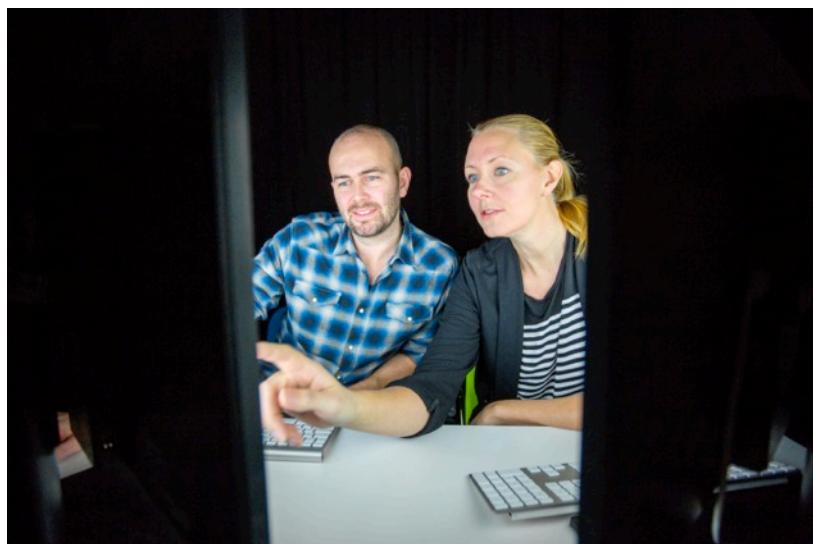




Science for Life Laboratory

Thomas Källman, NBIS





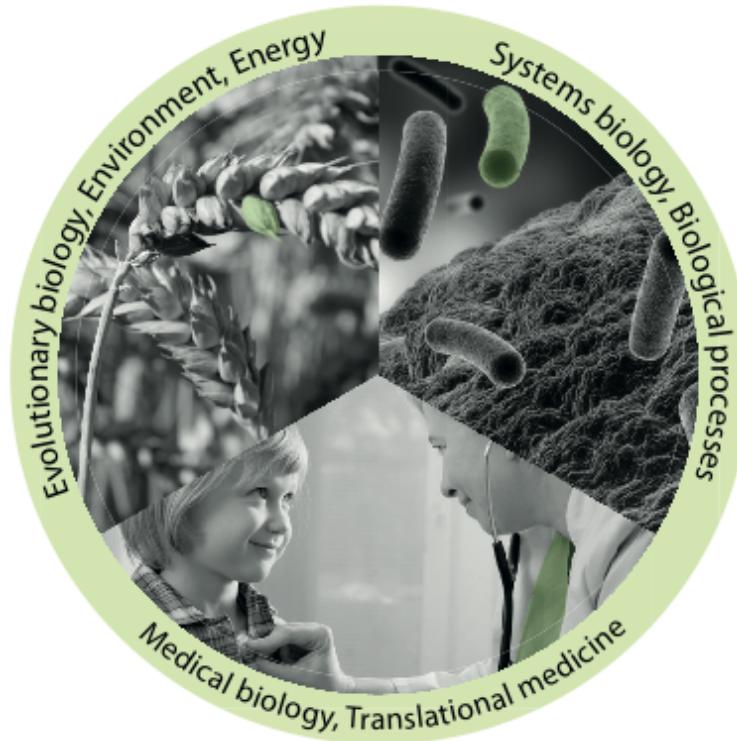
- **4 host universities**
- **Established in 2010**
- **National resource since 2013**
- **More than 1000 researchers**



Vision

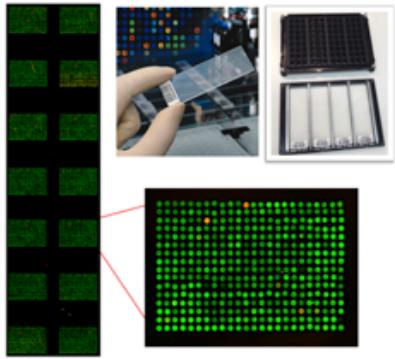
SciLifeLab

To be an internationally leading center that develops, uses and provides access to advanced technologies for **molecular biosciences** with focus on health and environment



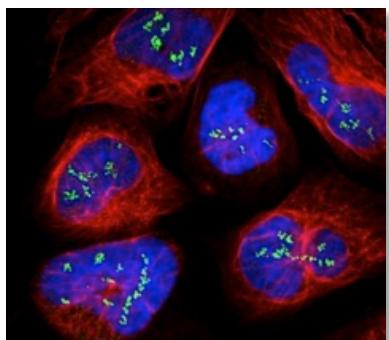
Mission

SciLifeLab



Technology platforms for national use

- Service to research community
- Technology development
- Education



Strong research community

- Strong interdisciplinary community
- SciLifeLab Fellows Program
- National projects

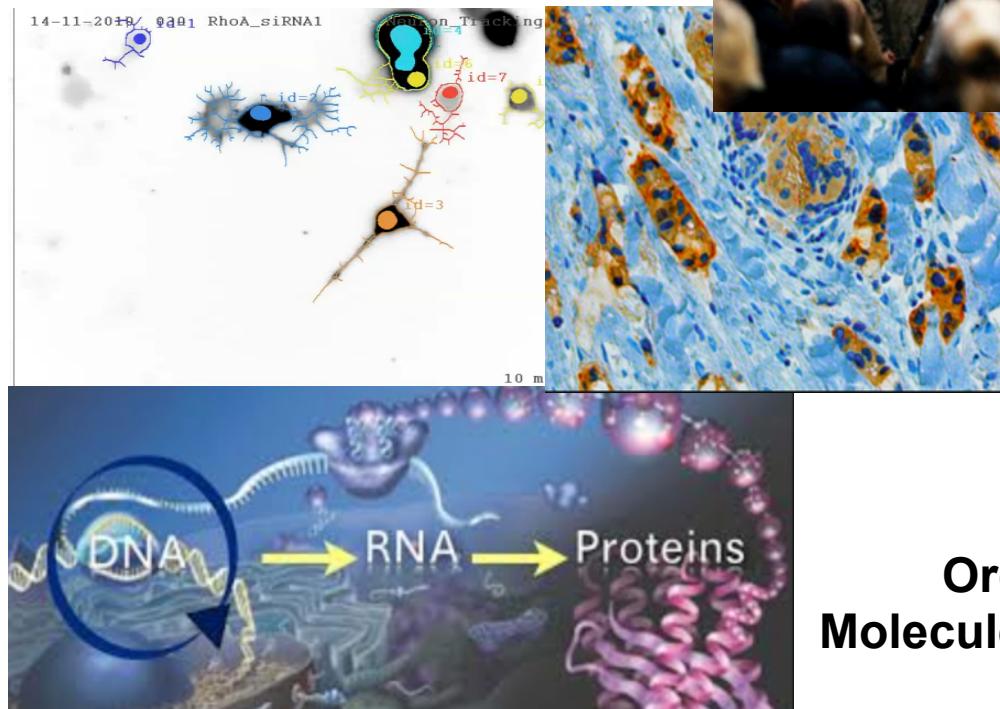


Society impact

- Health care outcome
- Environment
- Tech transfer, spin-offs, industry collaborations

The range of life sciences studied

SciLifeLab



Ecosystems
Communities
Populations
Organisms
Organs
Tissues
Cells
Organelles
Molecules

Platforms and facilities

National facilities

Affinity Proteomics

Biobank Profiling
Cell Profiling
Fluorescence Tissue Profiling
Mass Cytometry
PLA Proteomics
Protein and Peptide Arrays
Tissue Profiling

Bioimaging

Advanced Light Microscopy
Fluorescence Correlation Spectroscopy

Chemical Biology Consortium Sweden

Laboratories for Chemical Biology Umeå (LCBU)
The Laboratories for Chemical Biology at Karolinska Institutet (LCBK)
Uppsala Drug Optimization and Pharmaceutical Profiling (UDOPP)

Drug Discovery and Development

ADME (Absorption Distribution, Metabolism Excretion) of Therapeutics (UDOPP)
Biochemical and Cellular Screening
Biophysical Screening and Characterization
Human Antibody Therapeutics
In Vitro and Systems Pharmacology
Medicinal Chemistry – Hit2Lead
Medicinal Chemistry – Lead Identification
Protein Expression and Characterization

Functional Genomics

Eukaryotic Single Cell Genomics
Karolinska High Throughput Center (KHTC)
Microbial Single Cell Genomics
Single Cell Proteomics

Metabolomics

Swedish Metabolomics Centre (SMC)

National Bioinformatics Infrastructure Sweden (NBIS)

Bioinformatics Compute and Storage (UPPNEX)
Bioinformatics Long-term Support (WABI)
Bioinformatics Short-term Support and Infrastructure (BILS)
Systems Biology

National Genomics Infrastructure

NGI Stockholm (Genomics Applications)
NGI Stockholm (Genomics Production)
NGI Uppsala (SNP&SEQ Technology Platform)
NGI Uppsala (Uppsala Genome Center)

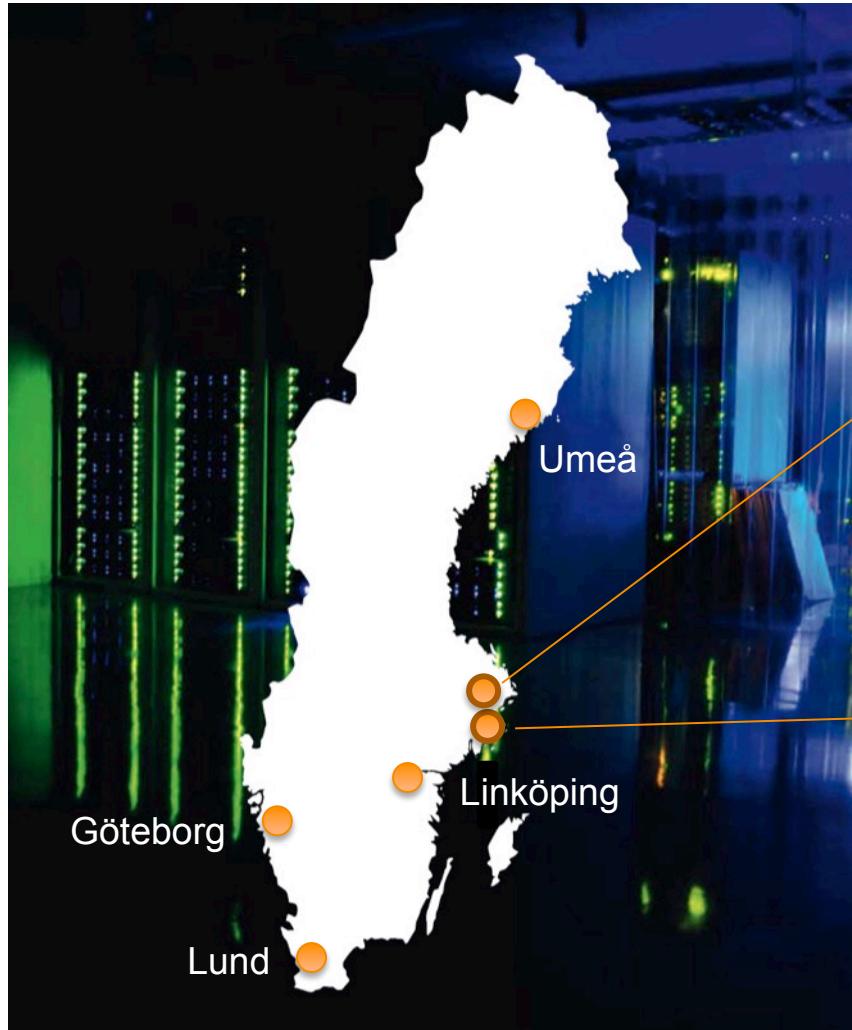
Next-Generation Diagnostics (NGD)

Clinical Biomarkers
Clinical Genomics
Clinical Sequencing
Integrative Clinical Genomics
Translational and Clinical Genomics

Structural Biology

Cryo-EM
Protein Science Facility
Swedish NMR Centre (SNC)

Nodes and sites



Uppsala node



Stockholm node (Solna)



Platforms and facilities

National facilities

Affinity Proteomics

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Translational and Clinical Genomics

Structural Biology

Cryo-EM
Protein Science Facility
Swedish NMR Centre (SNC)

The banner features a purple background with faint, semi-transparent illustrations of a DNA double helix, chemical structures (including one labeled H₂N), and binary code. In the center, the letters 'NBIS' are written in large, bold, orange capital letters. A small green and orange DNA helix graphic is positioned between the 'B' and 'S'. Below 'NBIS', the text 'NATIONAL BIOINFORMATICS INFRASTRUCTURE SWEDEN' is written in green capital letters.

NBIS is a distributed national bioinformatics infrastructure, supporting life sciences in Sweden

Support ▾ Infrastructure ▾ Training ▾

Why bioinformatics infrastructure?



A continuous technical scale-up will provide an unprecedented amount of heterogeneous omics data

- Support, Tools, Training

System-level analyses in biomedical research will transform life science

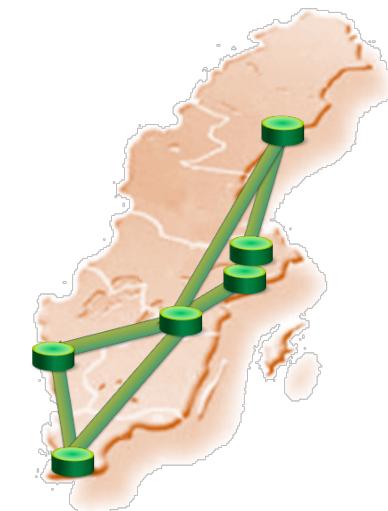
- Strategic positioning in systems biology

Large-scale omics is will make a major leap into translational research and diagnostics

- Method adaptation and expert advice

User access to NBIS

- Study design consultation (free)
- Short & medium-term support
- 8 hours for free, then 800 SEK/hour
- <http://www.nbis.se/support/supportform/index.php>
- Apply anytime
- Long-term support (500h; free: scientific evaluation)
<http://www.scilifelab.se/facilities/wabi/>
- Next deadline: **March 2017**
- Compute and storage (free; majority of hardware and system administration belongs to SNIC)
- Apply: <https://supr.snic.se>
- Read more: <http://www.uppmax.uu.se/>



- Are you planning a project and need someone to discuss the bioinformatics analysis with?
- Do you need bioinformatics support, but do not know who to turn to?
- Are you stuck in your own bioinformatics project and need help?
- Meet the NBIS staff at bioinformatics drop-in

Uppsala

When: Weekly on Thursdays
at 10-11 am

Where: SciLifeLab, level 3

Stockholm

When: Weekly on Tuesdays
at 10.30-11.30 am

Where: SciLifeLab, gamma, level 6

- Similar activities in the other NBIS nodes/cities

Upcoming courses 2017



Date	Course
January 23-27	Introduction to Bioinformatics using NGS data
February 6-10	Python programming with applications to Bioinformatics
October 25-27	RNA-seq
March 27-31	R Programming Foundations for Life Scientists
May 9-11	Introduction to Genome Annotation
May 15-19	Introduction to Bioinformatics using NGS data, Göteborg
Application Nov/Dec	The Swedish Bioinformatics Advisory Program

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The Swedish Bioinformatics Advisory Program



A new teaching model, where PhD students get a senior bioinformatician as a personal advisor during 2 years of their PhD.

Monthly project meetings + two grand meetings per year to aid networking and knowledge transfer.

First call late 2014:

>50 applicants for 15 places

Last call in 2016

>110 applicants

www.scilifelab.se/education/mentorship/the-swedish-bioinformatics-advisory-program/

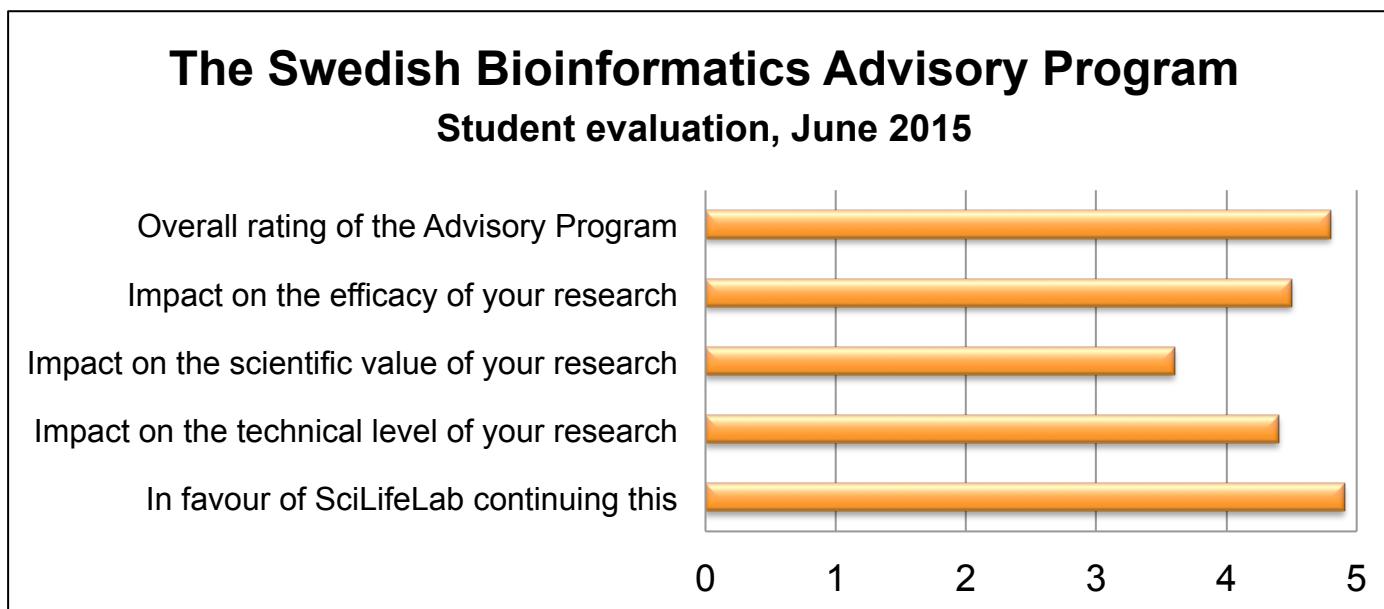
Next call Nov-December 2016

Why this program

Overall aim: Great research in Sweden!

How? Strategic investment in PhD education
 Complementing PhD supervisors with technical expertise
 Catalyze transition to large-scale data analyses

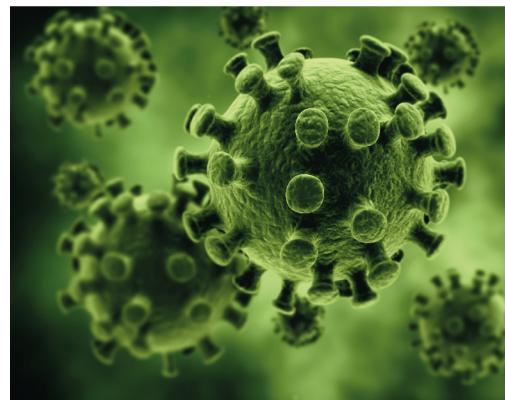
The PhD student is responsible to prepare and drive the meetings!



Science & SciLifeLab Prize



- A grand prize winner receives a prize of US \$30,000; and each of the three category winners will receive US \$10,000
- The grand prize winning essay will be published in *Science* and essays from the three category winners will be published online



“to incent our best and brightest to continue in their chosen fields of research”

SciLifeLab



Karolinska
Institutet



KTH
TEKNIK
OCH
KONST



Stockholms
universitet



UPPSALA
UNIVERSITET

www.scilifelab.se

