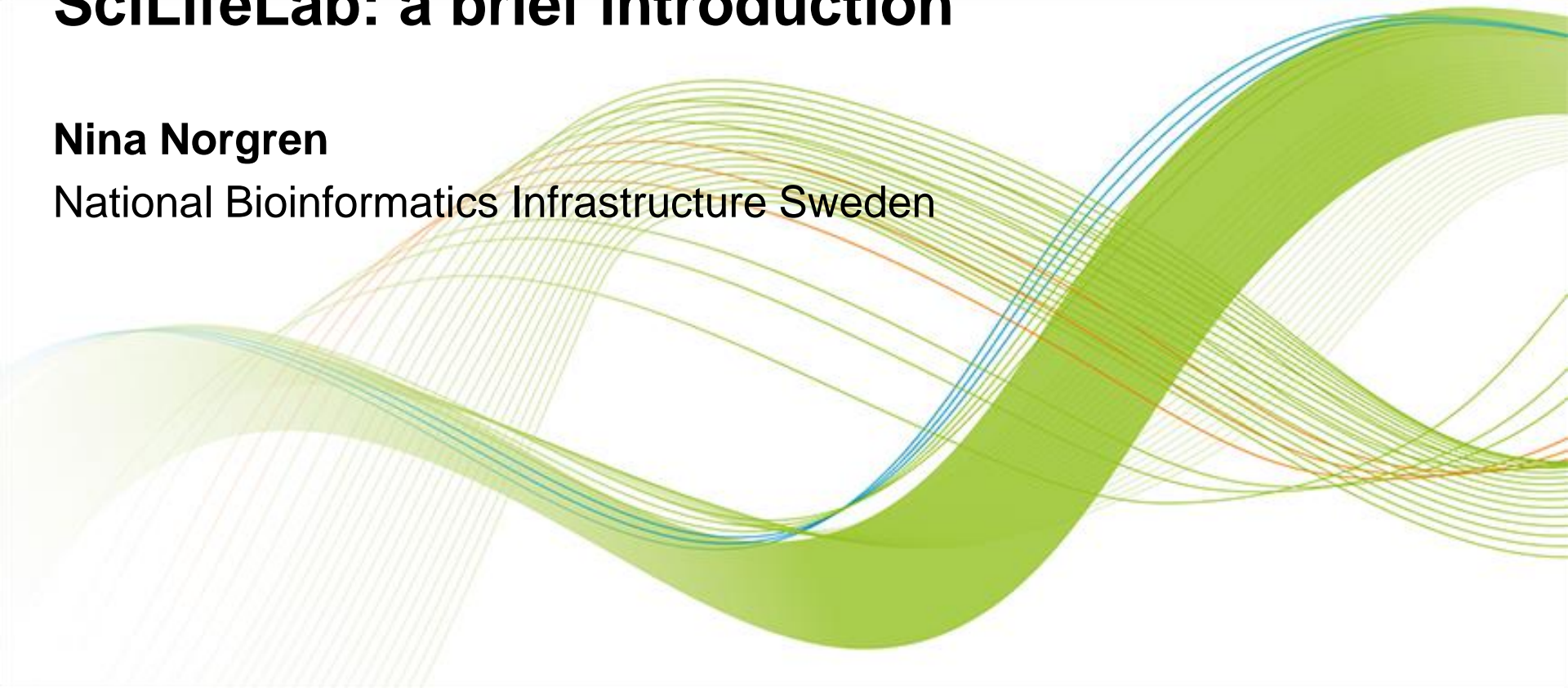

Introduction to Bioinformatics using NGS data, Nov 12-16 2018, Umeå

SciLifeLab: a brief introduction

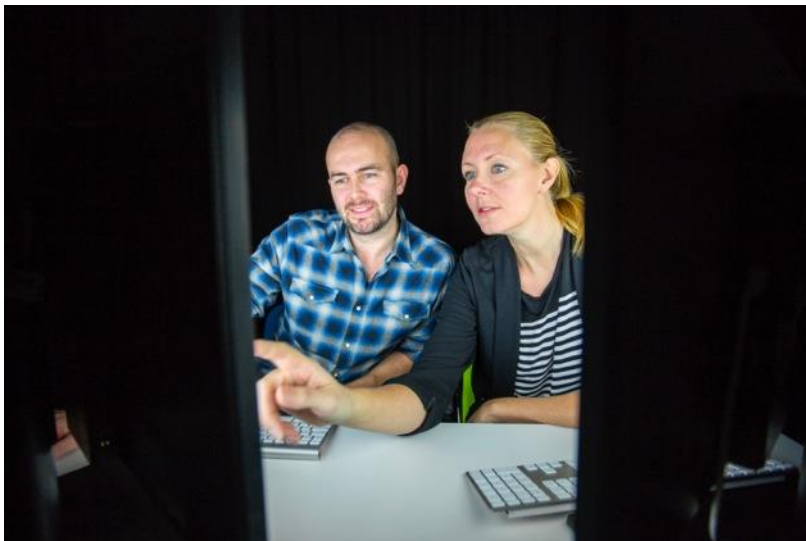
Nina Norgren

National Bioinformatics Infrastructure Sweden





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

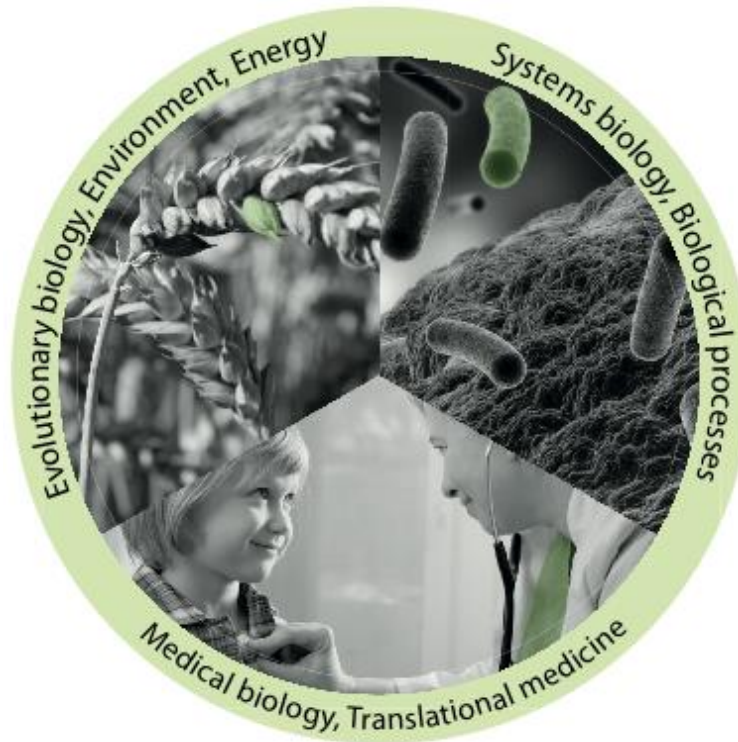


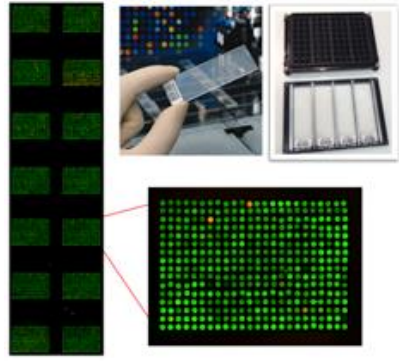
UPPSALA
UNIVERSITET



Stockholms
universitet

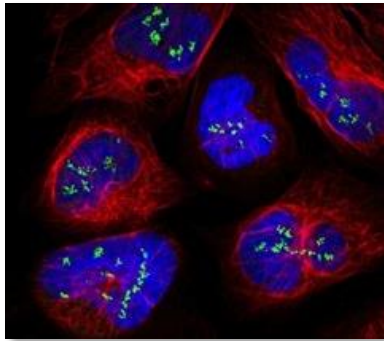
To be an internationally leading center that develops, uses and provides access to advanced technologies for **molecular biosciences** with focus on health and environment





Technology platforms for national use

- Service to research community
- Technology development
- Education



Strong research community

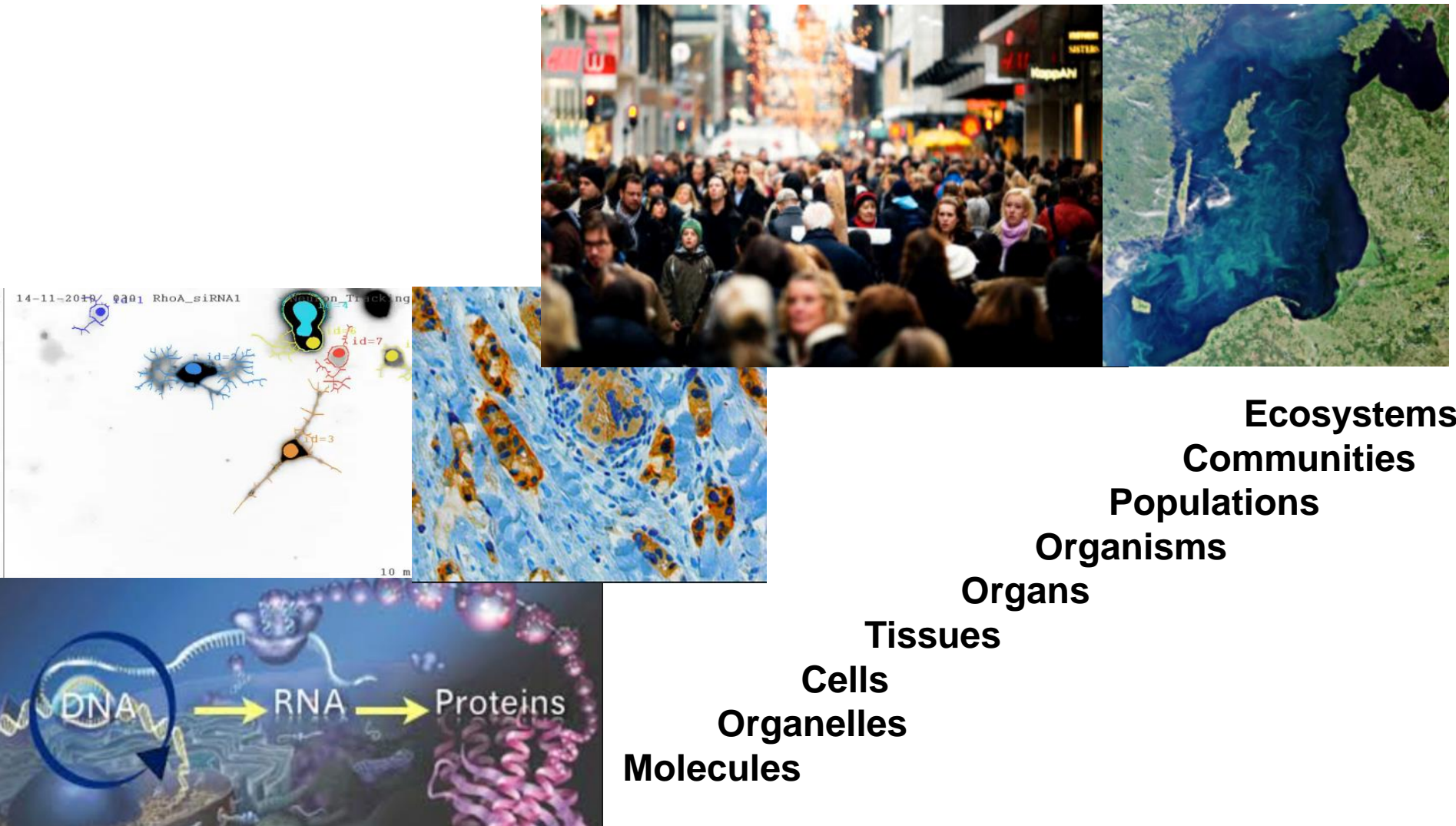
- Strong interdisciplinary community
- SciLifeLab Fellows Program
- National projects



Society impact

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

The range of life sciences studied



Platforms & facilities

Bioinformatics (NBIS)

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

Cellular & Molecular Imaging

Advanced Light Microscopy
BioImage Informatics
Cryo-EM
Fluorescence Correlation Spectroscopy
Fluorescence Tissue Profiling
High-Content Microscopy
Protein Science Facility
Swedish NMR Centre (SNC)
Tissue Profiling

Chemical Biology & Genome Engineering

Genome Engineering Zebrafish
High Throughput Genome Engineering (HTGE)
Laboratories for Chemical Biology Umeå (LCBU)
The Laboratories for Chemical Biology at Karolinska Institutet (LCBKI)

Diagnostics Development

Clinical Biomarkers
Clinical Genomics Göteborg
Clinical Genomics Lund
Clinical Genomics Stockholm
Clinical Genomics Uppsala

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

Genomics (NGI)

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

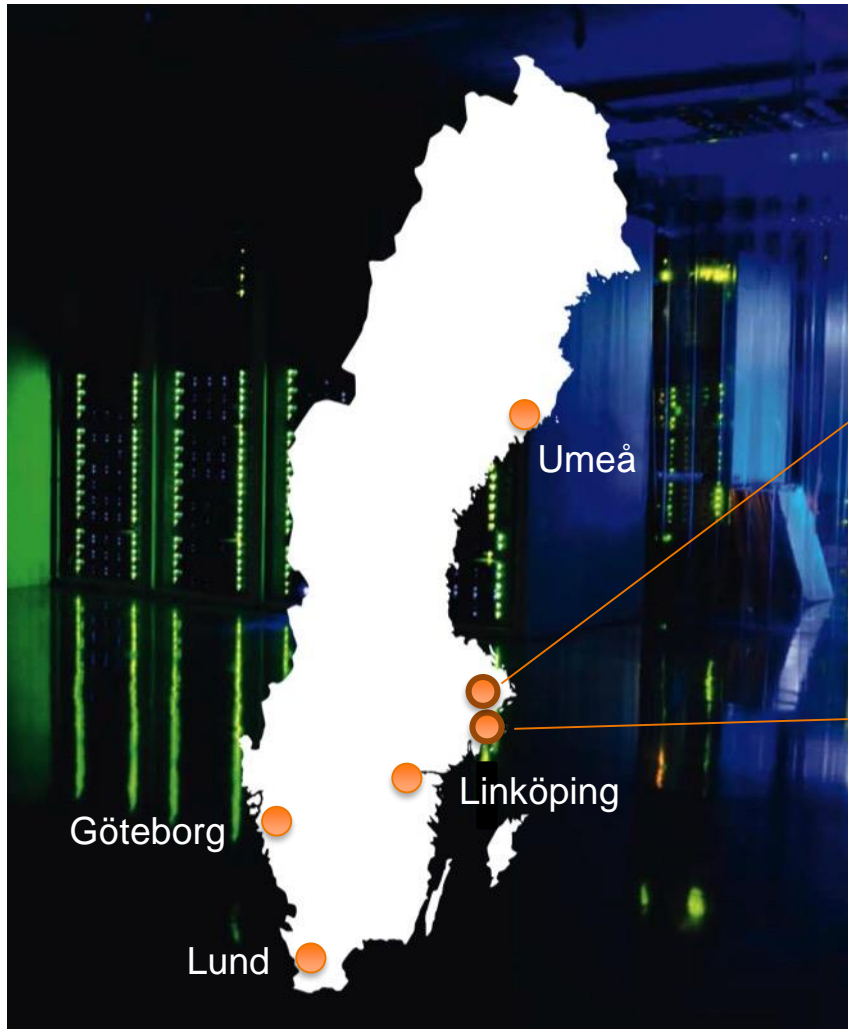
Proteomics/Metabolomics

Autoimmunity Profiling
Chemical Proteomics & Proteogenomics
PLA Proteomics
Plasma Profiling
Swedish Metabolomics Centre (SMC)

Single-cell Biology

Eukaryotic Single Cell Genomics
Mass Cytometry
Microbial Single Cell Genomics
Single Cell Proteomics

Nodes and sites



Uppsala node



Stockholm node (Solna)



2 facilities

- Swedish NMR Centre
- Swedish Metabolomics CentreHead: Tommy Martinsson

National Bioinformatics Infrastructure Sweden

Staff in Umeå:

- Jeanette Tångrot (Short-term support)
- Joakim Bygdell (Systems development)
- Allison Churcher (Long-term support)
- Nina Norgren (Long-term support)

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Single Cell Proteomics

Support ▼

Infrastructure ▼

Training ▼

NBIS

NATIONAL BIOINFORMATICS
INFRASTRUCTURE SWEDEN

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



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

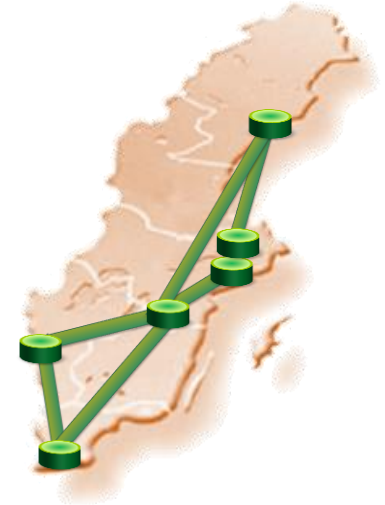
- Strategic positioning in systems biology

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
- Short & medium-term support
- 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: **January**
- 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

Umeå

When: Weekly on Thursdays
at 10 am

Where:

Even weeks: Outside Betula
Odd weeks: KBC cafeteria

- Similar activities in the other NBIS nodes/cities

Attendance sheet

- Please sign morning and afternoon

Fika and lunches together every day

- 10, 12:00, 15
- Fika outside the lecture hall

Course dinner

- Wed 14/11, at 18:00, Teatercafé (TC)
- Included: pre-ordered menu, 1 drink

SciLifeLab



www.scilifelab.se

