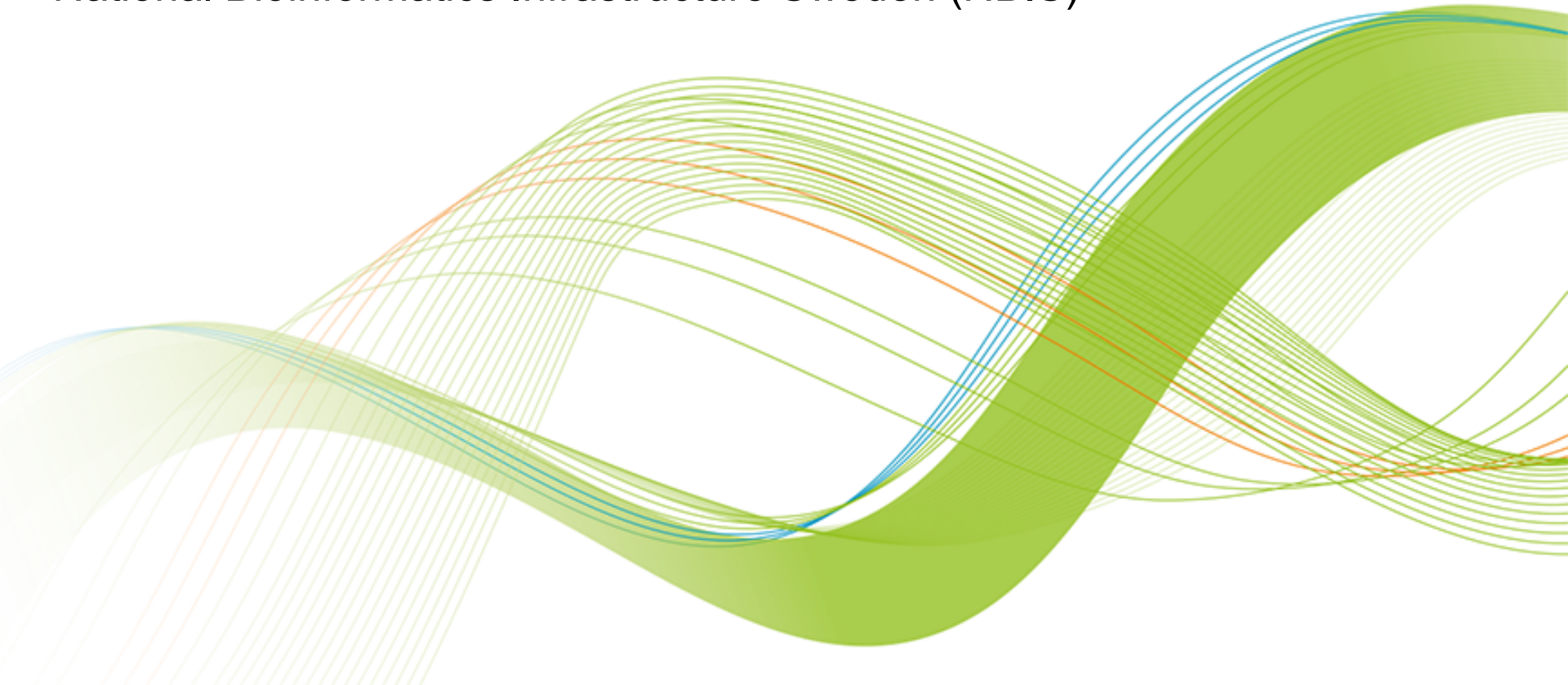


---

## Malin Larsson

SciLifeLab long term bioinformatics support

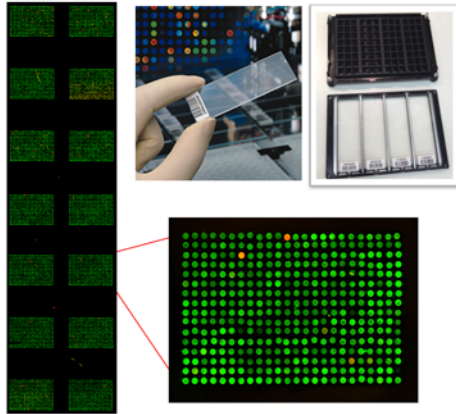
National Bioinformatics Infrastructure Sweden (NBIS)



**Develops, offers and applies  
advanced technologies for molecular biosciences with a  
focus on health and environment**

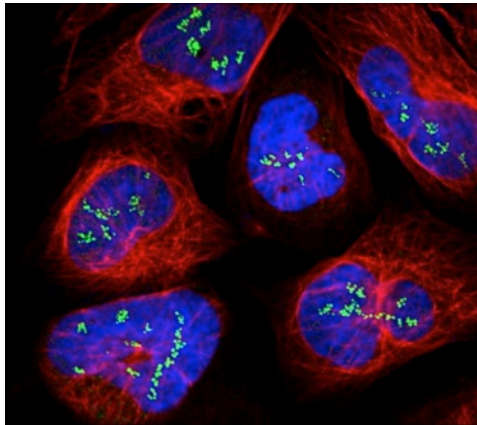


- **Joint Uppsala – Stockholm center with two nodes**
- **Hosted by four universities**
- **Official start, 1 July 2013**
- **Approximately 1500 researchers by mid 2014**
- **Infrastructure for molecular bioscience**



## Technology platforms for national use

- Service
- Technology Development
- Analytical support
- Courses and workshops



## Generate a strong research environment

- Affiliated faculty
- SciLifeLab Fellows Program
- National projects
- International collaborations

# SciLifeLab platforms

SciLifeLab

VR

National  
Genomics  
Infrastructure

Joakim Lundeberg  
Ann-Christine Syvänen  
Ulf Gyllensten

National  
Bioinformatics  
Infrastructure  
Sweden

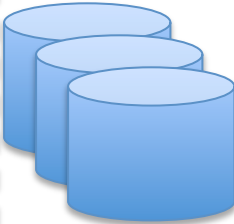
Bengt Persson

Clinical  
Diagnostics

Lars Engstrand

...

SNIC



Computer  
resources  
free for  
Swedish  
researchers



Ongoing merge of BILS, WABI  
and more; complete 2016.  
National, distributed

Date	Course
April 12-14	RNA-seq
April 26-27	Introduction to Genome Annotation
May 23-27 NOTE! Application deadline April 18	Perl Programming with Application to Bioinformatics
October 10-14	Perl Programming with Application to Bioinformatics
October 25-27	RNA-seq
November 15-16	De novo Genome Assembly
November 22-23	Metagenomics
Application Nov/Dec	The Swedish Bioinformatics Advisory Program

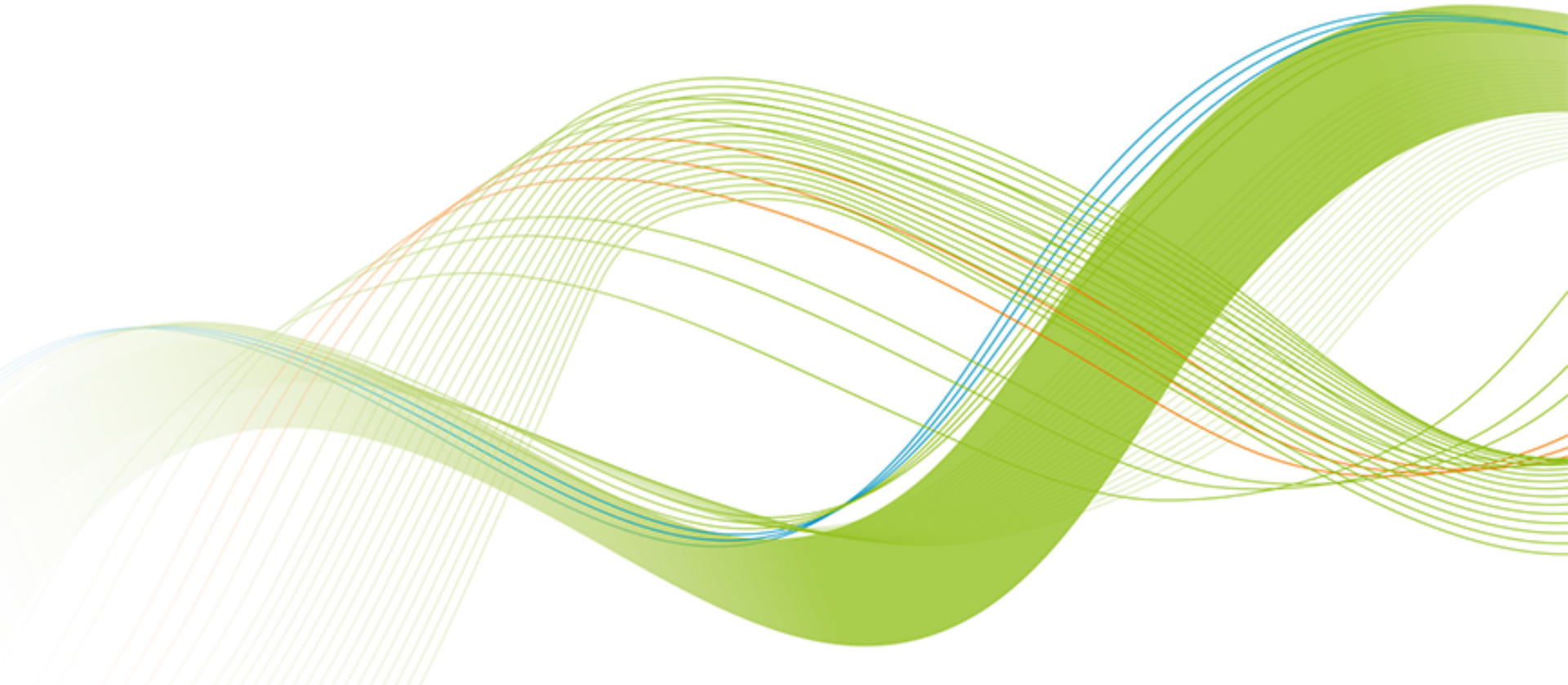


# SciLifeLab



---

[www.scilifelab.se](http://www.scilifelab.se)



# Course schedule

## Monday

Room: [Campus Valla, House B, Room Odén](#)

**09.00-09.15** [Registration and Welcome, presentation of SciLifeLab](#)

**09.15-10.00** [Lecture: Introduction to Linux \(Martin Dahlö\)](#)

**10.00-12.00** [Exercise: Introduction to Linux \(Martin Dahlö, Malin Larsson\)](#)

**12.00-13.00** Lunch

**13.00-14.00** [Lecture: Introduction to UPPMAX/UPPNEX \(Martin Dahlö\)](#)

**14.00-17.00** [Exercise: Introduction to UPPMAX/UPPNEX \(Martin Dahlö, Malin Larsson\)](#)

## Tuesday

Room: [Campus Valla, House B, Room Odén](#)

**09.00-10.00** [Lecture: Alignment with BWA; Data Processing with Picard; Variant Calling with GATK; SAM/BAM and VCF Formats](#)

**10.00-12.00**

[Exercise: Alignment with BWA; Data Processing with Picard; Variant Calling with GATK; SAM/BAM and VCF Formats part I \(Malin Larsson, Mihaela Martis\)](#)

**12.00-13.00** Lunch

**13.00-17.00** [Exercise: Alignment with BWA; Data Processing with Picard; Variant Calling with GATK; SAM/BAM and VCF Formats part II](#)

## Wednesday

Room: [Campus Valla, House B, Room Odén](#)

**09.00-11.30** [Lecture: Next Generation Sequencing Overview](#)

**11.30-12.00** [Lecture: The National Bioinformatics Infrastructure Sweden](#)

**12.00-13.00** Lunch

**13.00-14.00** [Lecture: NGS and bioinformatics analysis pipelines](#)

**14.00-17.00** [Project discussion](#)

**18.00-** Course dinner at [De Klomp](#)

[Gr](#)

## Thursday

Room: [Campus Valla, House B, Room Odén](#)

**09.00-10.00** [Lecture: ChIP sequencing and data analysis](#)

**10.00-12.00** [Exercise: ChIP sequencing and data analysis part I](#)

**12.00-13.00** Lunch

**13.00-17.00** [Exercise: ChIP sequencing and data analysis part II](#)

## Friday

Room: [Campus Valla, House B, Room Odén](#)

**09.00-10.00** [Lecture: RNA sequencing, transcriptome and expression quantification](#)

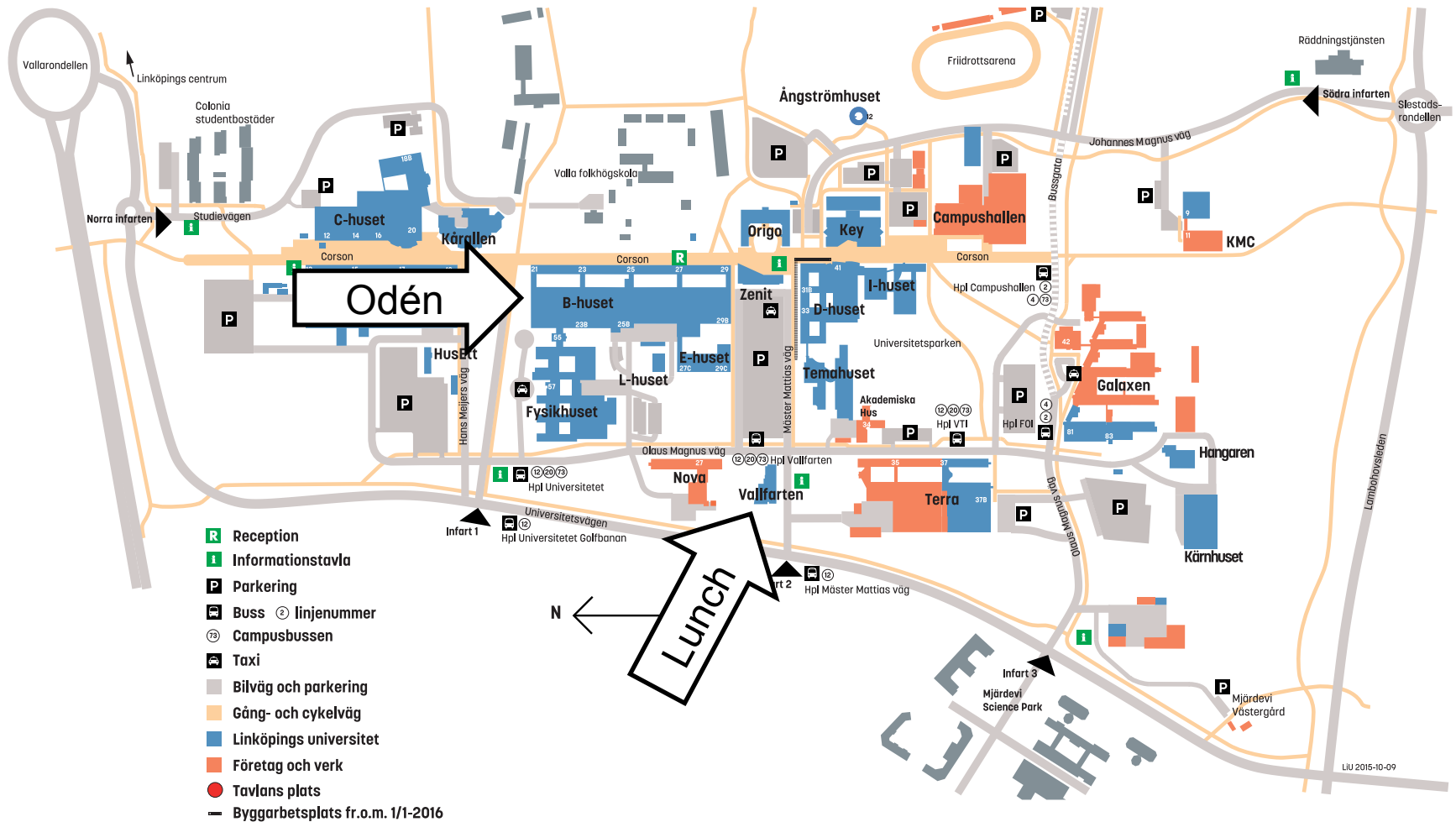
**10.00-12.00** [Exercise: RNA sequencing, transcriptome and expression quantification part I](#)

**12.00-13.00** Lunch

**13.00-17.00** [Exercise: RNA sequencing, transcriptome and expression quantification part II](#)

Project discussions in smaller groups

# Lunch in Universitetsklubben





# Project discussions on Wednesday

Groups based on your interest. Proposed groups:

- RNA-seq and epigenetics (Agata and Mihaela)
- Variant calling including somatic variants (Malin and Adam)
- Experimental setup (Olga)

Please plan questions for the discussion:

- technology-related
- analysis-related
- if there is something you would like to discuss 1:1 with a teacher only
- ?

Time: 14:00 -17:00 on Wednesday

Place: Odén, Fick and Dalton

Groups will be decided during Monday/Tuesday (let me know which group you want to be in)