

# ANA Futura breakfast mingle



Karolinska  
Institutet



3 June 2025

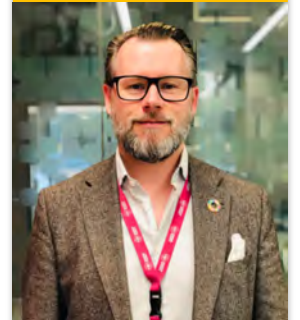
# Agenda

- **Welcome!**
- **Latest ANA Futura news** – *Lars Frelin, facility manager*
- **Presentation of Karolinska ATMP Center** – *Knut Steffensen, Director*
- **LCI core facility at KI South: high quality microscopy equipment and support** – *Sylvie Le Guyader, Live Cell Imaging core facility director*
- **Questions**

# Latest ANA Futura news

- Survey: service function ANA Futura
- Safety in ANA Futura
- Freezer facility information
- Update from the ANA Futura service team
- Next ANA Futura breakfast mingle

Facility  
manager



Lars Frelin  
LabMed

# Survey: service function ANA Futura

- **The purpose of the survey was to evaluate whether the employees perceive the service from the service team as effective and meeting their needs**
- The survey was open from 10 March to 8 April.
- All staff members were included as respondents, in total 536 individuals.
  - The staff were divided into the following categories: administrative, technical, doctoral students, research staff, and other.
- The response rate was 38%, with 204 replies received.

# Survey: service function ANA Futura

- **The survey included the following topics:**
  - Overall, how satisfied are you with the following services?
    - General service/support
    - Technical service/support
    - Waste and recycling
    - Dishwashing/sterilisation
    - Mail/goods and deliveries
  - How well do you agree with the following statements about the service team?
    - Availability, communication, relevant service, reasonable time of service and satisfactory result of service
  - Free-text comments and feedback

# Survey: service function ANA Futura

- An initial analysis of the survey has been completed, and the results were presented to the steering committee on 2 June.
- The results will be communicated to the Drafting Committee and shared with all staff during a breakfast mingle after the summer.
- The survey results will be utilized in the systematic improvement and quality work within ANA Futura

# Safety in ANA Futura

## A few reminders of...

- Fire display
- Defibrillators
- Emergency phones
- Chemical spill alarm

# What is the role of the fire display? What should you do if it beeps?



- The fire displays should be considered as an information display
- The fire displays help you to get information about on which floor/detector the alarm has been triggered, i.e. detected a possible fire
- Do you need to evacuate if a fire display is beeping. No, a beeping fire display is not a fire alarm
- **Always evacuate immediately in case of a fire alarm (strobe light, siren, audible alarm)**



# Defibrillators in ANA Futura



- CPR (cardiopulmonary resuscitation) with defibrillation can save lives with sudden cardiac arrest. Several defibrillators are placed at KI South.
- Within ANA Futura we currently have for defibrillators
  - Floor 9: meeting room corridor
  - Floor 8: lab corridor
  - Floor 7: reception
  - Floor 3: freezer facility corridor
- For information about where to find defibrillators:  
<https://staff.ki.se/defibrillators-at-karolinska-institutet>



Floor 7, reception



Floor 8, south-east corner lab corridor

# Emergency phones

- We have 12 emergency phones placed in corridors in ANA Futura

Emergency phones					
	Floor 3	Floor 6	Floor 7	Floor 8	Floor 9
A1 (North)			80215		
A2 ( North, adjacent to hospital)			80202		
B1 (South)			80204		
B2 (South, adjacent to hospital)			80205	80206	
C (North)			80214	80211	
D (South)		80208	80209	80212	
Freezer facility	80207				
Meeting rooms					80210

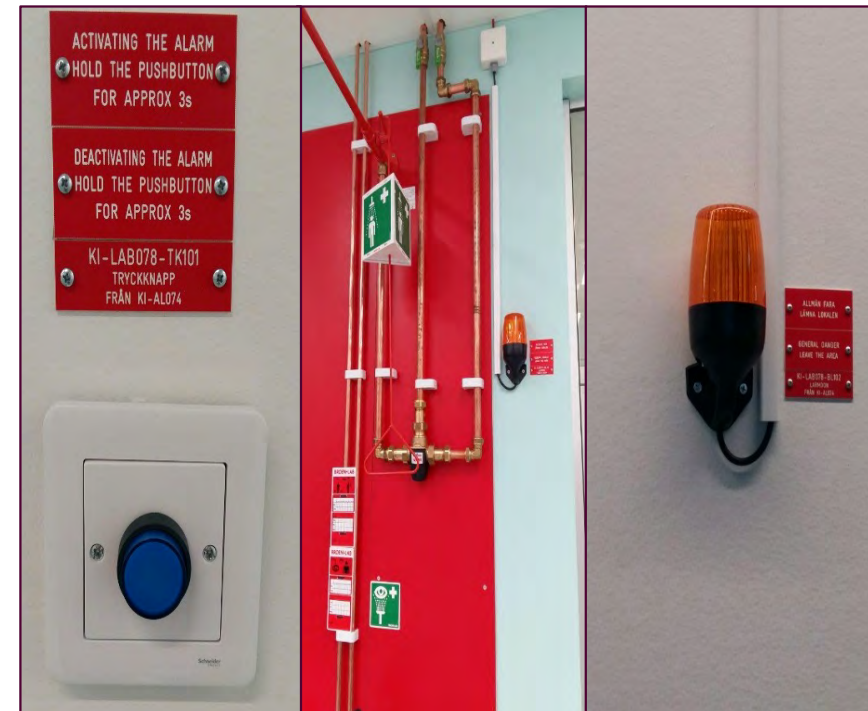
ANA Futura information meeting, Karolinska Institutet.



2025-06-05

# Chemical spill alarm

- **In case of spills or emissions of hazardous chemicals**
  - In the event of a chemical spill requiring evacuation, an alarm can be activated manually by pushing the blue button. (one/fire compartment)
  - A local alarm with an orange light will flash within the same fire compartment, no sound!
  - Close doors to prevent the chemical spill from spreading and post a note on doors.
  - Once the area has been evacuated only authorized personnel may enter the premises until decontamination is completed. **Inform the service team and facility manager.**
  - Inactivate the spill alarm manually, by pushing the same blue button used for activation.



# Freezer facility website

## ANA Futura freezer facility

On the 3rd-floor there is a approximately 745 m<sup>2</sup> freezer facility for use by staff at ANA Futura. External users are also welcome if free space is available. Periods of use are regulated by agreement, with a specified notice period.

[Sign up for Liquid Nitrogen Safety Courses](#)

[Annual refresher safety course](#)



### How we keep your samples safe

If you have biological samples in a freezer in ANA Futura, systems and procedures are continuously updated to keep your samples safe.



Rescue and emergency equipment



Practical routines for freezers



Facility and freezer alarms



Access to the Cryo SafeFill cabinet in ANA Futura

25-06-05

12



# Contact information ANA Futura freezer facility

*In case of a freezer alarm or a problem in the ANA Futura freezer facility*

## **Office hours:**

1. Contact the alarm recipients for the freezer that is alarming.
2. If no one answers, contact the service team: (08-524 836 41).
3. If multiple freezers are alarming, or if there is an audible alarm or lightning alarm from the room/corridor, contact the service team immediately (08-524 836 41).
4. For general problems in the freezer facility, contact the service team (08-524 836 41).

**Note: If urgent problems in the freezer facility – do not send a ticket/email to the ANA Futura Service Team.**

## **Outside office hours:**

1. Contact the alarm recipients for the freezer that is alarming.
2. If no one answers, contact the facility manager or coordinator.
3. If multiple freezers are alarming, or if there is an audible alarm or lightning alarm from the room/corridor, contact the facility manager or coordinator immediately.
  1. Facility manager Lars Frelin: 070-4243001
  2. Coordinator Tommy Eklund: 076-0500405
4. For general problems in the freezer facility, contact the facility manager or coordinator immediately.

# Sign with contact information on your freezer

*Make sure that your alarm recipient information is correct and updated*

Information about this fridge/freezer:		Nilex number:
		XYZ
Room number:		
Department:		
Division/Unit:		
Research group leader/PI:		
Set temperature (celsius):		
Contact list:		Is the fridge/freezer connected to the alarm:
Email	Telephone no.	Yes
		Fridge/freezer alarm number:

# Evacuation freezers at ANA Futura

- For your convenience, evacuation freezers are available in ANA Futura to be used in the case of: freezer break down, defrosting etc.
- Currently, evacuation freezers are available at the following temperatures:  $-20^{\circ}\text{C}$ ,  $-80^{\circ}\text{C}$ , and  $-196^{\circ}\text{C}$  (isothermal)
- Procedure for the use of evacuation freezers in ANA Futura is available on our website: <https://staff.ki.se/procedure-for-the-use-of-evacuation-freezers-in-ana-futura>



# Update from the Service team

- **Staffing during summer 2025**
  - The service team will be on-site during the whole summer but with reduced number of staff.
  - Lead times for may be longer and some services may not be available.

## In case of emergency

Please contact the facility manager:

Lars Frelin [lars.frelin@ki.se](mailto:lars.frelin@ki.se).

08-524 836 32.

070-424 3001 (for text messages).



# Update from the Service team

- Procedure for receiving packages

## Responsibilities of the service team

1. The service team collects the packages from the loading dock and places them in the goods receiving office.
2. The service team labels each package with the recipient's name (if indicated on the package) and the date of arrival.
3. Heavy packages are marked "heavy" and placed on a low shelf.
4. All packages marked "dry ice" or "-80 degrees" will be placed in the -20 degree freezer unless otherwise indicated on the package.
5. The service team sends an email to the recipient that packages are available for pickup.

## Information about unmarked packages

**Every Friday at lunchtime**, the service team sends an email to the "ANA Futura Lab" mailing list indicating the number of unmarked packages (i.e. without a recipient's name) in the goods receiving office, together with a request to the staff to check them.

## Responsibility of the recipient

1. When ordering, make sure that the package is marked with the correct address and name of the recipient.
2. Collect the notified package within 1-2 working days.
3. If a package is not found, follow the "if packages disappears" procedure.



## What happens if packages disappear?

1. Track your own package via the supplier.
2. If the package is delivered, request the signature of the recipient in ANA Futura.
3. Contact the service team with the above information.
4. The service team troubleshoots.
5. If packages are not found, a situational assessment is made by the ANA Futura Facility Manager whether compensation should be paid. To be eligible for compensation, recipients must have followed the above procedure.

# Update from the Service team

**All you need is three phone numbers...**

- ANA Futura service team: 08-524 836 41
- KI security guards (CSG): 08-524 860 60
- SOS Alarm: 112
- **Please record the phone numbers in both your work and private phone! (if you have two separate)**



# Next ANA Futura breakfast mingle!



- **Drop-in breakfast 8.30 am**
- **Meeting starts 8.45 am – 9.30 am**

# Presentation of Karolinska ATMP Center

- **Knut Steffensen**, Director







## Karolinska ATMP-Centrum



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# Vad är ATMP?

Läkemedel för avancerad terapi, ATMP, är baserade på gener, celler eller vävnad som klassificeras som läkemedel enligt en särskild europeisk lagstiftning (EC/1394/2007). Ett regulatoriskt godkännande baseras på värdering av patienters risk i förhållande till nyttan och produktens kvalitet.

ATMP delas in i 4 subklasser:



## Genterapier (GTMP)

Tekniker och strategier som innefattar användningen av genetiska koder och andra konventionella eller radikala metoder för att förändra eller modifiera celler



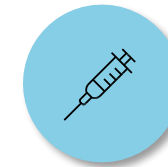
## Somatiska Cellterapi (scTMP)

Innehåller celler som har manipulerats i syfte att förändra deras biologiska egenskaper



## Vävnadskonstruerade terapier (TEP)

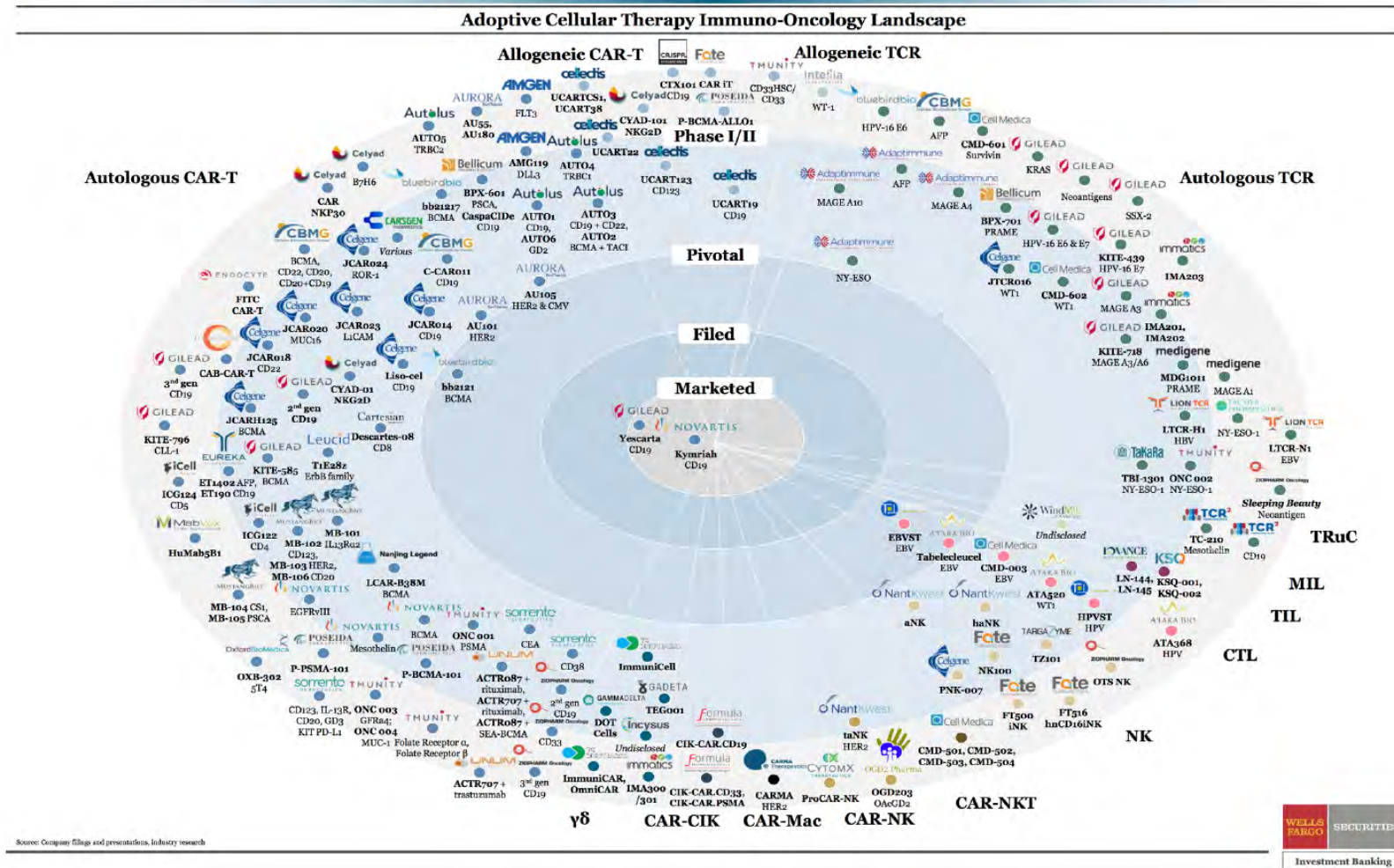
Innehåller konstruerade celler eller vävnader, som är avsett att regenerera, reparera eller ersätta en mänsklig vävnad



## Kombinerade ATMP (cATMP)

Ett ATMP-läkemedel som innehåller en eller flera medicintekniska produkter som en integrerad del av produkten

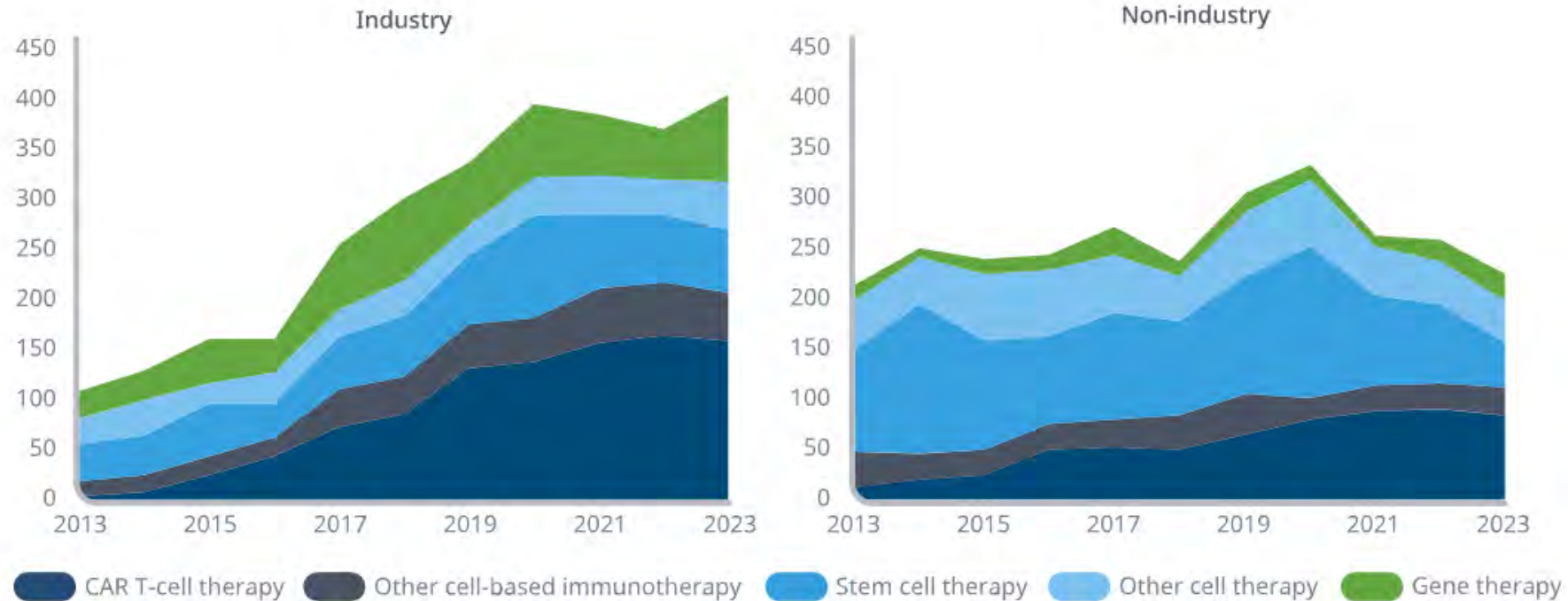
# The cell therapy market





# Global pipeline perspective

Cell and gene therapy clinical trial starts by type, 2013-2023



Source: Citeline Trialtrove, Dec 2023; IQVIA Institute, Jan 2024.

Notes: Includes phase I, II, and III. Terminated trials are included to track the activity still involved with their initiation, partial execution and termination. Trials are interventional trials. Trials are categorized by type based on disclosed information. Other cell-based immunotherapies includes T-cell receptor, tumor-infiltrating lymphocyte, natural killer, and dendritic cell therapies.

Report: Strengthening Pathways for Cell and Gene Therapies: Current State and Future Scenarios. IQVIA Institute for Human Data Science, March 2024.



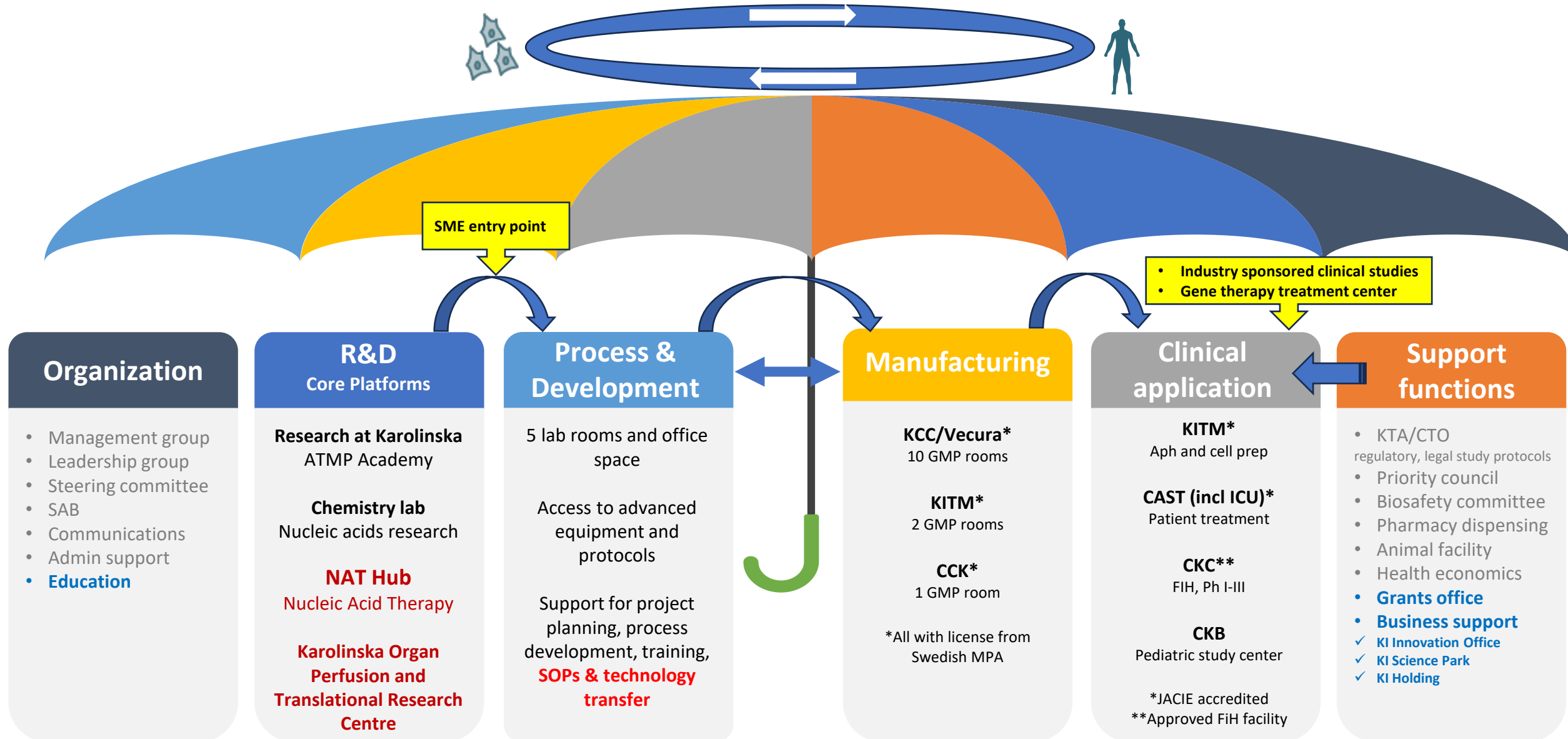
# Karolinska ATMP Center



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Accelerating translational research into clinical application



# Track record Vecura: GMP products and clients

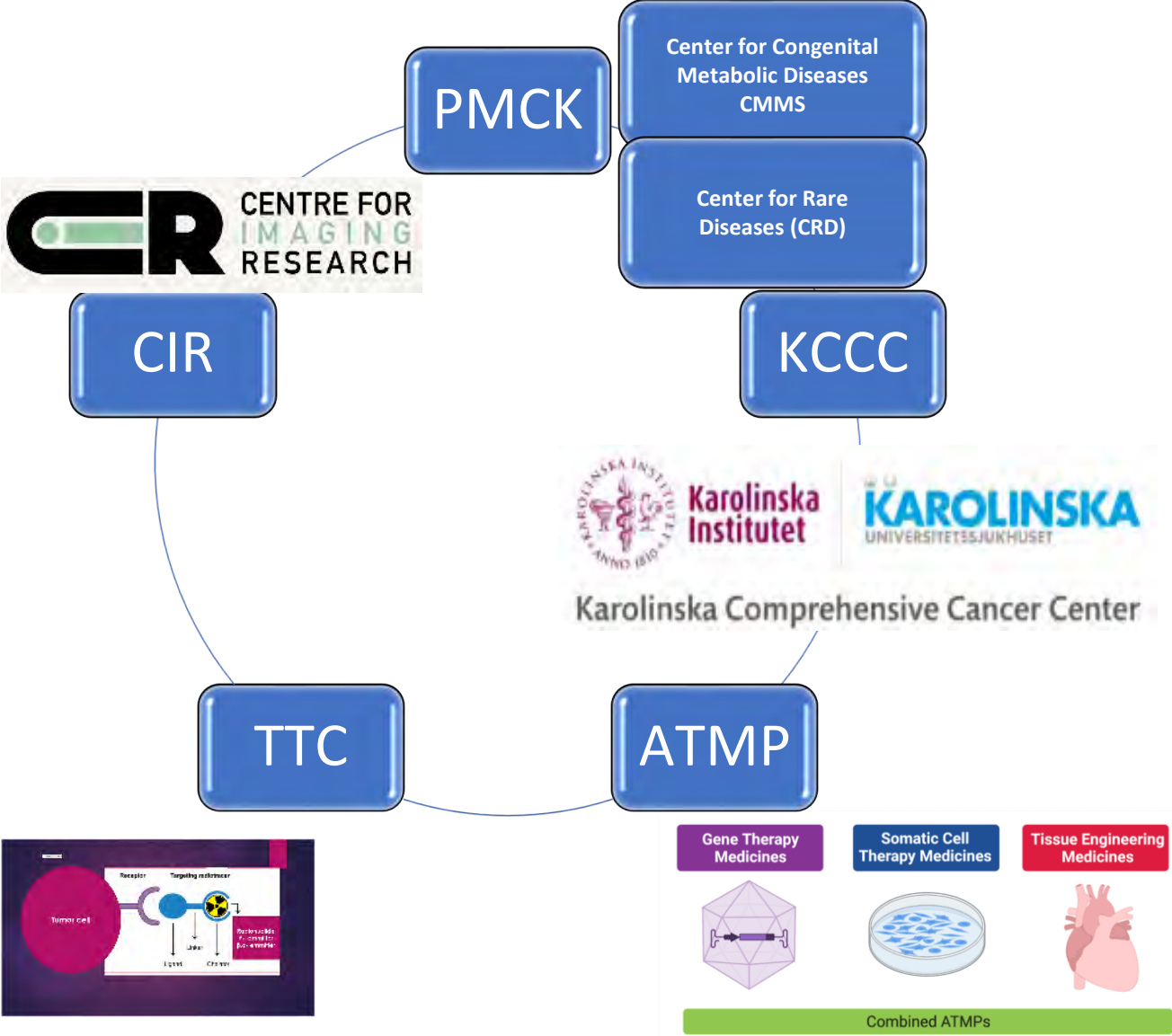
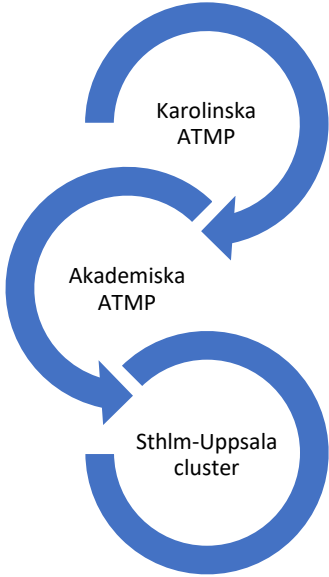


- Manufactured more than **50 different** cell and gene therapy products for phase I/II clinical trials.
- More than **700 patients** have been treated with produced products.
- Cells manufactured include CAR T cells, NK cells, TILs, epithelial cell sheet, MSC, and more
- Clients in 9 countries: Sweden, Denmark, Finland, The Netherlands, Great Britain, Italy, France, Austria and Poland – **export of medical products**



# Samarbete inom Karolinska och i regionen

## Avsiktsavtal

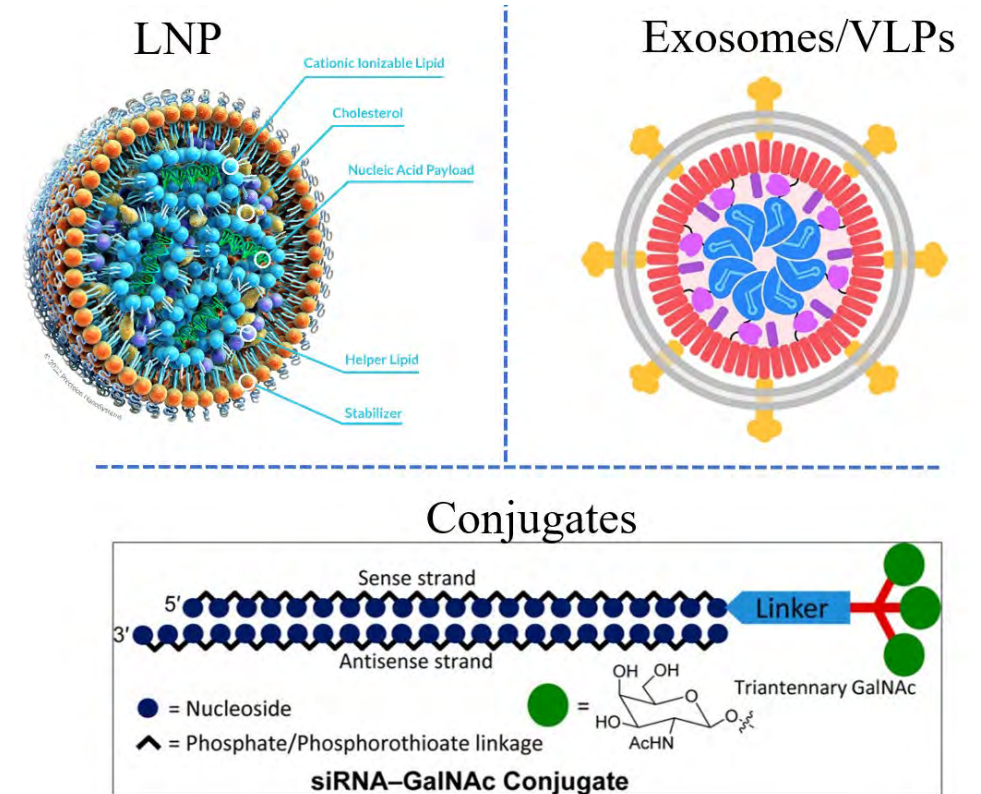


# Nucleic Acid Therapy - hub

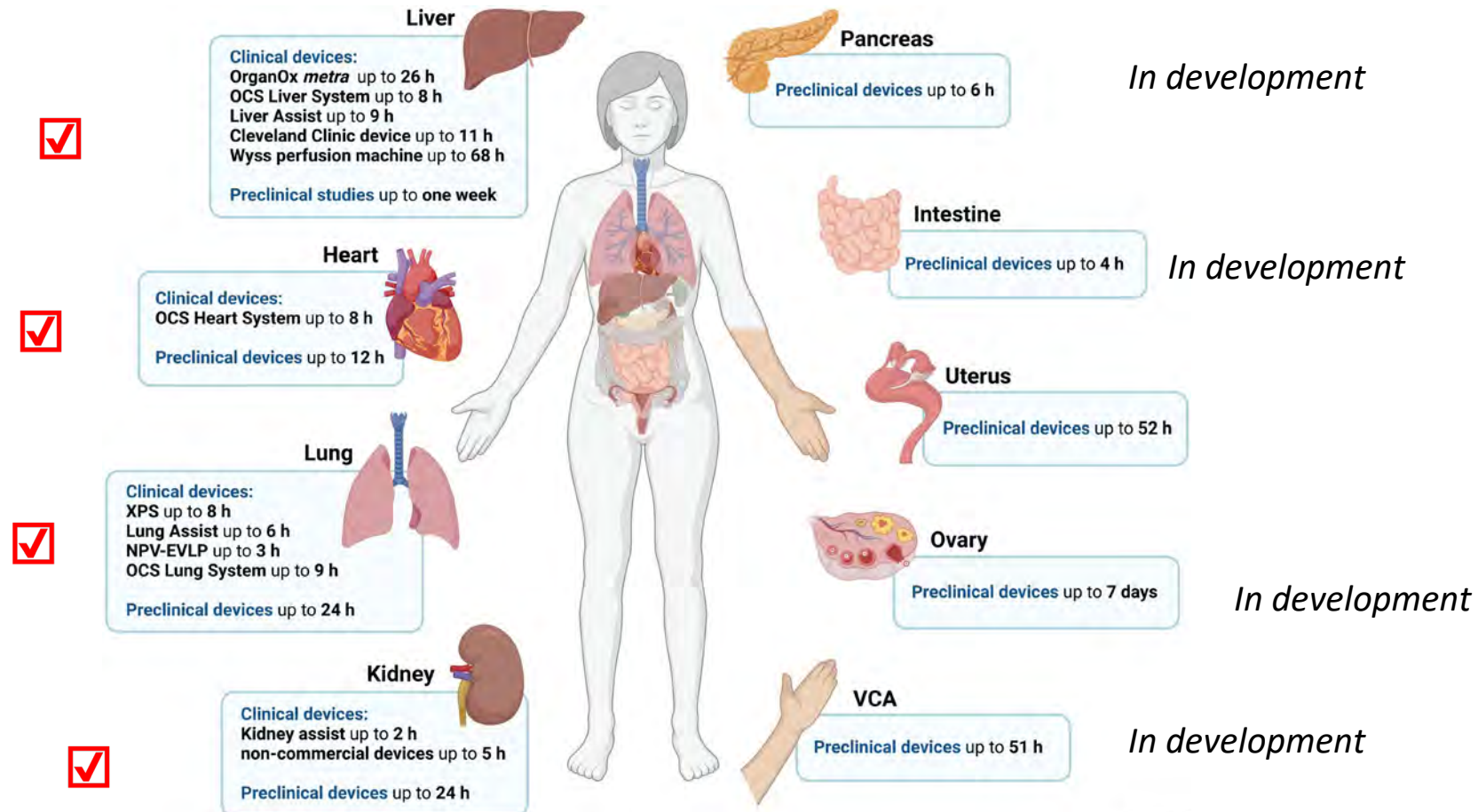


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- Existing research platform
  - Lung transplant model
    - Survival model
  - Liver DCD model
    - CC model
  - Kidney DCD model
- Testing of therapies

# ATMP & rare diseases (Anna Wedell-PMCK)



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*Clinical Genomics and Genetics*

*Integrated patient flow*



CMMS

Congenital metabolic diseases

WGS  
Genpanels

MMS

Clinical  
phenotyping

Neonatal  
screening

Functional  
analysis

Imaging

Multidisc  
eval

Advanced  
treatment

NHV

Primary immune deficiency

PID

Neuromuscular diseases

NMS

Skeletal dysplasia

SKD

Rare kidney diseases

KID

Intellectual disabilities

IF

Undiagnosed syndromes

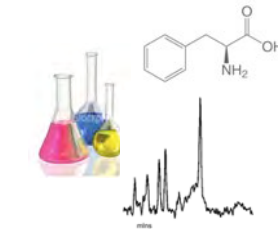
OMIM

Others

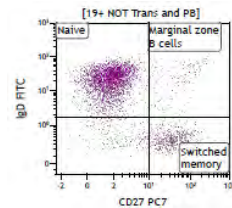
HPO



*Clinical chemistry*



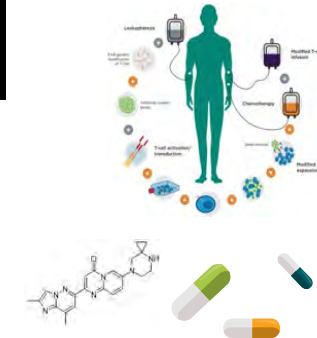
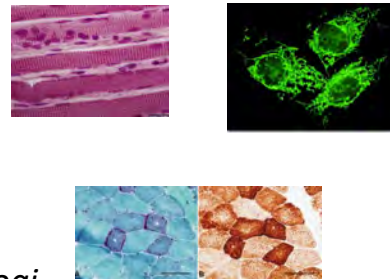
*Clinical immunology*



*Imaging*



*Pathology*

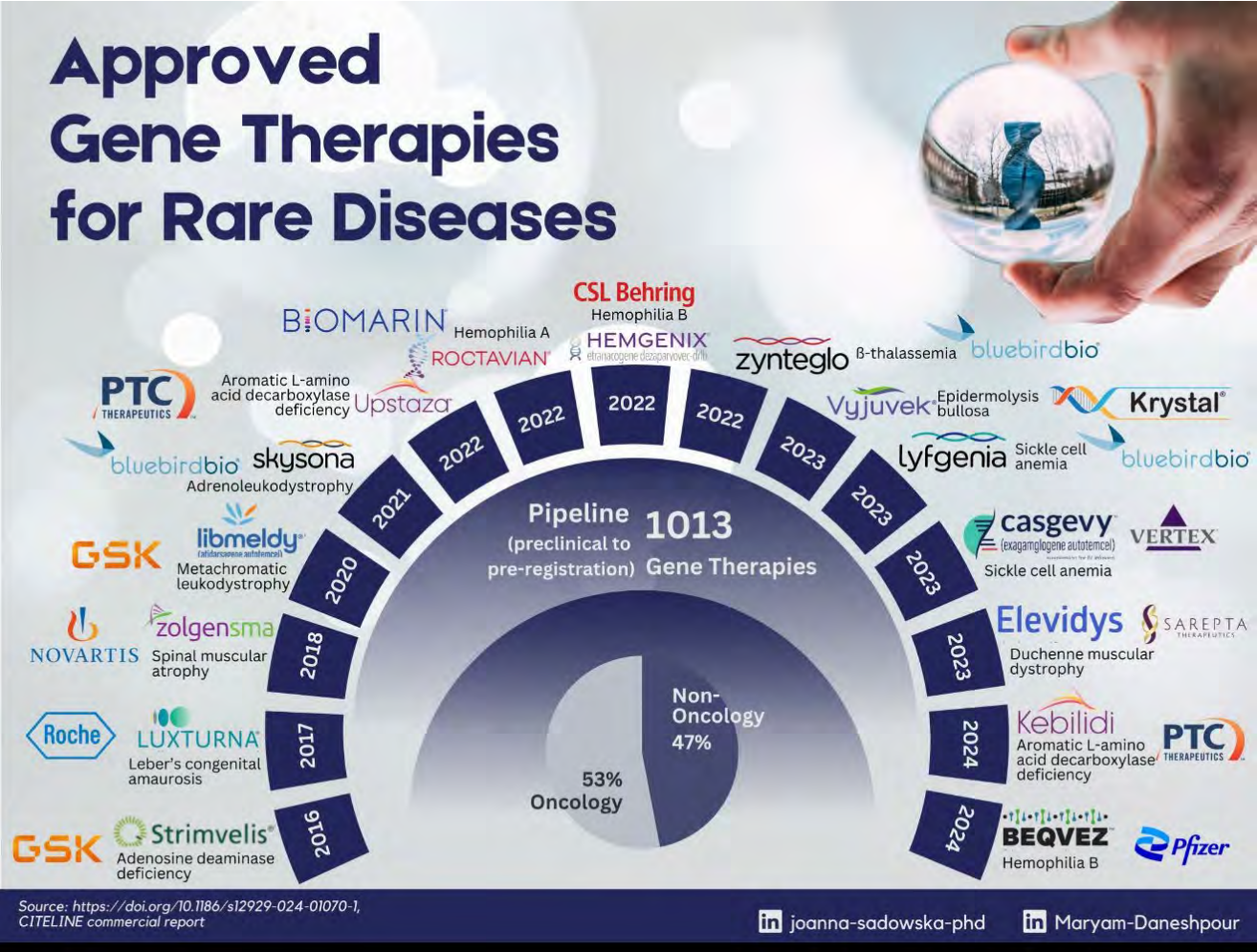


**RARE GENETIC DISORDER  
TREATED IN WOMB  
FOR THE FIRST TIME**

The child, who is now almost three years old, shows no signs of the often fatal motor neuron disease.

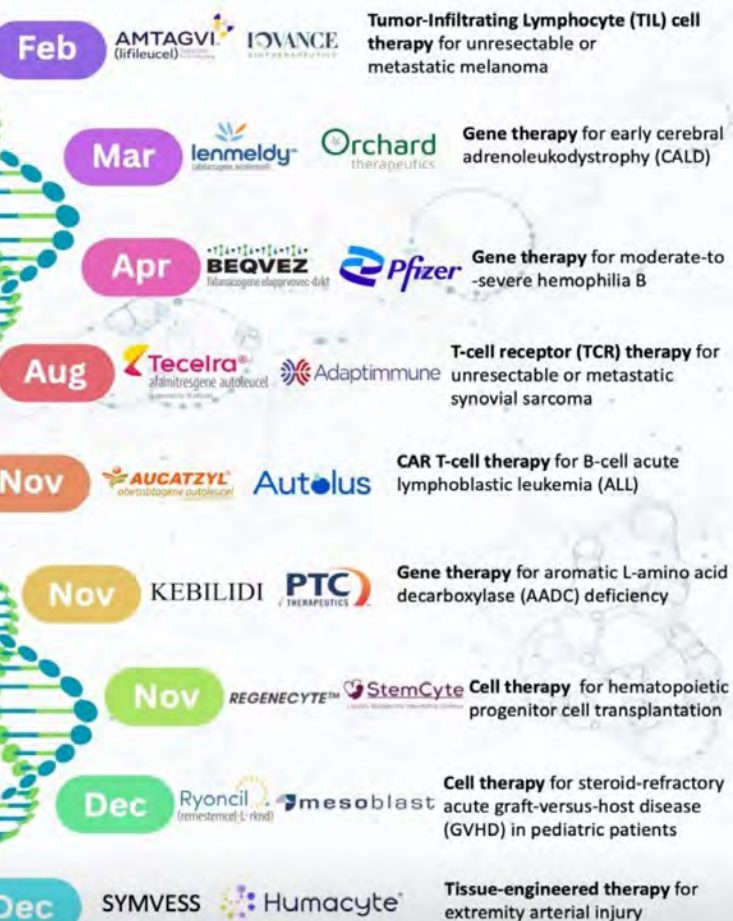


# Global pipeline perspective





## NEW CELL AND GENE THERAPIES APPROVED IN 2024



in joanna-sadowska-phd @jmsadowska

## THE MOST EXPENSIVE DRUGS



in joanna-sadowska-phd @jmsadowska



# ATMP: The future is now!



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# Questions?

- **Knut Steffensen, Director**
- <https://ki.se/forskning/forskningsomraden-centrum-och-natverk/centrumbildningar/karolinska-atmp-centrum>
- <https://www.karolinska.se/vard/vardverksamheter/karolinska-atmp-centrum/>



# LCI core facility at KI South: high quality microscopy equipment and support

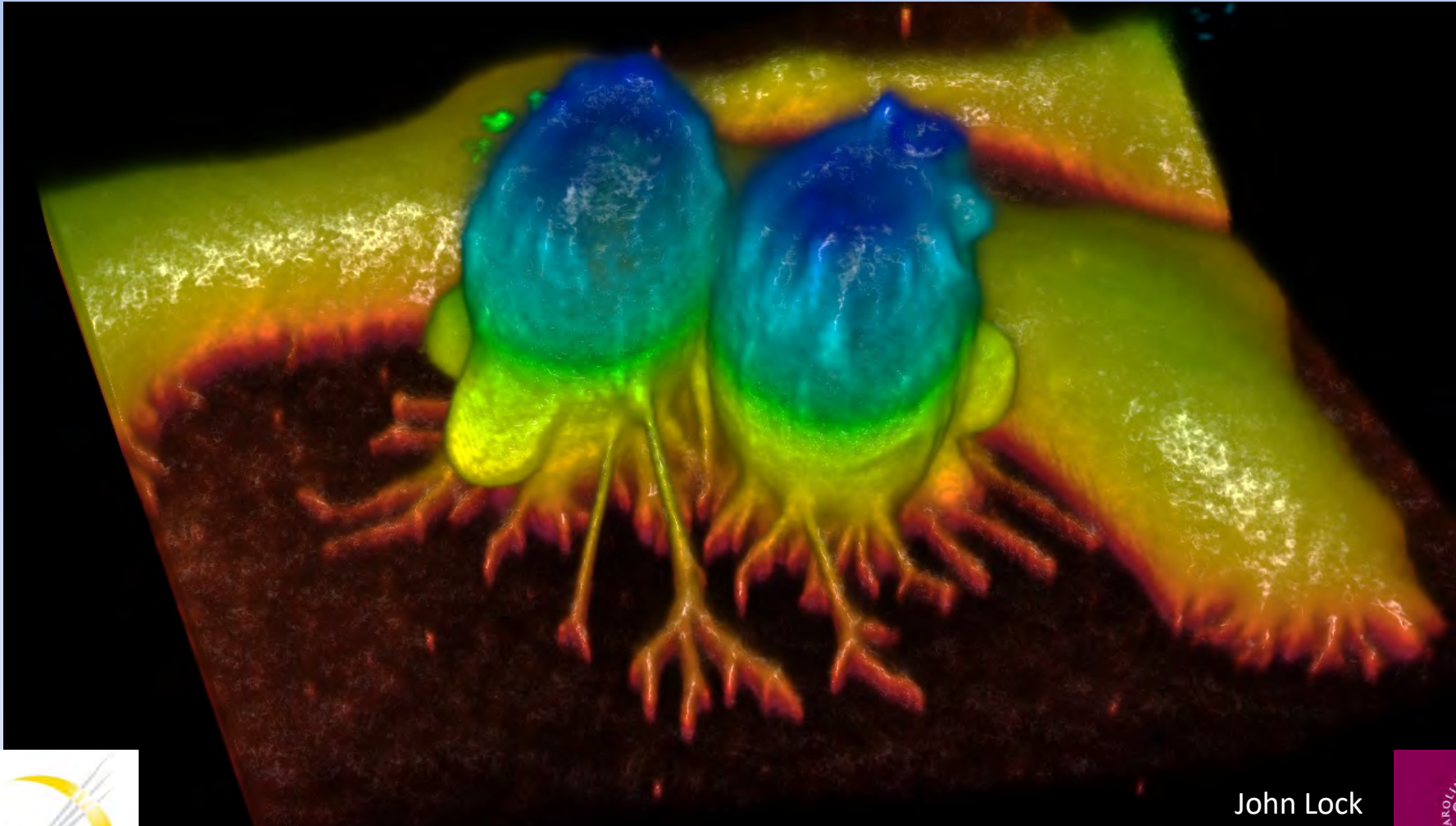
- **Sylvie Le Guyader**, Live Cell Imaging core facility director



# The Live Cell Imaging core facility @ KI South

## High quality microscopy equipment and support

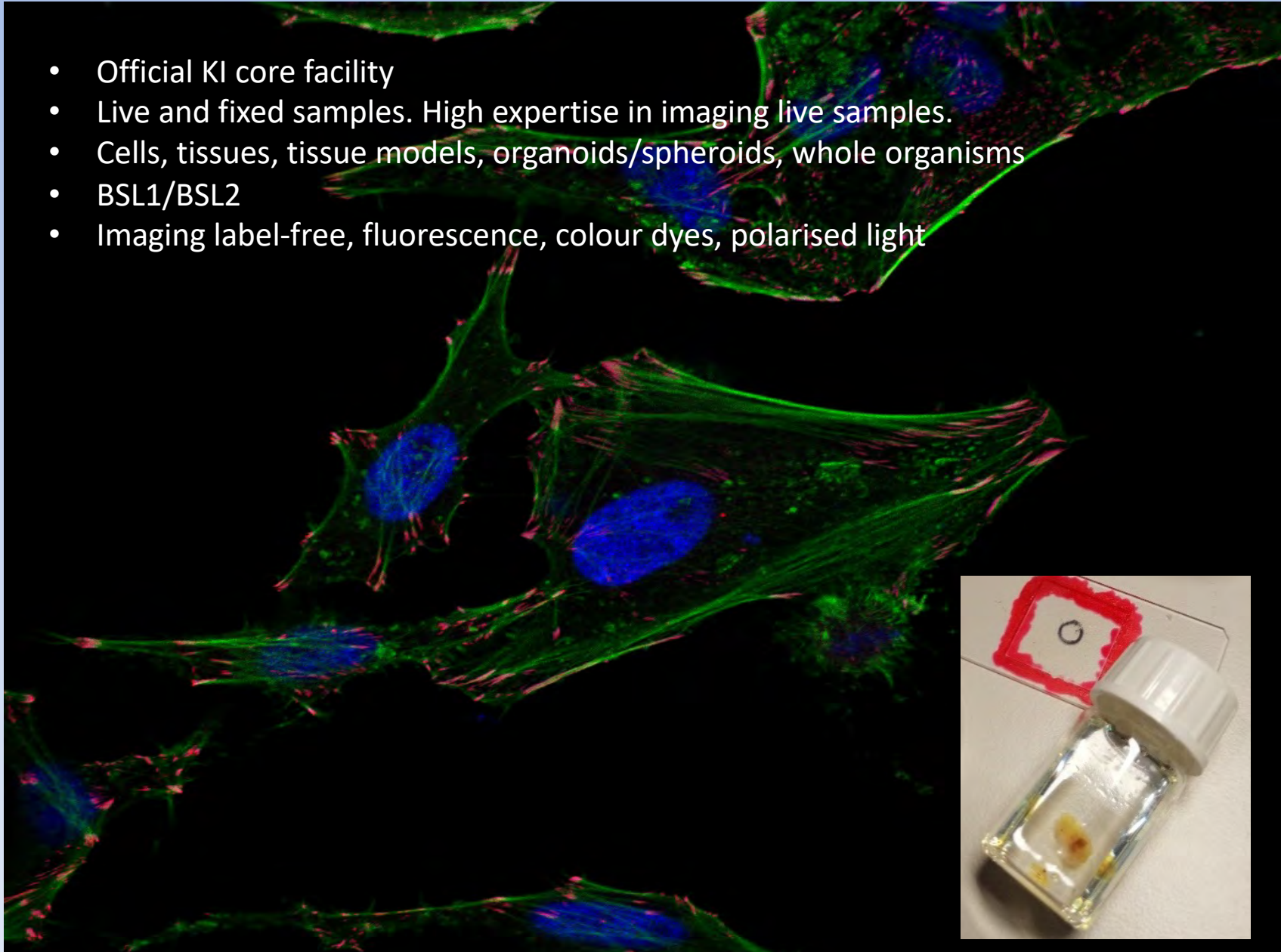
Sylvie Le Guyader, LCI Director



John Lock

# Live Cell Imaging core facility - beyond the name

- Official KI core facility
- Live and fixed samples. High expertise in imaging live samples.
- Cells, tissues, tissue models, organoids/spheroids, whole organisms
- BSL1/BSL2
- Imaging label-free, fluorescence, colour dyes, polarised light

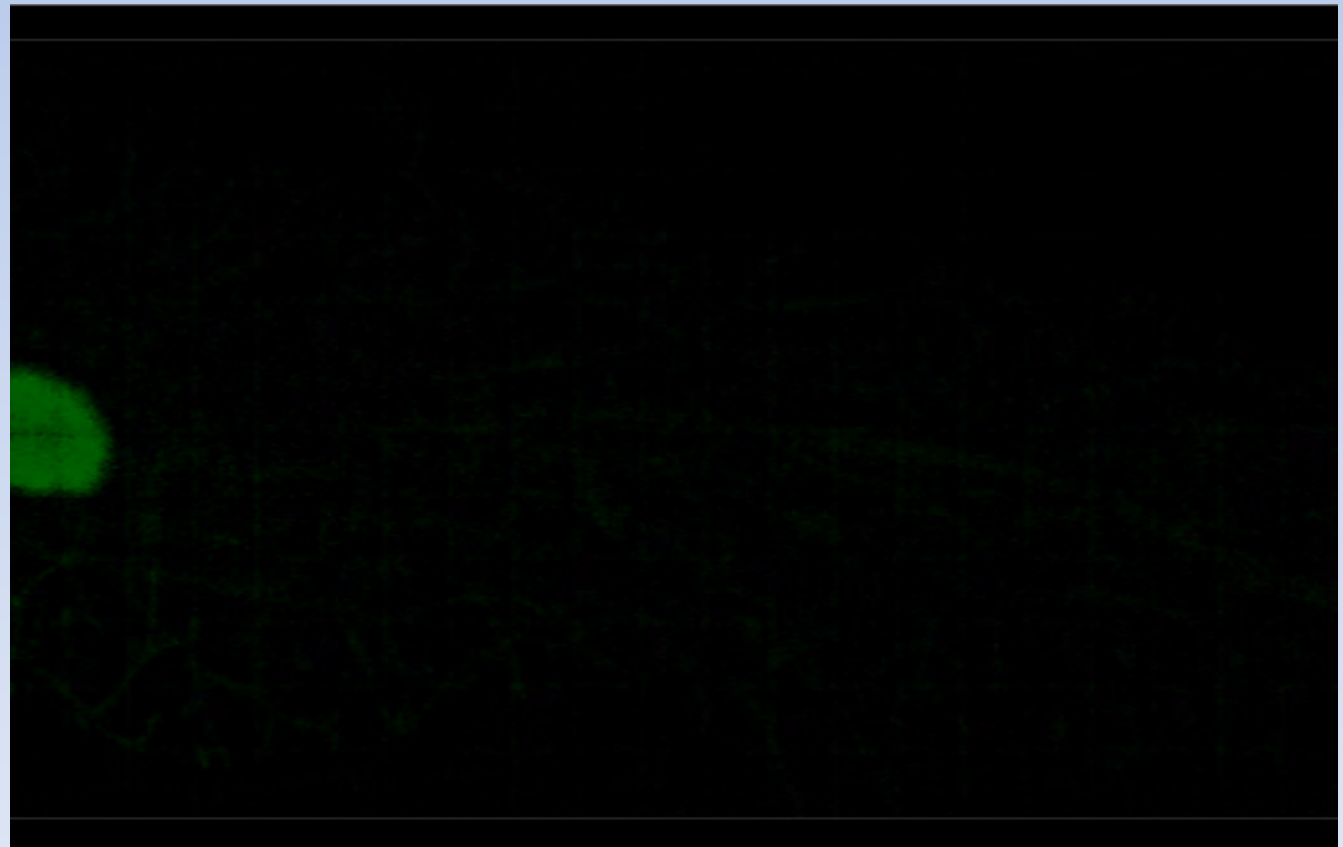


# 10 microscope stands, many functions

- Modern, serviced and quality-controlled
- 5 confocals
- 9 widefield
- Light sheet
- Super resolution
- Laser microdissection
- Micropatterning/microwells

Spinning disk confocal

Whole mammary gland acquired in a few seconds

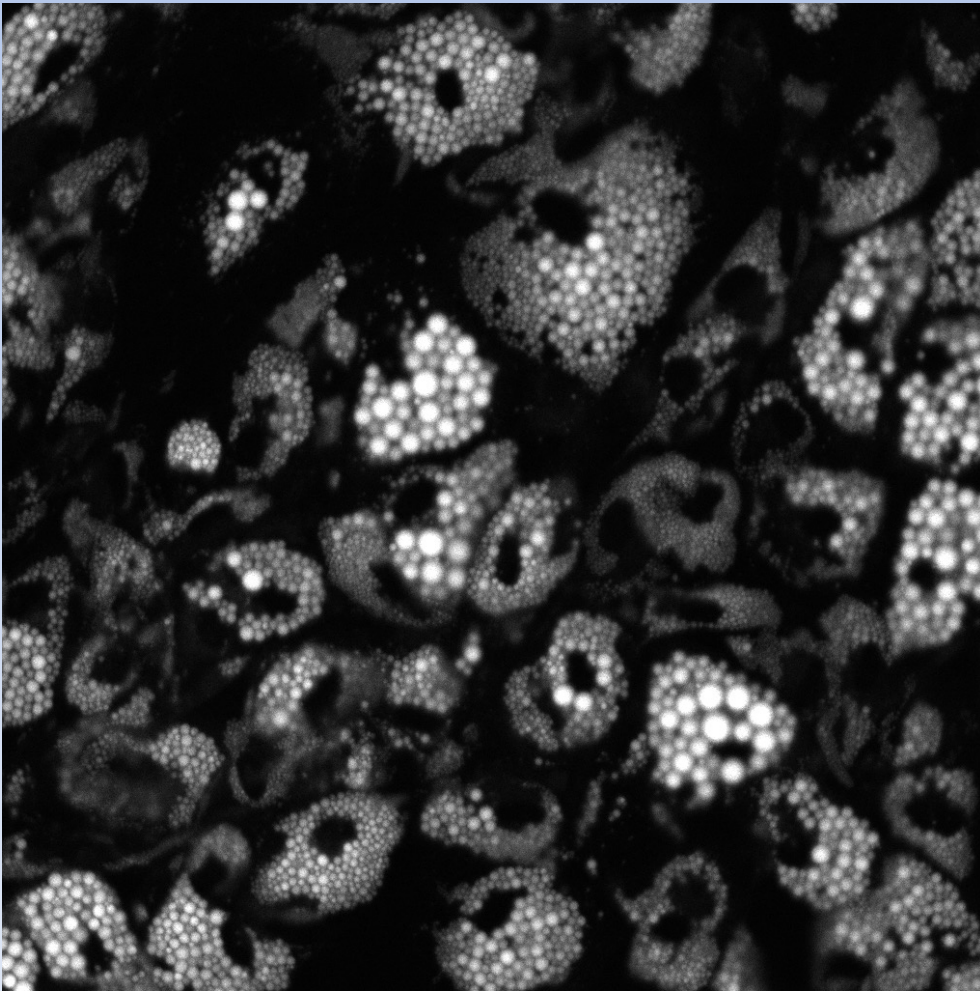




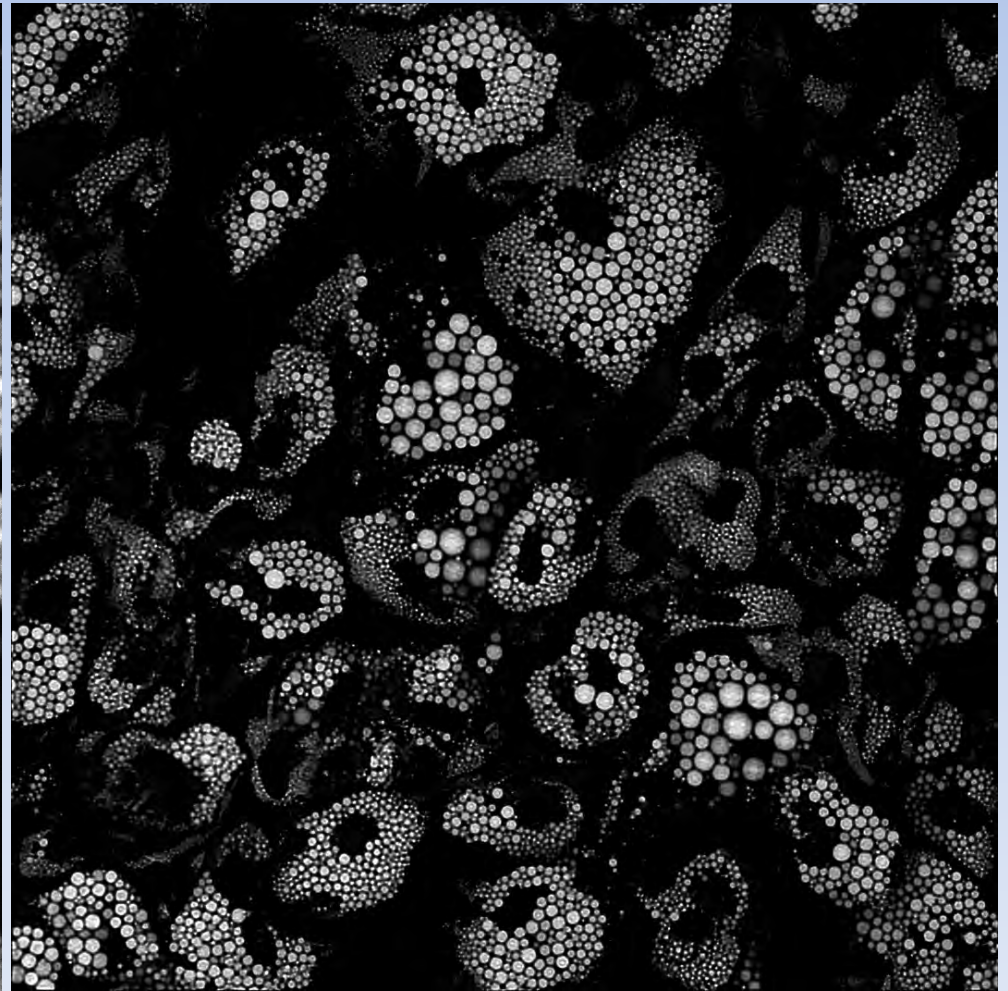
# SIM: Super resolution fast and deep

- Structured illumination microscopy
- Doubles confocal resolution (100 nm)
- Fixed or live samples

Confocal



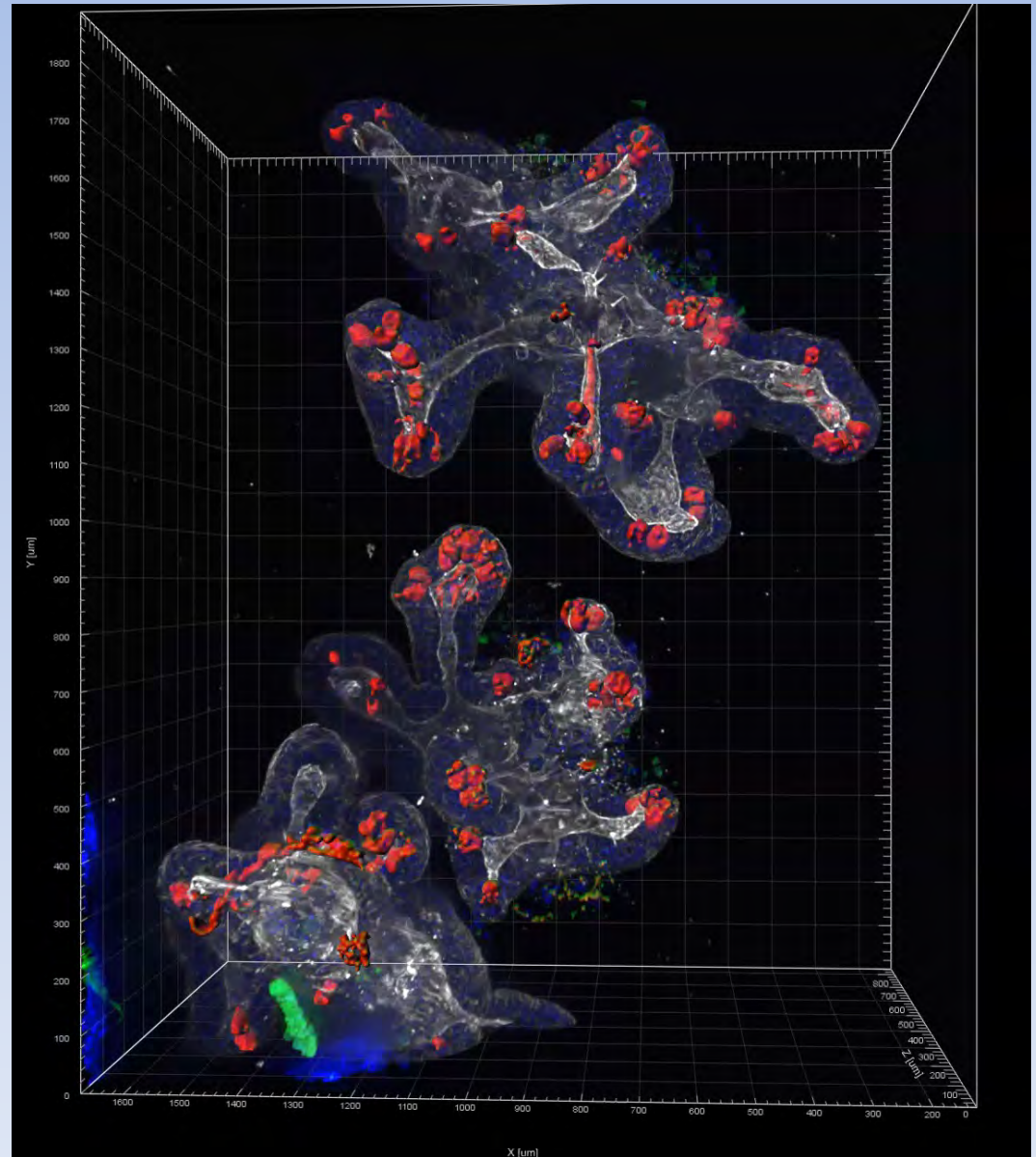
SIM



# Large samples: Light sheet

- From hundreds of  $\mu\text{m}^3$  to  $\text{cm}^3$
- Fixed or live samples
- Excellent resolution
- High speed
- Multiplexing: 7 lasers

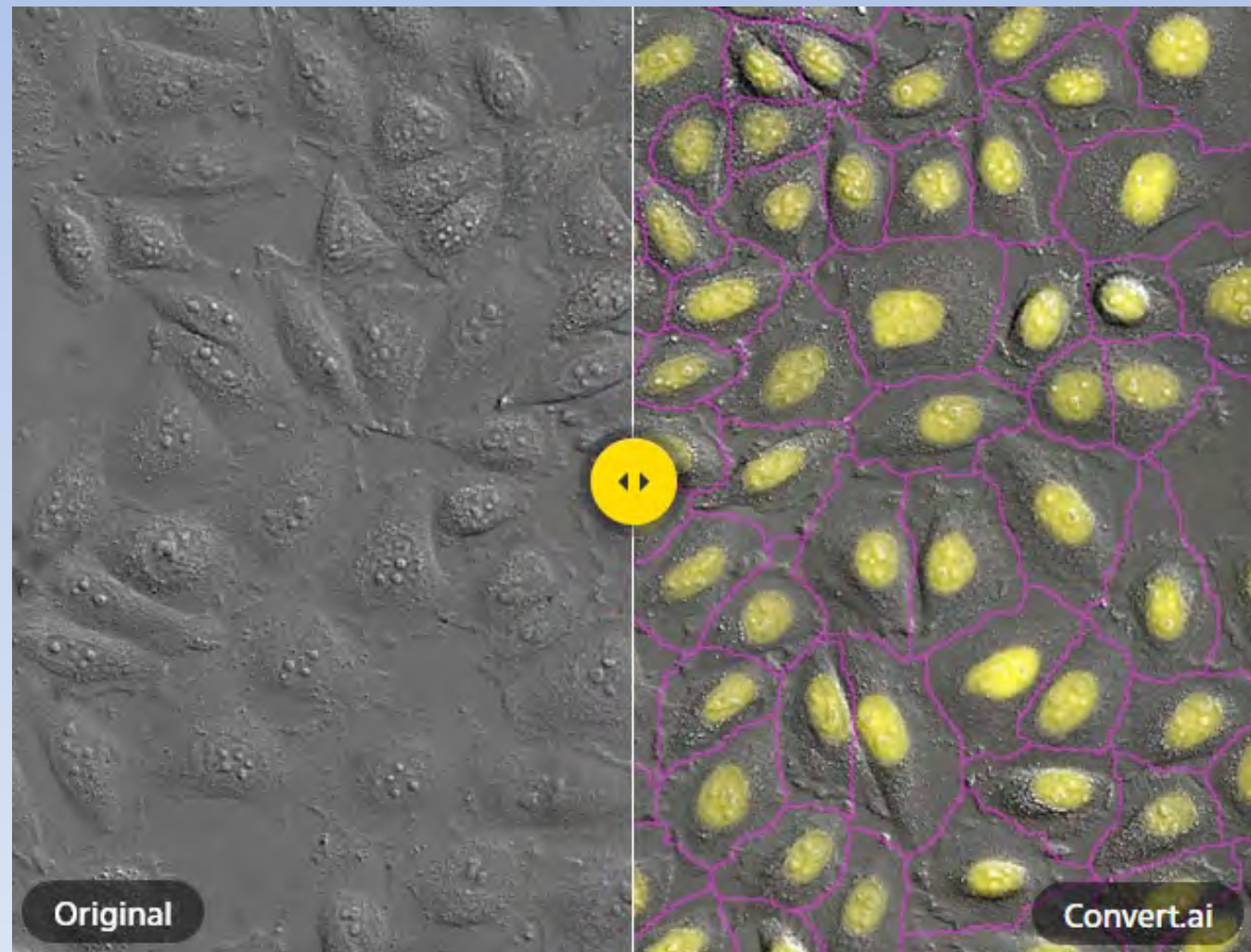
Organoids  
 $1.9 \times 1.7 \times 0.9 \text{ mm}$





# Artificial intelligence

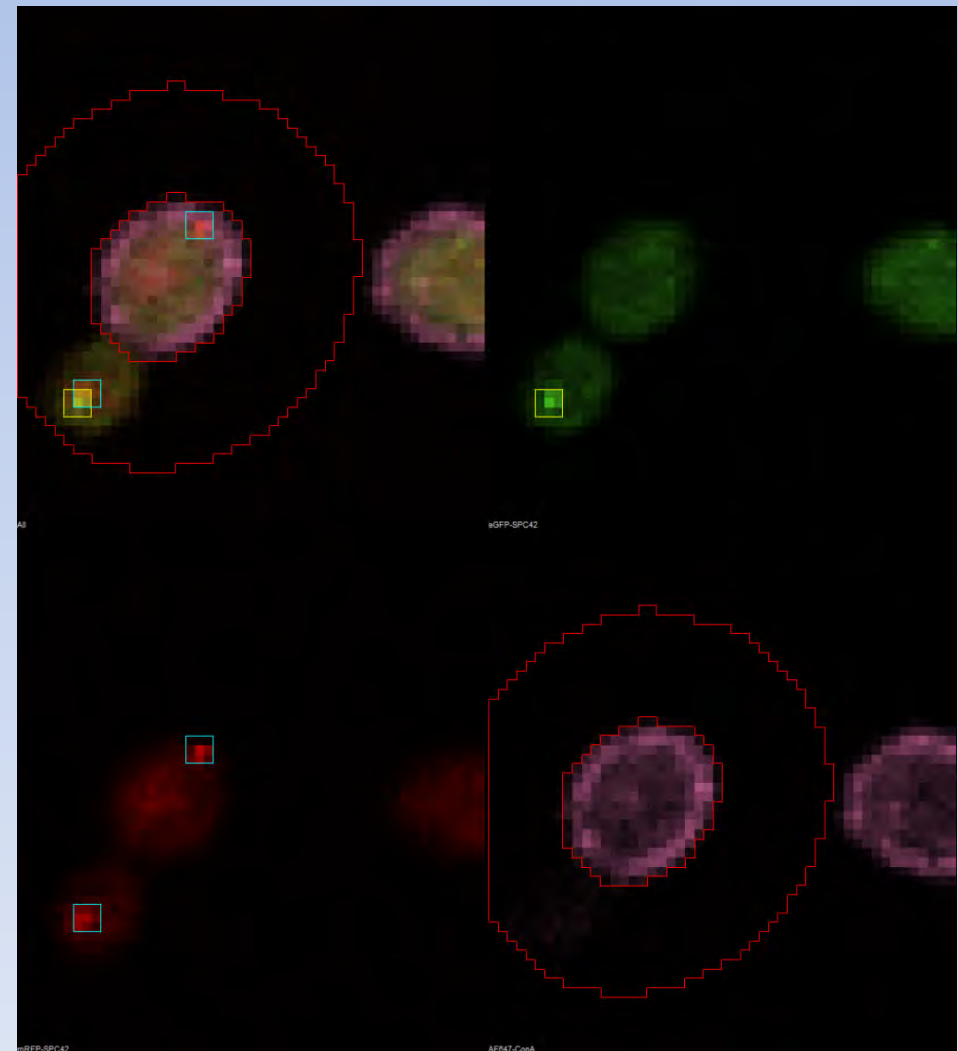
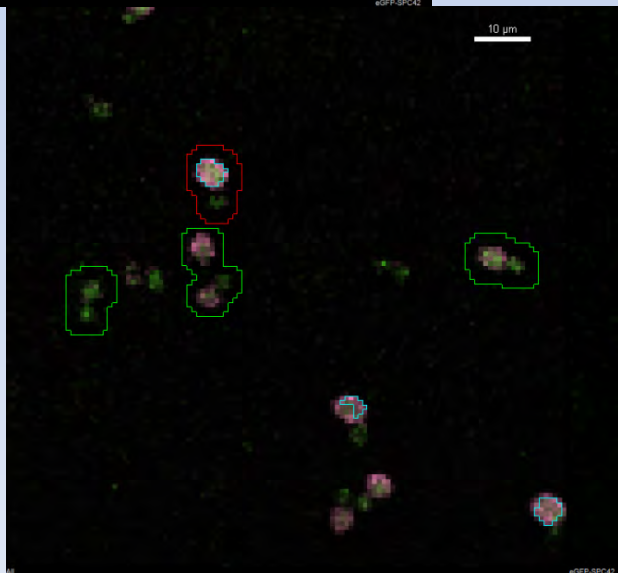
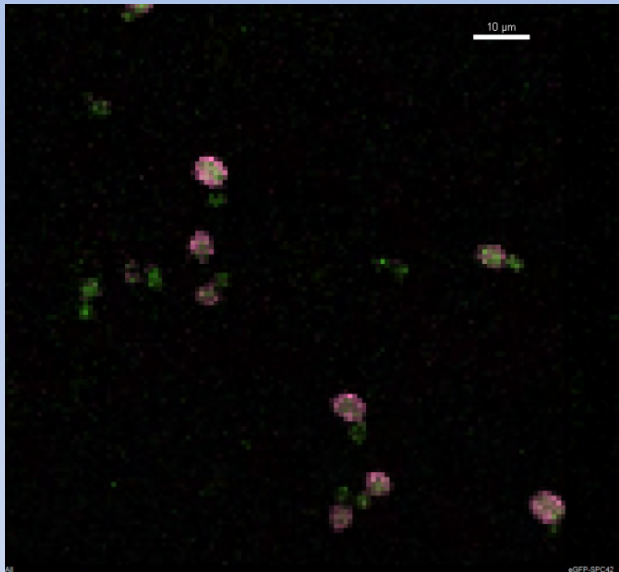
- Pre-trained algorithms
- Custom-trained algorithms



[https://www.microscope.healthcare.nikon.com/en\\_EU/products/software/nis-elements/nis-ai-1](https://www.microscope.healthcare.nikon.com/en_EU/products/software/nis-elements/nis-ai-1)

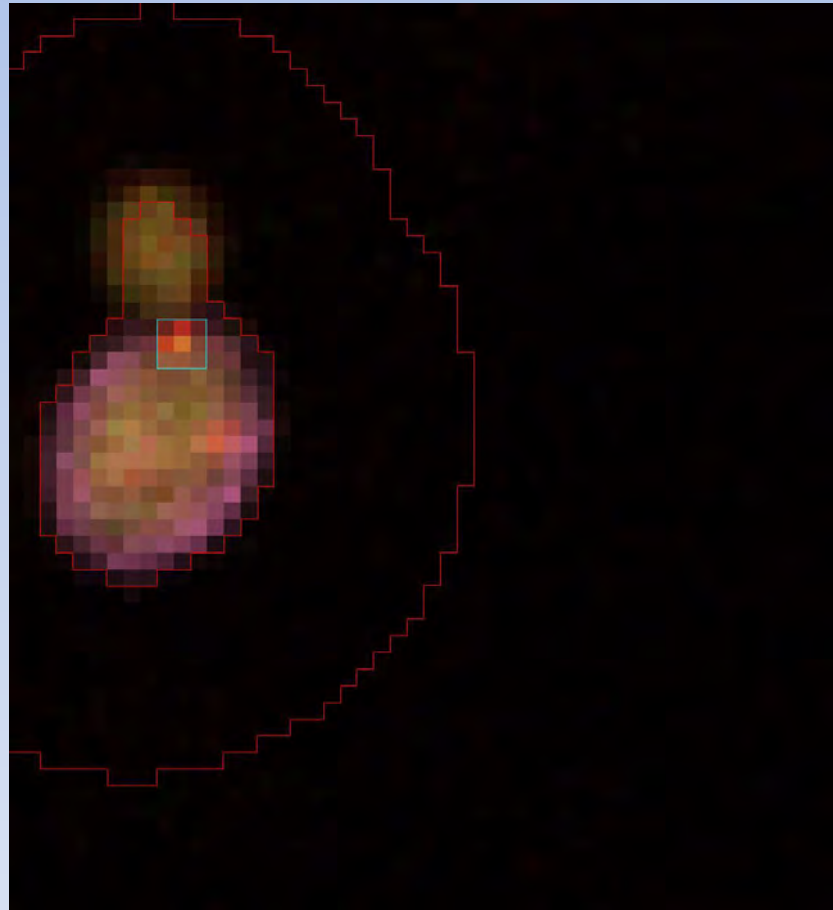
# Smart microscopy

- Embedded image analysis
- High content screening



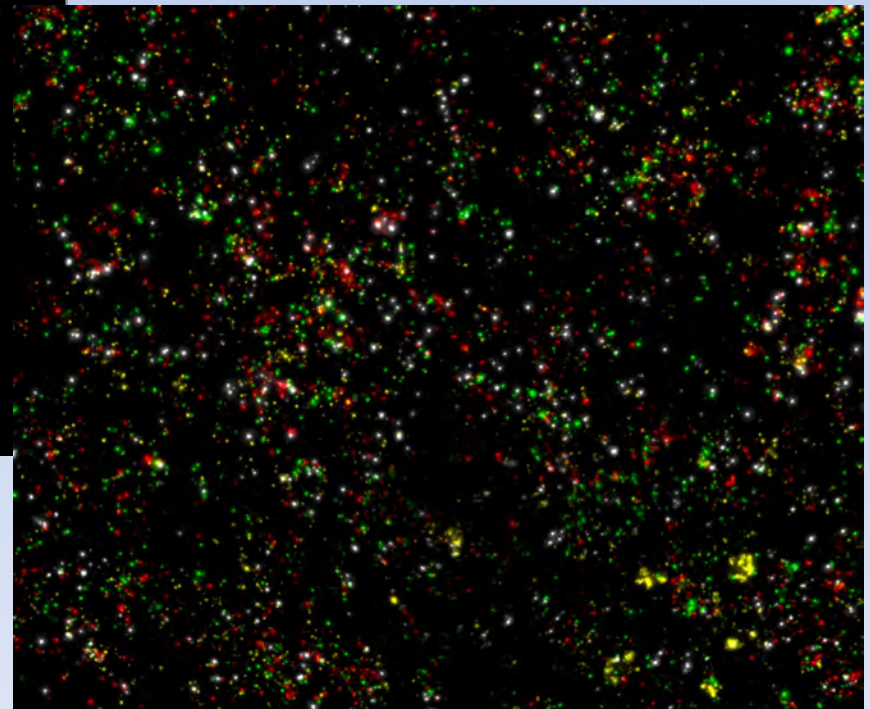
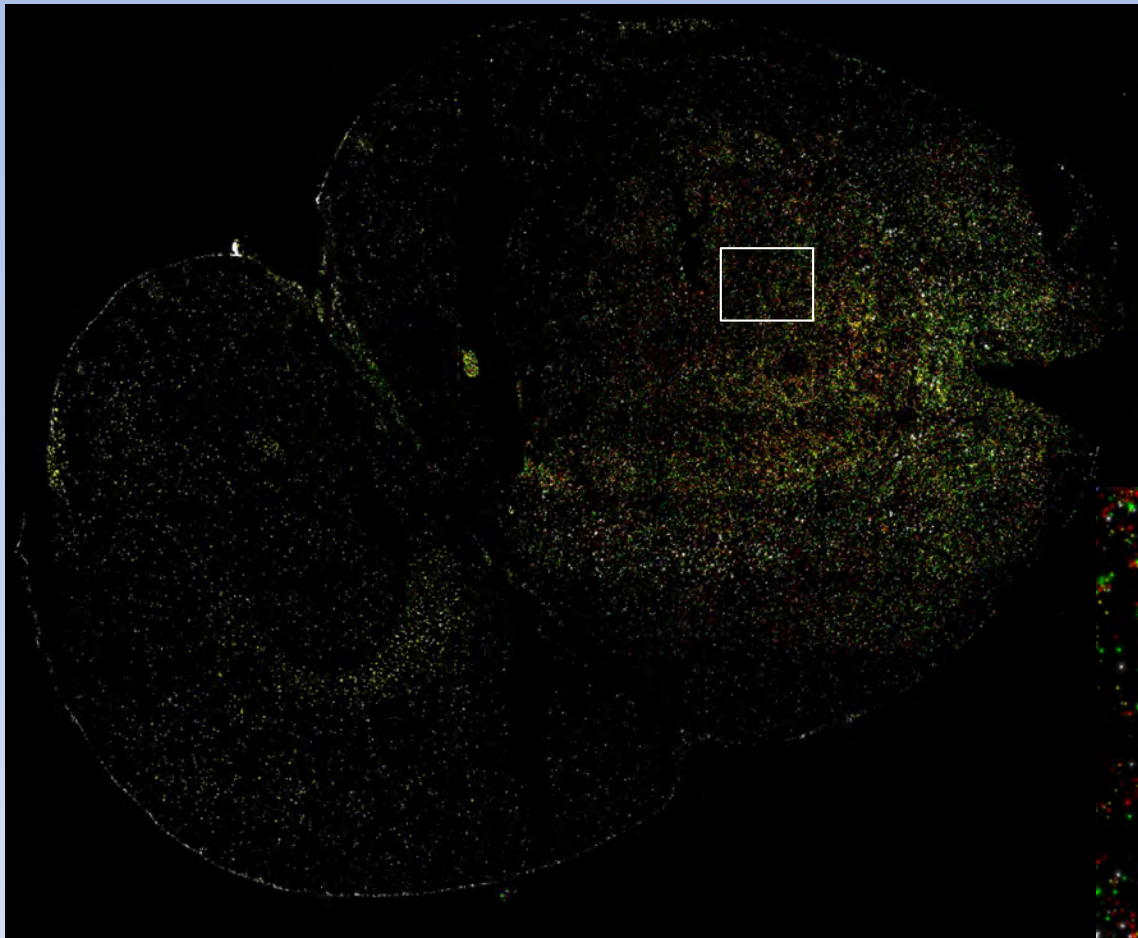
Alexander Julner

# Smart microscopy





# Multiplexing: 7 lasers, unlimited rounds of imaging



Maria Escrivá Conde

# Spatial transcriptomics

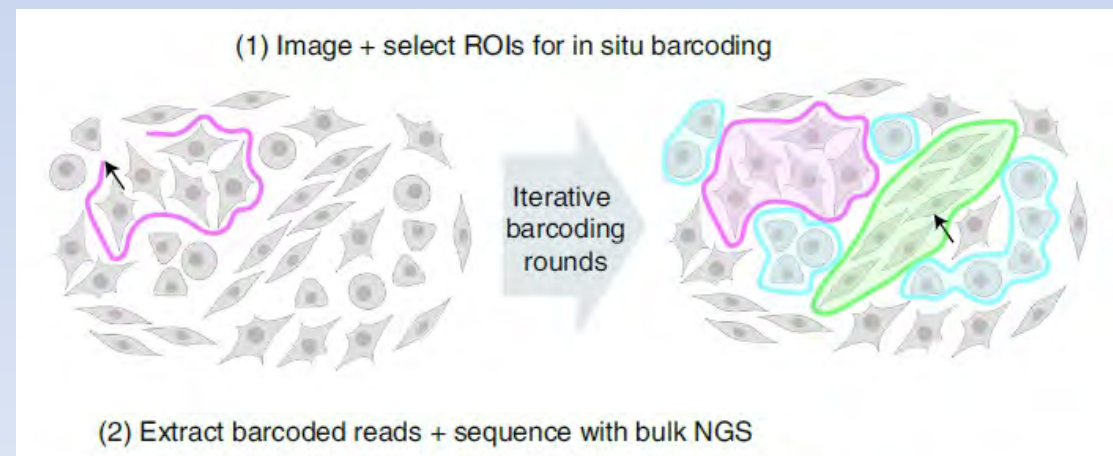
## Cytassist and Visium: LCI, SICOF, BEA

- Human or mouse whole transcriptome
- 2um spatial resolution
- FFPE and cryosections



## Light-Seq

- Light-selected regions
- Deep sequencing
- Sample preserved.







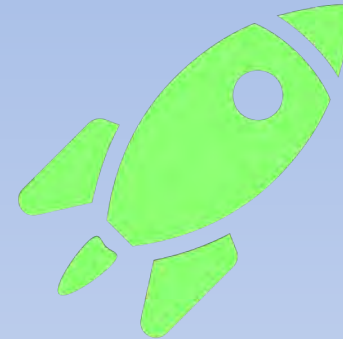
# Flexible pricing equivalent to BIC

- Training rated Good (26.7%) to Excellent (73.3%) by our users 😊
  - Discussion with tons of tips from sample preparation to image analysis
  - Enabling researchers to make educated choices: reliability and reproducibility
  - Hand-on training 5 sessions of 3h
    - Exclusively with your own sample
    - Sample and experimental design troubleshooting
    - Ample practice time and data collection: 3-6h of imaging on your own
    - Gives access to 2-3 microscopes
  - 9,000 sek (equivalent to 10,800 sek at BIC)
- Usage:
  - Hourly fees
    - 330 SEK /h office hours
    - 165 SEK/h after hours
    - 6h imaging: 1485 (1800 at BIC)
  - Memberships for heavy users (38 \*3h per year) with free access to Remote Desktop server
- Continuous, free post-training support for all (520/h SEK at BIC)
- Excellent microscope access
- Imaging-by-staff service

# Yearly microscopy course

Learn using

- You own sample
- Your own microscope
- Your own project





# The LCI core facility: High quality light microscopy equipment and support at your doorstep

Neo, 7th floor



Come and discuss your project with us! 😊



Gabriela  
Imreh



Jianjiang  
Hu



Sylvie Le  
Guyader

## LCI is expanding!

- One fast confocal at BSL3
- One fast confocal at Ana Futura?  
-> Survey: 80% support



# Questions?

- **Sylvie Le Guyader**, Live Cell Imaging core facility director
- <https://ki.se/en/research/research-infrastructure-and-environments/core-facilities-for-research/live-cell-imaging-core-facility-lci>



Questions from the staff

A decorative border consisting of numerous gold stars of various sizes, scattered across the top and bottom of the slide.

# ANA Futura



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# Questions?

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## Questions from the staff

# ANA Futura



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