

# ANA Futura information meeting



Karolinska  
Institutet



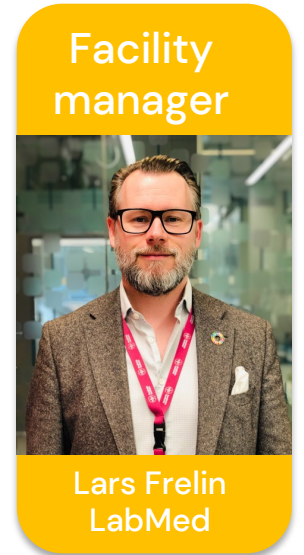
13 October 2023

# Agenda

- Welcome!
- Latest ANA Futura news – Lars Frelin, facility manager
- "What's new in the BSL3 facility" – Annika Karlsson, facility manager BSL3
- "Tick-borne encephalitis (TBE)" – Hung Tran, postdoctoral researcher, MedH
- Questions from the staff

# Latest ANA Futura news

- New research groups to ANA Futura – status with the relocation
- Update regarding the new touch down seats and meeting areas
- Rules for the ANA Futura meeting rooms
- Update from the ANA Futura service team



# New research groups to ANA Futura

- **Eight research groups** will relocate from Novum to ANA Futura (around 65 new staff)



**Samir EL Andaloussi**



**Joel Nordin**



**Edvard Smith and Rula Zain-Luqman**



**Anthony Wright**



**Caroline Palm-Apergi**



**Rainer Heuchel,  
Clintec**



**Olav Rooijackers,  
Clintec**



**Weimin Ye,  
MEB**



# Time plan for relocations

- **Weeks 40–44:** Internal relocations and adjustments in ANA Futura premises
- **Week 44:** Novum groups closes cell culture rooms. Disconnect LAF-benches, ventilation and incubators. Moving boxes and stickers are delivered.
- **Week 45:** Novum groups moves cell culture rooms and low-temperature freezers to ANA Futura
- **Week 46:** Equipment is connected in the cell culture rooms at ANA Futura
- **Weeks 46–48:** Novum groups moves remaining labs and offices
- Last day to move: December 31, 2023 (realistically December 22)
- Adjustments to ANA Futura premises (January – March 2024)

# Changes in the service team

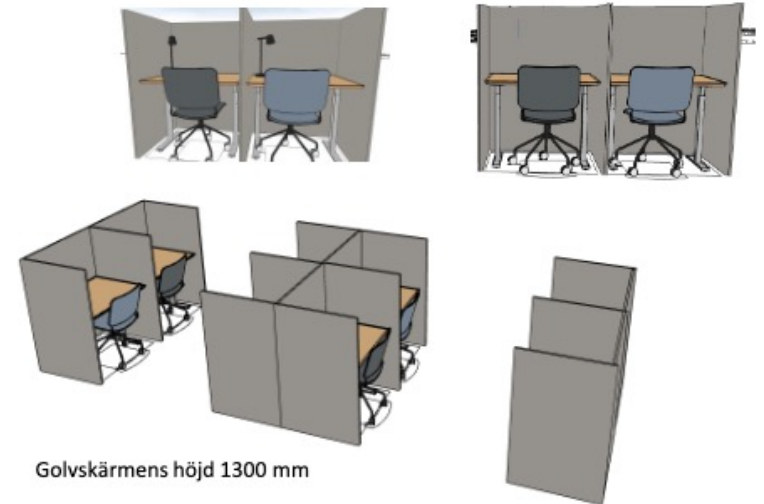
- Consultant Staffan Kjellgren will end his work in the service team at ANA Futura on October 15.
- From October 16 to December 31, Staffan will only work on Labmed:s relocations. Staffan will be financed solely by Labmed from October 16.
- The service team will be maintained with regular staffing.



# New touch down seats and meeting areas

- **The installation of touch down seats and pods is planned for early-mid November**

- Preparatory work will be initiated shortly, information will be communicated separately
- Office storage cabinets (in corridors) will need to be emptied prior to being moved to new localization



- **What will be installed?**

- A total of 38 attractive touch down seats will be installed in the office building (extension building) on floor 7 and 8, and 3 pods for meetings, and several open meeting areas



# Rules for the ANA Futura meeting rooms

- The meeting rooms in ANA Futura are intended to be used by the staff localized in ANA Futura
- Please use meetings rooms adjusted to the number of participants
- Meeting rooms are not intended as personal offices
- A few smaller conversation rooms will be converted to bookable meetings rooms. New pods will be available as conversation rooms
- Meeting rooms are not allowed to be used for educational activities with students (courses, exams etc.)
- Rules fully described on our webpage:  
→ [https://staff.ki.se/rules-for-booking-ana-futura-meeting-rooms?pk\\_vid=5fdf5b331828a393169711477570fe96](https://staff.ki.se/rules-for-booking-ana-futura-meeting-rooms?pk_vid=5fdf5b331828a393169711477570fe96)

ANA Futura - Möte - Calendar - lars.frelin@ki.se

Organisatör    Formatera text

Skicka    Avbryt    Avtalad tid    Schemaläggning    Teams-möte    Upptagen    15 minuter

Från: Calendar - lars.frelin@ki.se

Till:  Lars Frelin     ANA Futura Steinman Plan 9 (12 platser)

Ämne: ANA Futura

Plats: Microsoft Teams-möte; ANA Futura Steinman Plan 9 (12 platser)

Varaktighet:  30 minuter     Hela dagen

Börjar: 2023-10-13 08:00

Slutar: 2023-10-13 08:30

# Update from the Service team

- **How to contact the service team**
- **Primary way for contact:**
  - Send your tickets to: [serviceteam.anafutura@ki.se](mailto:serviceteam.anafutura@ki.se)
  - Webpage: <https://staff.ki.se/service-team-ana-futura>
- **Secondary way for contact:**
  - Telephone: 08-524 836 41
  - Talk to any member of the Service Team

# Update from the Service team

- **New routine for the evacuation freezers**
  - During “office hours”
  - During “non-office hours”
  
  - Routine will be posted on the ANA Futura webpage
  - Information will also be sent out by email
  - Evacuation freezers (4 freezers) are only intended for short term usage
  - Users are not allowed to move other researchers' material between freezers.



# Update from the Service team

- New colleague in the Service Team from 1 September 2023 – Maria Lunell
- >20 years experience from working at medical technology at Karolinska University Hospital



# Questions?

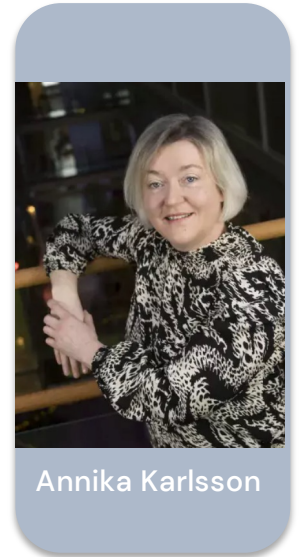
Facility  
manager



Lars Frelin  
LabMed

# “What's new in the BSL3 facility”

- **Speaker: Annika Karlsson**, facility manager BSL3
- Presentation: **“ANA Futura BSL3 Core Facility”**
- Webpage: <https://ki.se/en/research/ana-futura-bsl3-core-facility>



Annika Karlsson



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# ANA Futura BSL3 Core Facility

Annika Karlsson  
Facility Manager  
CIM, MedH



# ANA Futura BSL3 Core Facility – Organization

## MedH/CIM

- Petter Höglund, Prefekt
- Klas Karlsson, AC
- Johanna Sandelius, Head of finance
- Anna Norrby-Teglund, Head of CIM

## ANA Futura BSL3

- Annika Karlsson, Facility Manager
- Jagadeeswara Rao Muvva – Research Specialist

## ANA Futura BSL3 Core Facility Group

- Johan Sandberg, Chair
- Annika Karlsson
- Jagadesh Rao Muvva
- Lars Frelin
- Jakob Michalesson
- Susanna Brighenti

# Biosafety level 3 (BSL3) laboratory

- Purpose – to host pre-clinical and clinical research needs for work with infectious microorganisms – pathogens that can cause severe human disease and may be transmitted through air
- Our safety regulations are established together with researchers at KI, the ANA Futura BSL3 Core Facility management group, central administration, the biosafety coordinator at KI, and representatives from the Public Health Agency of Sweden (Folkhälsomyndigheten)
- Risk and consequence analysis
  - Conducted for each microorganisms and type of work to be conducted
  - Decontamination processes evaluated for each technique and each microorganism



# ANA Futura Biosafety Level 3 (BSL3) Core Facility

- 200m<sup>2</sup>
- Laboratory designed for **safe handling and research**
- Windows – security for staff in the lab
- Independent fire module
- Independent HEPA filtered airtation

## Personal protection equipment - PPE

- Coat and trousers - water/chemical resistant
- Powered Air Purifying Respirator Masks - PAPR
- Virus and ethanol resistant gloves
- Shoes
- Plastic apron/sleeves in the lab

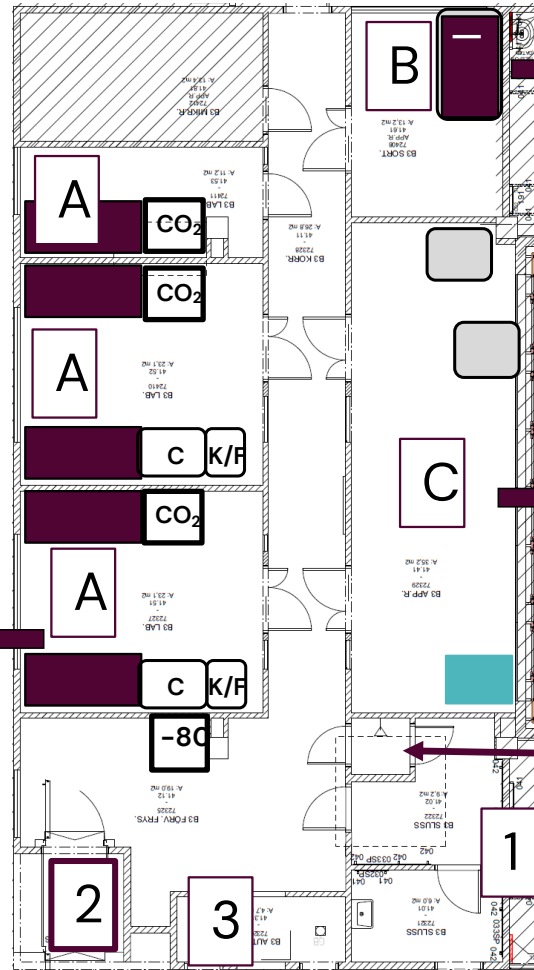


# ANA Futura BSL3

## Lab-rooms:

- A: Cell modules
- B: FACS sorting room
- C: Equipment, u-cfg, chemicals,..

MSC-II



Emergency shower

- 1) Personal lock w emergency shower
- 2) Sluss - VHP / Material / Air - lock
- 3) Autoclave - all waste, protective clothing

# What we offer

- The BSL3 Core Facility supports
  - large-scale propagation and concentration of infectious microorganisms
  - antimicrobial screening
  - analysis of pathogen-host interactions
  - Tissue/organoids/in vitro culture work
- We can provide you with support and training throughout your research project.

ANA Futura information meeting, Karolinska Institutet.

- Automatic pipetting device
- Sony MA900 cell-sorter
  - 12 fluorescence parameters and 4-way sorting
- 10X Chromium controller
- Tecan Spark multi-mode reader:
  - absorbance
  - fluorescence
  - luminescence
  - Alpha screen technology
- Ultra-centrifuge, centrifuges
- Microscopes with cameras,
- Cell counter
- CO2 Incubators
- Fridges, -20 to -80°C freezers
- PCR machine

# Notifications and permits

- The BSL3 Core Facility has permits and notifications from the Swedish Work Environment Authority to store and work with several infectious microorganisms
  - ***Coronaviridae (Coronavirus)***: SARS-CoV-2
  - ***Retroviridae (Retrovirus)***: Human immunodeficiency virus (HIV)
  - ***Hantaviridae (Hantavirus)***: All strains within the hantavirus family, including HFRS-causing viruses: Puumala virus, Dobrava virus, Hantaan virus, Seoul Virus and others; HPS-causing hantaviruses: Andes virus, Sin Nombre virus and others.
  - ***Flaviviridae (Flavivirus)***: Tick Borne Encephalitis Virus (TBEV), Dengue virus (DENV), Japanese encephalitis virus (JEV), Yellow fever virus
  - ***Flaviviridae (Hepacivirus)***: Hepatitis C-virus
  - ***Hepadnaviridae (Orthohepadnavirus)***: Hepatitis B virus
  - **Deltavirus**: Hepatitis delta-virus
  - ***Mycobacterium tuberculosis – including R-activity GMM***

# Increasing number of internal KI users!

- 4 groups have access
- 3 groups in training
- *Access to the ANA Futura BSL3 Core Facility is preceded by the fulfilment of entry requirements which encompass understanding the risks associated with the handling of the pathogens used in the facility and understanding how to perform experiments with the pathogens in a safe manner*

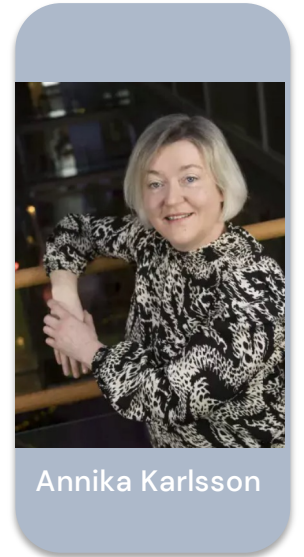
# Our web – page

- <https://ki.se/en/research/ana-futura-bsl3-core-facility>
  - Already a user – book our services through iLab
  - Contact info
- [Our offer](#)
- [User guidelines](#)
- [About Us](#)
  
- Contact us
  - Email: [bsl3-anafutura@ki.se](mailto:bsl3-anafutura@ki.se)



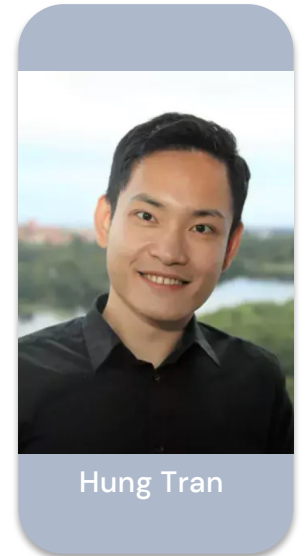
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# “Tick-borne encephalitis (TBE)”

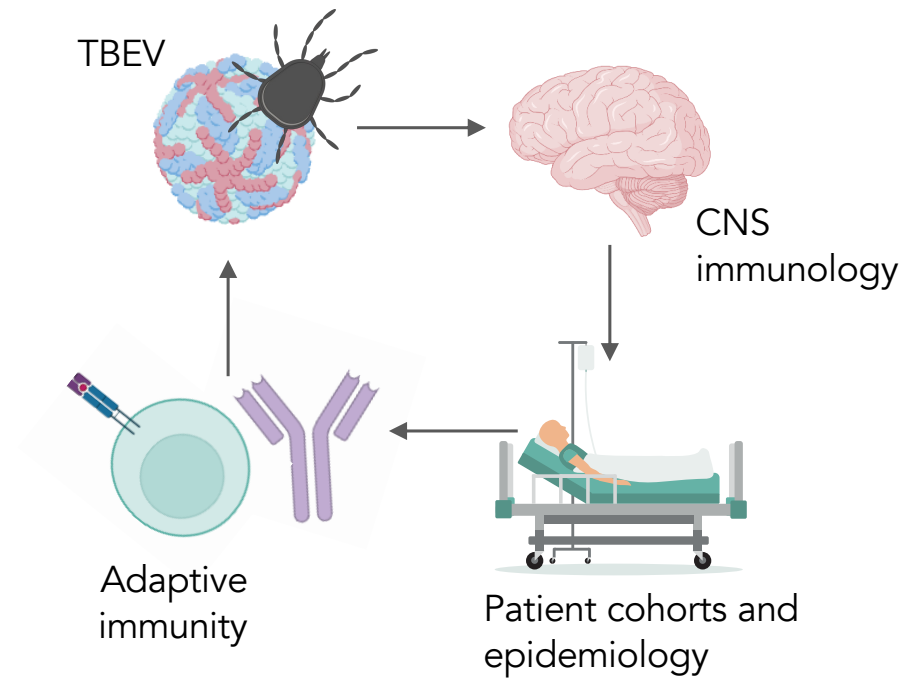
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# Tick-borne encephalitis (TBE)

Studies on a complex disease  
from a detailed  
clinical, immunological  
and virological standpoint

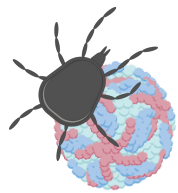
Sara Gredmark Russ group



# Tick-borne encephalitis virus (TBEV) – an emerging viral infection



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Transmitted to humans by infected ticks



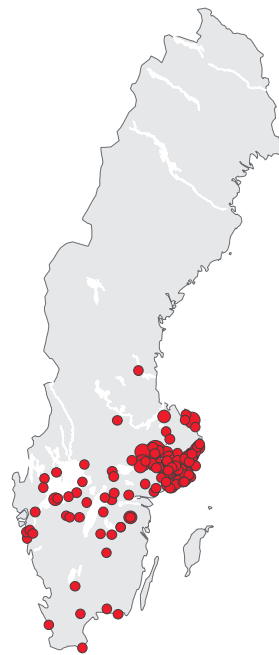
Causes CNS symptoms



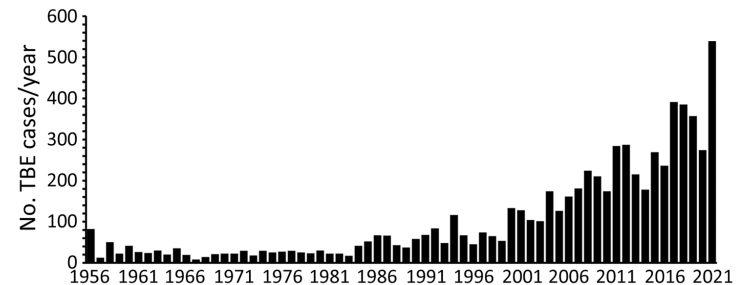
Vaccine preventable disease



No specific therapy exists



Lundkvist et al., 2011, *Euro Surveill.*



Slunge et al., 2022, *Emerging Infectious Diseases*

TBE incidence is increasing in Sweden despite available vaccines

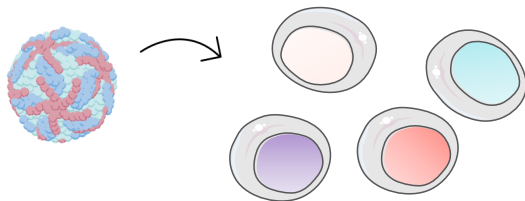
Vaccine failures are reported in up to 5% of cases

*To develop better vaccines and therapeutics we first need to understand the disease mechanism!*

# Virus-host interaction studies in ANA Futura BSL-3

To understand how TBEV affects host cells in order to develop antivirals and improved immunization strategies

- TBEV Sofjin strain from the Swedish Public Health Agency.
- Cell lines: A549, U87-MG, HEK293, Vero,..
- Knock-in and knock out cell lines
- Primary cells: mouse neurons, differentiated human neurons,...
- Experiments inside the BSL3:
  - Virus infection, immuno focus plaque assays
  - Prepare samples for IF staining, WB, qPCR,...

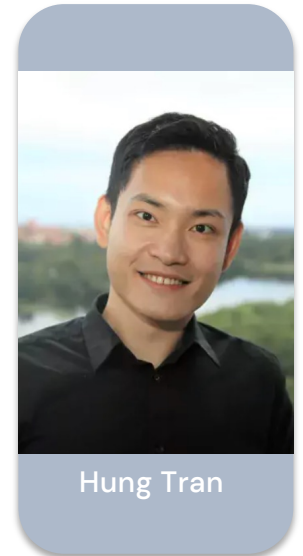


TBEV in vitro infections in BSL-3 lab



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## Questions from the staff

# ANA Futura



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