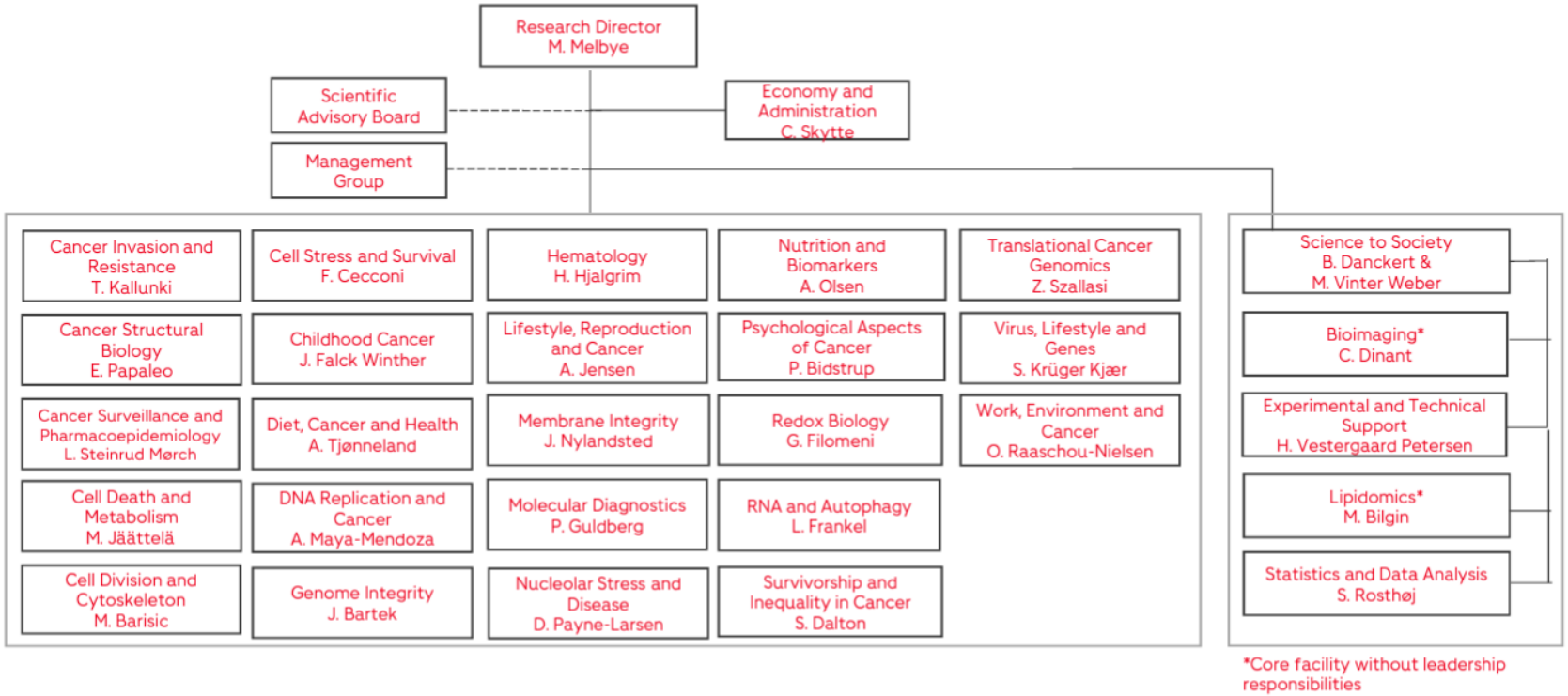
Core Facility for Bioimaging, Danish Cancer Society Research Center

Chris Dinant, Head of Core Facility

Danish Cancer Society Research Center 2022



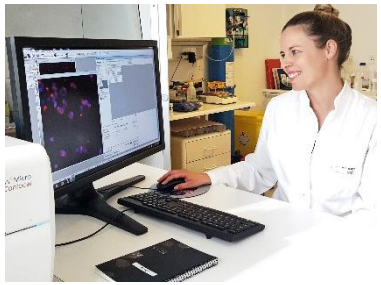
*Core facility without leadership responsibilities

June 2022

23 groups, 5 core facilities, 250 researchers

Core Facility Organization

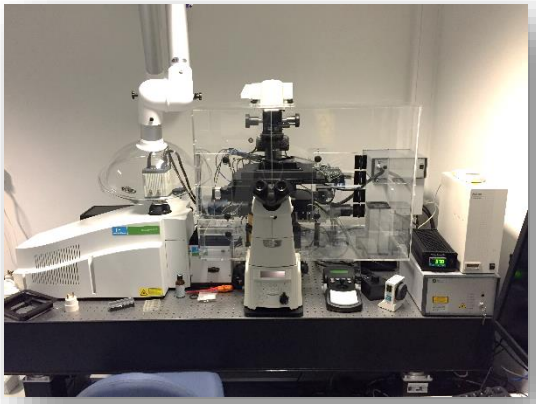
- 2 staff, Tiina Naumanen Dietrich and Chris Dinant
- >60 regular internal users from 10 groups
- 57 users do high content screening (up from ~36 in 2021)
- 10 bookable microscopes and 4 workstations
- 15000h booked in 2021 and 2022.
- External users from early 2023
- Research
  - Basic and translational cell/molecular biology
  - Genome integrity, autophagy, mitosis, metabolism
  - We image nuclei, cytoplasmic organelles, nucleoli, membranes, spheroids, DNA fibers etc



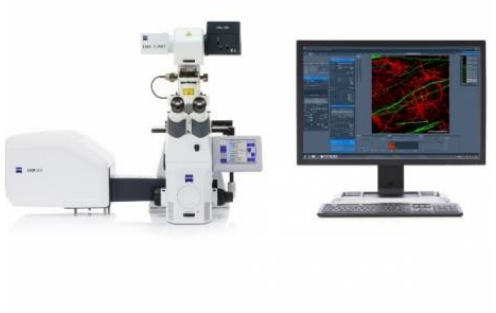
Olympus (Evident) ScanR

Molecular Devices ImageXpress Microconfocal HT.AI

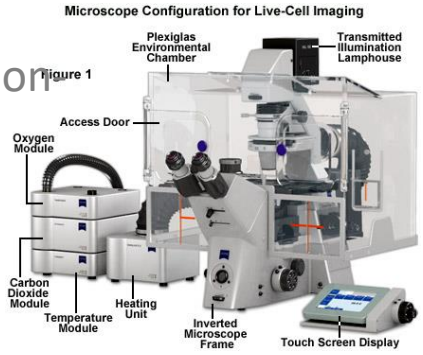
Perkin Elmer Ultraview Vox, soon replaced by Crest X-Light V3
Laser ablation



Zeiss LSM700 and 800 (airyscan)



Other live- and non-live-cell fluorescence widefield microscopes



Opening to external users

- Early 2023 we will allow external users on two machines
  - The Zeiss Elyra 7 and Cell Discoverer 7

Zeiss Elyra 7

- Lattice SIM
- SIM^2 (60nm)
- 3D SMLM
- Duolink two cameras

- Fast live-cell SIM resolution.

Zeiss Cell Discoverer 7 with LSM900

- Installed last month
- 7 excitation leds for widefield
- LSM900 with airyscan
- Automatic water immersion
- Automatic sample identification
- Environmental control
- ZEN and Arivis4D software

Challenges

- Analysis as a service
  - Image analysis, data analysis, 3D
- Core facility development
- Career development
- Communication