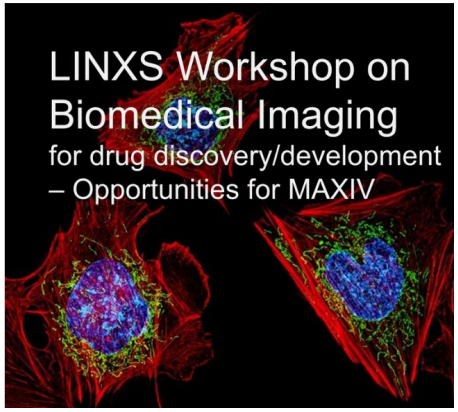

Program

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Panel: Speakers above and Jens Lagerstedt, Novo Nordisk

12:30-13:30 Lunch

LINXS

LUND UNIVERSITY

LINXS Workshop on Biomedical Imaging

for drug discovery/development – Opportunities for MAXIV

LINXS

LINXS INSTITUTE OF ADVANCED NEUTRON AND X-RAY SCIENCE

Integrative Pharmacology and Drug Discovery

From structure-based drug design of small molecules and macromolecular drugs to their interplay with tissue and its formulation

Core Group

Karin Lindkvist,
Professor,
Medical Structural Biology,
Lund University

Raminta Venskutonyte,
Assoc. Researcher,
Medical Structural Biology,
Lund University

Anna Stradner,
Professor,
Physical Chemistry,
Lund University

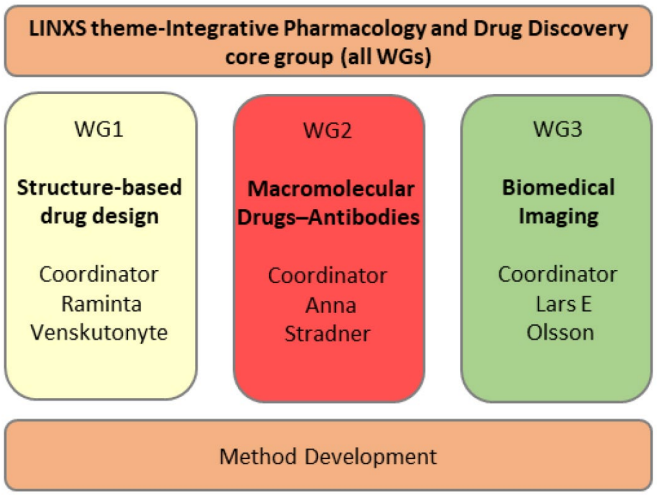
Lars E Olsson,
Professor,
Hospital Physicist
Medical Radiation Physics,
Lund University

Gisela Brändén,
Senior Lecturer,
Department of Chemistry & Molecular Biology,
Göteborg University

Mikael Dohlsten,
CSO and President,
Worldwide R&D and Medical - Pfizer Inc.

Image Credits: National Institutes of Health, NIH

INTEGRATIVE PHARMACOLOGY AND DRUG DISCOVERY



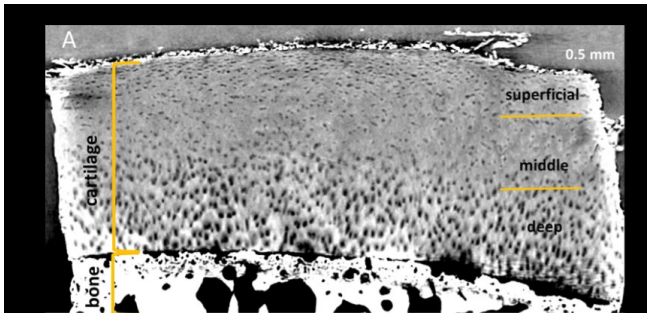
Structure-based drug design
Structure-based drug design aims to use structural biology methods to understand the molecular recognition and binding of potential drug compounds by their target proteins.

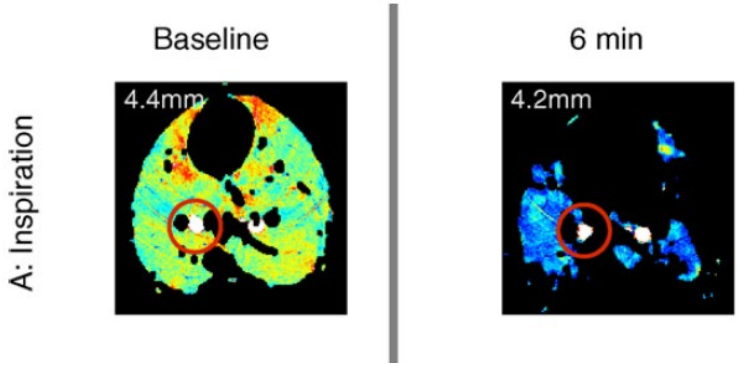
Macromolecular Drugs–Antibodies
Provide a framework for a concerted experimental and theoretical research to advance our understanding of antibody solutions.

Biomedical Imaging
Aims to facilitate the use of imaging from MAX IV and ESS for drug discovery and development. Imaging of tissue ex-vivo as well as in-vivo imaging will be within the scope.

IPDD BioMedical Imaging
Mission and purpose

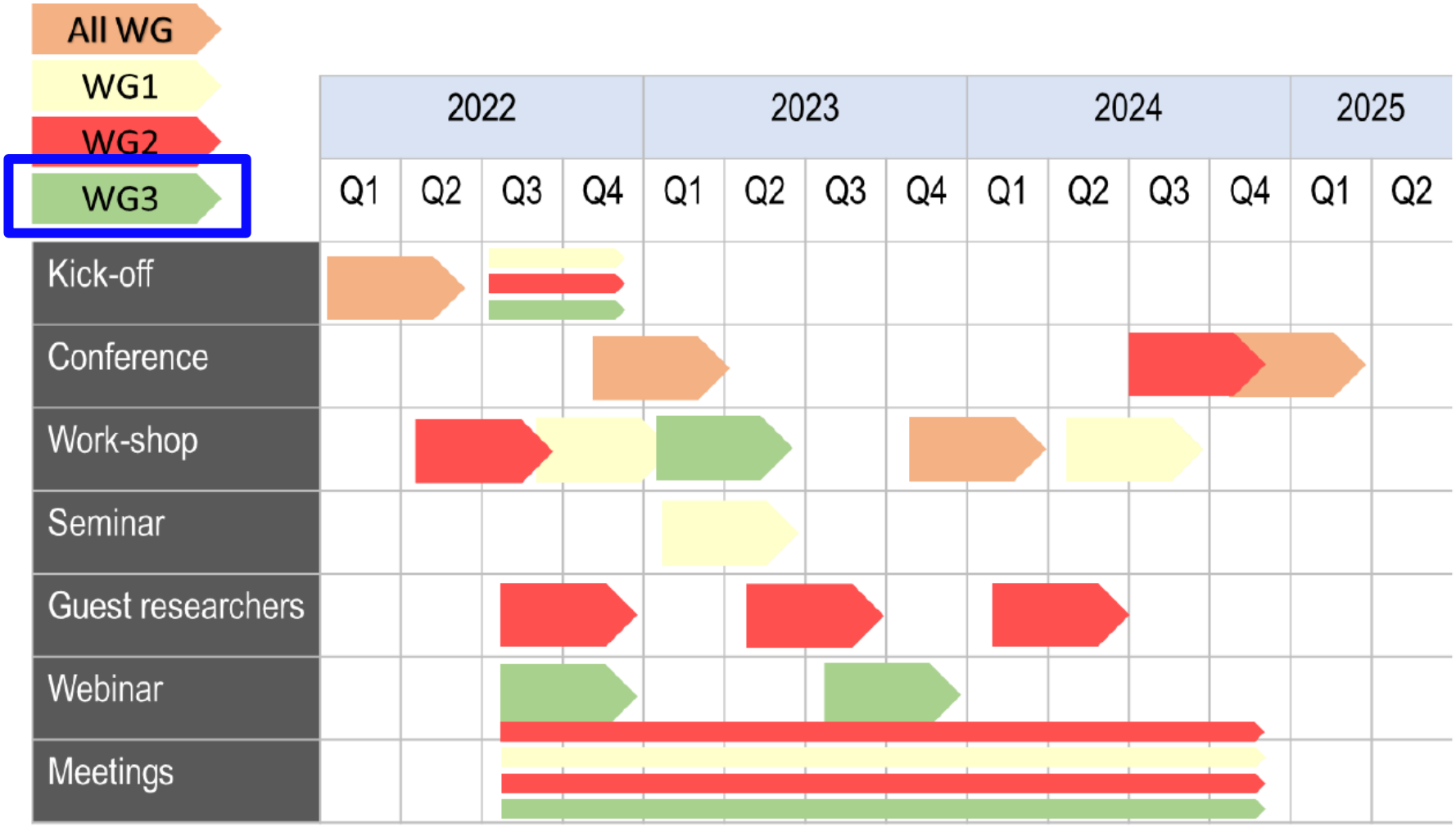
- The mission of the working group is to provide an arena for scientists to meet around “Biomedical Imaging” for drug discovery and development.
- In that arena scientists from academia and industry can gather and learn about synchrotron imaging, drug development and how imaging can benefit the drug development process
- Tissue -> in-vivo





Horng et al., 2021

Bayat et al., 2006


All WG
WG1
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2025
Q1
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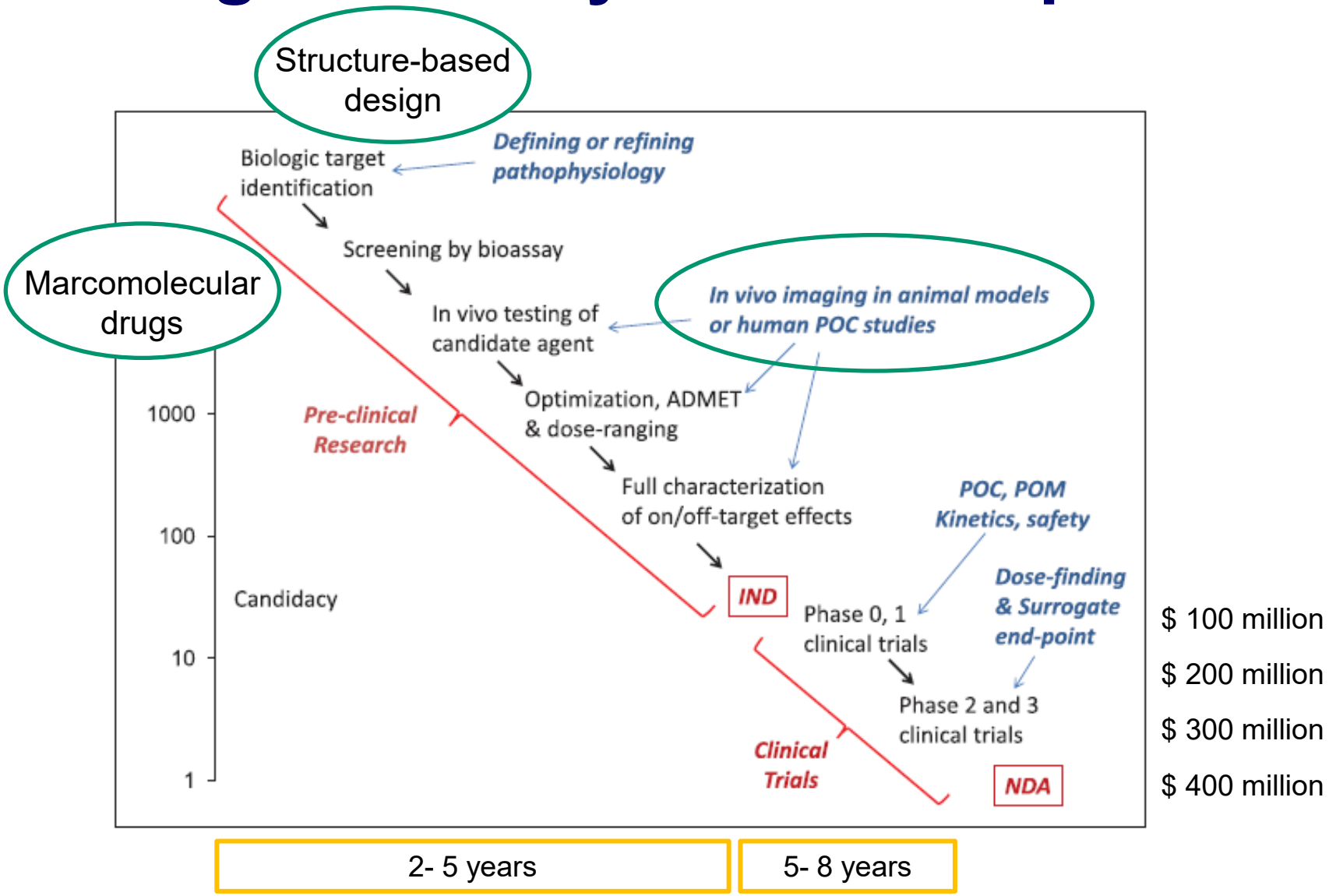
Q3
Q4
Q1
Q2
Q3
Q4
Q1
Q2
Kick-off
Conference
Work-shop
Seminar
Guest researchers
Webinar
Meetings

BioImaging group
active members

- Sam Bayat, MD PhD, Professor Grenoble
- Martin Bech, PhD, Associate Professor Lund
- Leif Hultin, PhD AstraZeneca
- Isabel Goncalves, MD, PhD, Professor Malmö
- Hanna Isaksson, PhD, Professor Lund
- Oxana Klementieva, PhD Associate professor Lund
- Emanuel Larsson, PhD Lund
- Rajmund Mokso, PhD, Senior Scientist, DTU Copenhagen
- Anja Schmidt-Christensen, PhD, Associate Professor Lund
- Karin Tran-Lundmark, MD, PhD Lund

Drug discovery and development



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12:30-13:30 Lunch

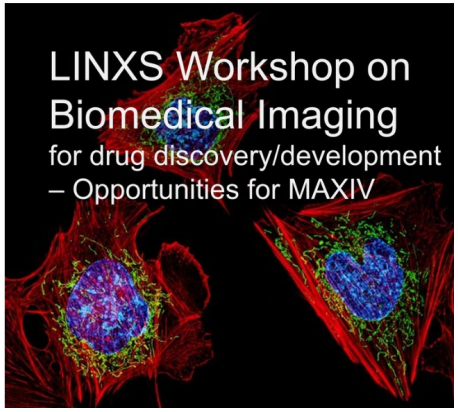
BioMedical Imaging – MAX IV

We need

- to understand what are the unmet needs in Pharma we can address with synchrotron imaging
- to understand what MAX IV can perform in terms of imaging, which we cannot be matched by conventional imaging, (tissue -> in-vivo)
- to provide (of find elsewhere) examples of these possibilities
- to work on present synchroton facilities in parallel

ToDo

- Power point slide deck
  - 2022, Q2 – MAX-IV imaging capabilitites
  - 2022, Q2 – Imaging examples on synchrotron ex-vivo and in-vivo imaging
  - 2022, Q3 – Outreach 1 – volunteer to participate and give webinars in various existing seminar series
- 2022-23 Pharma stakeholder engagement
- 2024, Experimental task group
- 2022, Q4 Educational webinar
  - 2023, Q1 – Outreach 2 – host webinar on Biomedical Imaging for drug studies
- 2023, Q3 1st Workshop on Biomedical Imaging for drug studies – MAX IV



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