

Subject: DCM-TAP is opening for projects

Dear Colleagues,

Following funding from the Novo Nordisk Foundation to establish the Danish Center for Mouse Transgenics and Advanced Phenotyping (DCM-TAP), we have spent much of 2026 recruiting specialized staff, procuring and installing new equipment, and establishing new techniques. We are now opening the first DCM-TAP services to researchers at SDU. Additional capabilities will become available progressively as new platforms and methods are established and validated.

DCM-TAP is an infrastructure facility comprising three complementary cores covering transgenic mouse model generation, advanced phenotyping, and microsurgery, providing integrated support from model generation to functional characterization and experimental disease modelling. DCM-TAP works closely with the Biomedical Laboratory (BML), which provides the animal facilities and associated reproductive and technical services supporting the infrastructure.

Below you will find information from the transgenic core, the phenotyping core and the microsurgery core.

Please feel free to forward this newsletter to your groups and colleagues. We are also happy to add interested researchers to our mailing list for future DCM-TAP news and updates.

TRANSGENIC CORE

The Transgenic Core supports researchers from initial model design through generation and validation of genetically modified mouse models, working closely with ReproLab (BML) for embryo manipulation and reproductive services.

Advice on mouse model design and selection is always available, including discussion of the most appropriate strategy before starting a project.

Prices for simple knockout and point-mutation models start at approximately DKK 20,000 and DKK 25,000, respectively, for internal users (SDU/OUH). Projects include in vitro testing of CRISPR guide RNAs and development of a validated genotyping protocol. A project-specific cost estimate is provided before initiation.

In utero electroporation (IUE) enables targeted gene manipulation, including overexpression and knockdown, in specific brain regions of developing mouse embryos. The facility supports experimental design and gene manipulation from embryonic day 12 to 16 (E12-E16). We also offer in utero injection of AAV and lentiviral vectors for CRISPR-based gene perturbations in the developing mouse brain.

Available now:

- Development of CRISPR/Cas9 gene knockout models
- Development of CRISPR/Cas9-mediated point mutations and small knock-ins
- In vitro testing of CRISPR guide RNAs
- Development and optimization of genotyping assays
- IUE in mouse models from embryonic day 12 to 16 (E12-E16)
- In utero injections of AAV/lentiviral particles (user-provided) for CRISPR perturbations from embryonic day 12 to 16 (E12-E16)

Currently being established:

- Generation of medium and larger targeted knock-in modifications
- More complex genetically modified mouse models (e.g. large floxed deletions)
- Expanded viral-vector approaches, including AAV and lentiviral applications
- In vitro electroporation in brain slice cultures and organoid models
- IUE in rats can be established on demand

Please contact Henrik Dimke (hdimke@health.sdu.dk) and Nicholas Ditzel (nditzel@health.sdu.dk) to discuss a new transgenic project and contact Arun Mariappan (mariappan@health.sdu.dk) for information on IUE.

PHENOTYPING CORE

The Phenotyping Core provides infrastructure and expertise for detailed in vivo characterization of mouse models across renal, cardiovascular, metabolic, neurological and behavioural physiology.

Available now:

- Rotarod
- Hargreaves
- Grip strength test
- Beam balance
- Open field test
- Y-maze test
- Elevated plus maze test
- Urinary and fecal electrolyte and volume determination

Currently being established:

- Comprehensive metabolic phenotyping
- Activity and movement monitoring
- Behavioural and cognitive phenotyping
- Gait and motor-function analysis
- Additional cardiovascular and physiological phenotyping platforms

Please contact Kate Lykke Lambertsen (klambertsen@health.sdu.dk) and Bettina Hjelm Clausen (bclausen@health.sdu.dk). For renal function studies, contact Henrik Dimke (hdimke@health.sdu.dk).

Isak Sidenius has been appointed to support the Phenotyping Core and will take on the coordination of the facility once he is fully established in his new role. In the meantime, all use of the core facility, including access and bookings, should be coordinated through Kate Lykke Lambertsen and Bettina Hjelm Clausen.

MICROSURGERY CORE

The Microsurgery Core provides specialized infrastructure and expertise for the development and performance of experimental surgical models.

Available now:

- Leica operating microscopes and dedicated microsurgical workstations
- Support for development and optimization of surgical animal models
- Microsurgical training and methodological support

- High-quality microscopic photography and video documentation in the BML rodent barrier facility

Currently being established:

- A microsurgery training classroom is under development in the area adjacent to the BML barrier facility. It is expected to open for use in September 2027

Please contact Peter Zvara (pzvara@health.sdu.dk) and Katarina Zvarova (kzvarova@health.sdu.dk) for additional information on the microsurgery core.

We encourage researchers to contact DCM-TAP early when planning a project. We can help assess feasibility, identify the most appropriate approach, and discuss experimental design, timelines and expected costs. We will continue to announce new services as additional platforms and techniques are established and validated.

On behalf of DCM-TAP,

Kate, Peter and Henrik