Submitted on Fri, 08/28/2026 - 13:33

Name of PI

Hanna Isaksson

PI e-mail

hanna.isaksson@bme.lth.se

Faculty/Department

Biomedical Engineering

Telephone

0768607255

Cost center

107231

Responsible researcher

Kunal Sharma

E-mail, researcher

kunal.sharma@bme.lth.se

Name of Dept. economist

Ammi Lindgren

Project title

Tomography cup holder print

Aim of project

The project aims at standardizing the design for sample holders used for biological tissue imaginig at MAXIV specifically for tomography applications.

Scientific background

Tomography experiments require sample holders that can stabilize biological tissues which in some cases are imaged fresh or in liquid to preserve natural tissue properties and morphology. These sample holders would ideally have very thin walls. To that extent we are applying for access to more advanced 3D printers within microfluidics.

Motivation for need of microfluidics

The thin walls are an engineering requirement of the sample holders. This requires us to search for options outside of traditional extruders at BME.

Expected outcome

Different sample holder designs will be used at an upcoming beamtime at MAXIV during September 14-18 2026. The expected outcome is a standardized design that can be used for printing sample holders for biological applications within tomography at MAXIV focusing on investigations in tendon healing, cartilage degeneration among others.

Acknowledgements

Yes