

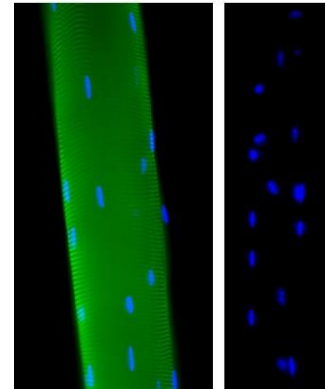
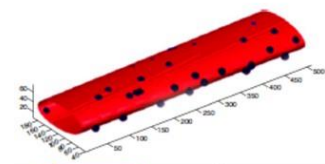
The Missing LINC To Human Healthy Muscle

Background

Mutations in proteins of LINC complex (= proteins of the nuclear envelope) are associated with early contractures, muscle weakness and diseases named congenital muscular dystrophies. The mechanisms by which these particular mutations deteriorate muscles remain obscure.

The project

In muscle fibres, nuclei are multiple and regularly distributed, allowing an optimal control of gene transcription. As LINC mutations affect the nuclear envelope, you will test the following hypothesis: the nuclear distribution is highly disrupted, impairing nuclear communication, gene transcription and overall muscle fibre function, explaining congenital muscular dystrophies. To test this hypothesis, you will use human tissue from patients and healthy controls. You will then isolate muscle fibres and run a series of experiments including immunohistochemistry and advanced imaging.



At the end of this project, you should be able to: (1) master state-of-the-art cell biology techniques; (2) apply advanced microscopy approaches; (3) generate and analyze large sets of data; (4) synthesize the findings by writing a publishable scientific paper.

The candidate

The project is suitable for a Master thesis in Human Biology, Human Physiology and Molecular Biomedicine. Note that an animal experimental course is NOT needed to participate in this project as muscles have already been harvested and ready to be analyzed.

Place of project and contact information

You will become a member [of the Xlab at the Department of Biomedical Sciences](#), located on the 2nd floor of the Maersk Tower. For more information, please contact Associate Professor Julien Ochala (Julien.ochala@sund.ku.dk).