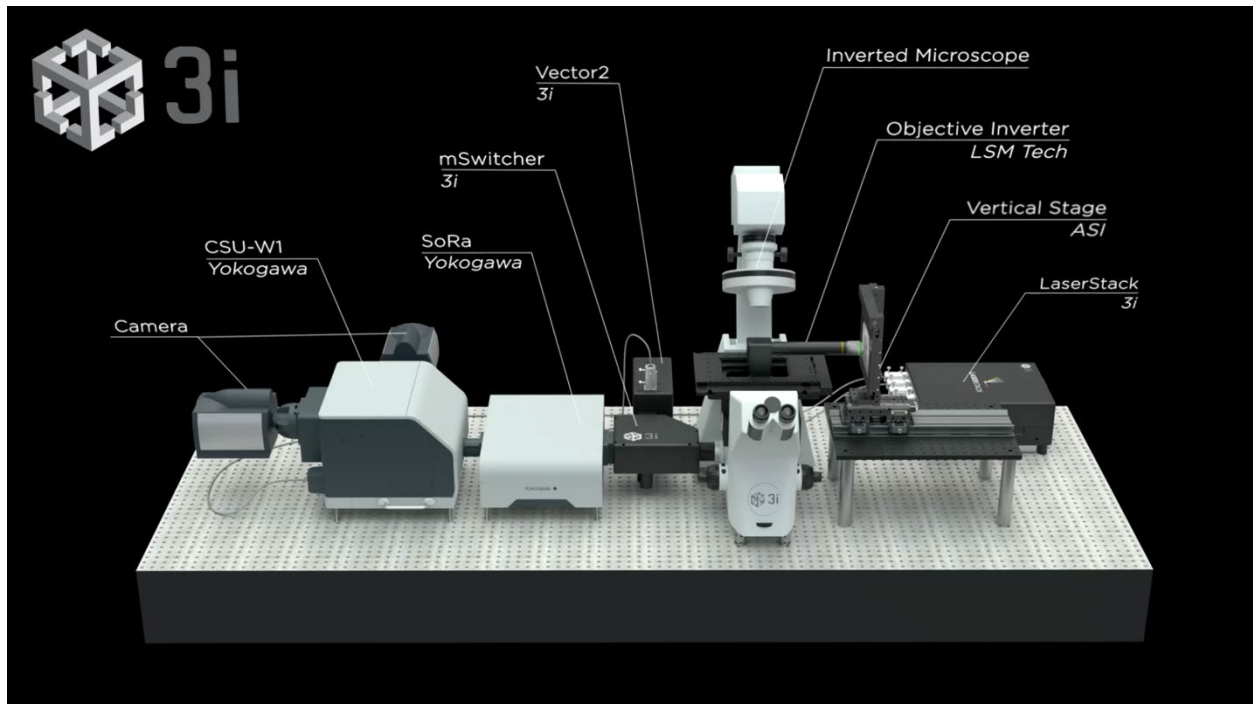


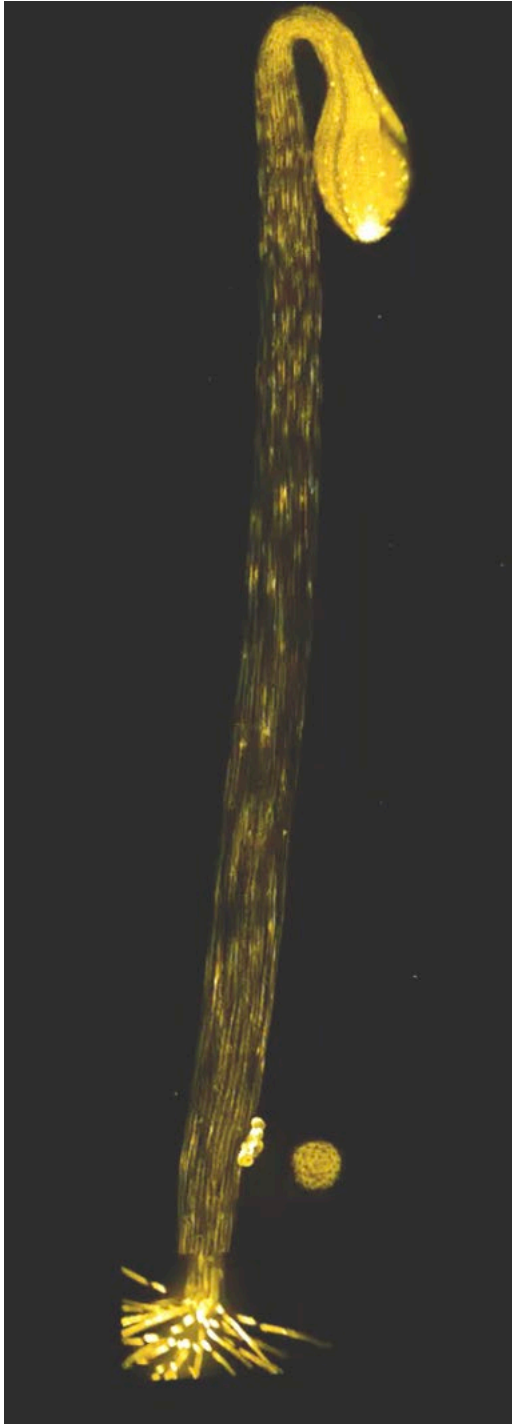
## 2021 – Annual Highlights (Eng)

In brief, the D NRF Chair grant (DNRF155) started July 1<sup>st</sup>, 2021. During the period July 1<sup>st</sup> to end of year, 2021, we successfully hired the personnel associated with the D NRF award activities and the projects have progressed well. Naturally, we were impacted by the COVID lockdowns, which affected some of the activities and the ability to order certain types of equipment. Nevertheless, several highlights in the last six months of 2021 are noteworthy:

1. Successful hire of two postdocs at the interface of physics, optics and biology.
2. Several successful grants, including NNF Data Science Collaborative Research grant (17,5 M DKK; main PI), NNF Project grant (2 M DKK; main PI), EMBO postdoc fellowship, NNF postdoc fellowship.
3. Several high-standing publications; e.g. *Nature Plants* (JIF: 16) and *Plant Cell* (JIF: 11).
4. Two PhD defenses; Huizhen Xu and Jana Verbancic.
5. Construction of new microscopy equipment, and the development of new imaging techniques, in cross-disciplinary interactions with the Niels-Bohr Institute (see example figure below).
6. As Head of the Copenhagen Plant Science Center (CPSC) I organized networking events, seminar series, and outreach activities (e.g. Forskningens døgn).
7. Disseminated research at several international events, as keynote or invited seminar speaker, e.g. the Leibniz Plant Biochemistry Symposium.



**Figure 1. Custom-built spinning-disc confocal microscope with vertical stage.** Marianas Plant Scope with Spinning Disk, image courtesy of 3i Intelligent Imaging Innovations. Image courtesy: Daniel von Wangenheim, 3i.



**Figure 2. Image of a whole seedling stem with fluorescent actin cytoskeleton marker.** Seedling was imaged using the vertical stage outlined in Figure 1. Image courtesy: Dr Felix Ruhnnow & Isabella Østerlund.

Whereas 2021 was used to build up and consolidate the group, in 2022, we aim to more intensely focus on new research developments. In context of the D NRF Chair grant, this means to use the new microscope set-ups to address biological questions. We expect several high impact publications to come out in 2022.