Enzyme prodrug therapy:
safe, specific anticancer medicine

Where drug delivery fails, we perform localized drug synthesis, using the unique enzymatic repertoire of the tumor

Technology Description
Tumor microenvironment has a unique enzymatic repertoire. Our technology is to use these enzymes so as to synthesize anticancer medicine specifically within the tumor volume. Key to our technology is the structure of prodrugs: inactive and non-toxic molecules that reveal highly potent toxin upon enzymatic bioconversion. We have synthesized prodrugs that exhibit enhanced tumor accumulation and at the same time have over 100-fold lower toxicity than the incorporated toxin – comprising a two-level safety enhancement and making an efficacious, cancer-specific drug.

Intellectual Property Rights
US priority patent application. Improved compounds for therapy No. 16/544,446 (August 2019).

Current State
In vivo proof-of-concept studies in murine human xenograft models of triple negative breast cancer. Next in line is to validate this platform in cancers with high unmet medical needs: pancreatic, hepatic, lung, and brain cancers, and metastasis. For the cancer(s) showing the best treatment outcome we will assess this mode of anticancer action in patient derived xenografts.

Contact information
Morten Holmager
Business Development Manager
Mobile: +45 9350 8718
E-mail: holmager@au.dk