



NSI Meeting Announcement

Date: Monday, May 14th, 15:15 – 16:00

Venue: Rom A3. 3067, Rikshospitalet

Guest lecture

by

Dr Anna Wu

**Associate Professor, Dept. of Molecular and Medical Pharmacology,
UCLA School of Medicine**

“Engineered antibodies for cancer targeting and imaging”

In this age of molecular medicine, imaging is playing an increasingly important role in assessing disease targets *in vivo*, evaluating delivery of targeted therapies, and determining response to treatment. Parallel development of engineered antibodies as imaging and therapeutic agents is a powerful implementation of this approach. Using the anti-carcinoembryonic antigen (CEA) antibody T84.66 as a model, a spectrum of engineered antibody fragments (scFv, diabody, minibody, scFv-Fc) have been engineered and radiolabeled with isotopes of iodine and radiometals for tumor targeting and biodistribution studies in mice. MicroPET imaging using recombinant fragments radiolabeled with Cu-64 or I-124 allows serial and/or dynamic evaluation of xenograft targeting and distribution in living animals. Results support the development of smaller fragments (diabodies and minibodies) as clinical imaging agents. Larger fragments, including scFv-Fc fragments with tailored pharmacokinetics, may be better suited for radioimmunotherapy applications. Extension of this approach to additional tumor-associated antigens (such as Her2, CD20, and PSCA) allows us to examine the influence of format over the function of these recombinant fragments. Engineered antibodies can also be fused to luciferases or conjugated to quantum dots for optical (bioluminescent or fluorescent) detection of tumor antigens. These approaches can readily be extended to novel targets identified through proteomics research, using phage display or transgenic mice to provide human antibodies for clinical development. Engineered antibodies provide a versatile platform for detection and therapy based on cell surface phenotype.

Refreshments will be served from 15:00

Welcome all!



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