

26

Nov 2020

Thursday

WEBINAR

via Webex*

45' (talk) + 30' (discussion)

11.00am



Targeting DNA repair: from basic biology to clinical trials

ABSTRACT

DNA damaging agents, i.e., radio- and chemotherapy, constitute the backbone for treatment of a wide variety of cancers and may result in complete cure from the disease. Here, I will give an overview on how DNA repair can be targeted using completely novel inhibitors and more specifically how cancer cells may require a specific DNA repair pathway to mediate survival to the high load of endogenous DNA damage. DNA repair inhibitors can be exploited in treatment of mutated cancers and here, I will present our pioneering work on using PARP inhibitors to selectively kill homologous recombination defective cancers and how this has been translated into the clinic. Furthermore, I will cover how to we identify novel targets using CRISPR-Cas9 and the difficulties of that approach. Novel targets emerging from our laboratory such as MTHFD2 will be discussed in detail and the strategies to advance these as anti-cancer treatments in a precision medicine approach. Finally, I will discuss the complication of targeting DNA repair proteins with many functions.



SPEAKER

Prof Thomas HELLEDAY

Torsten and Ragnar Söderberg Professor in Translational Medicine, Strategic Professor in Chemical Biology, Department of Onkology Pathology, Karolinska Institutet, Solna, Sweden

HOST:

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