LUXEMBOURG INSTITUTE OF HEALTH

BIO SKETCH FORM & Abstract

First Name: Thomas

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Please send us a picture in a Jpeg format

Title: Professor

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Curent position:

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

Past positions:

2018 – 2020	**Professor of Translational Oncology, Director of the Weston Park Cancer Centre,** Department of Oncology & Metabolism, University of Sheffield, UK
2007 – 2011	**Professor of Cancer Therapeutics,** Gray Institute for Radiation Oncology & Biology (GRAY), University of Oxford, UK
2006 – 2011	**Professor in Molecular Genetics,** Department of Genetics, Microbiology, and Toxicology (GMT), Stockholm University, Sweden
2006 – 2007	**Professor, Chair in Cancer Genetics,** University of Sheffield, UK
2004 – 2006	**Senior Lecturer**, Institute for Cancer Studies, University of Sheffield, UK
2004 – 2006	**Research Fellow** (Swedish Research Council), Department of Genetics, Microbiology and Toxicology, Stockholm University, Sweden
2000 – 2004	**Lecturer,** Institute for Cancer Studies, University of Sheffield, UK
1999 – 2000	**Postdoctoral Research Associate,** Institute for Cancer Studies, University of Sheffield, UK
1999	**Research Associate,** Department of Genetics, Microbiology and Toxicology, Stockholm University, Sweden

Abstract

Title of your presentation:

Targeting DNA repair: from basic biology to clinical trials

Summary of your presentation:

At least: 10 lines • Website addresses can be provided.

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 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.