



Nanoparticle Enhanced Radiotherapy workshop, 23rd January 2023

Session 1: MultiChem COST Action: Pre-clinical research, Modelling, Infrastructure

9:00-9:05 (GMT) Introduction **Kate Ricketts, UCL**

Preclinical (Chair, Andrey Solov'yov, MBN Research Center)

9:05 – 9:30 **Radiosensitization: are *in vitro* studies informative for clinical translation?** **Cécile Sicard-Roselli (University Paris Saclay, France)**

9:30-9:55 Mechanism of radiosensitization through metal nanoparticles - nuclear, cytoplasmic, and/or systemic effects. **Martin Falk (Institute of Biophysics, Czech Academy of Sciences)**

9:55-10:20 Changes of chromatin nano-organization induced by nano-particle enhanced radiation: What makes up the difference? **Michael Hausmann (Heidelberg University, Germany)**

10:20-10:30 Break

Modelling (Chair, Nigel Mason, University of Kent)

10:30-10:55 Multiscale approach for quantitative assessment of radiation damage in biological systems, **Andrey Solov'yov (MBN Research Center)**

10:55-11:20 Computational multiscale analysis of nanoparticle radiosensitization effects, **Alexey Verkhovtsev (MBN Research Center)**

11:20- 11:30 Break

Infrastructure (Chair, Martin Falk, Czech Academy of Sciences)

11:30-11:55 Platforms for measuring NERT, **Kate Ricketts/Eirini Velliou (UCL)**

11:55 – 12:20 The New PArticle Therapy REsearch Center (PARTREC) at the University Medical Center Groningen, **Alexander Gerbershagen (UMCG)**

12:20-12:40 Update on regulations of NERT, **Giuseppe Schettino (UK National Physical Laboratory)**

12:40-13:00 Wrap up (Kate Ricketts)

13:00-14:00 LUNCH BREAK

Session 2: Translation

14:00 – 14:05 (GMT) Welcome

Overview and industrial perspectives (Chair, Gary Royle, UCL)

14:05 – 14:25 Current and future perspectives of nanoparticle enhanced radiotherapy. **Kevin Prise (Queens University Belfast)**

14:25-14:45 AGuIX gadolinium-based nanoparticles. **Géraldine Le Duc (NH TherAguix)**

14:45-15:05 NBTXR3 nanoparticles. **Sebastian Paris (Nanobiotix)**

15:05-15:25 Translation hurdles of Oxilia nanoparticles. **Gareth Wakefield (Xerion Healthcare)**

15:25-15:35 Break

Oncology perspectives: Lessons learned from the first clinical trials (Chair, Richard Amos, UCL)

15:35-15:55 Preclinical and Clinical Studies with AGuIX at the Dana-Farber Cancer Institute. **Ross Berbeco (Dana Farber Cancer Institute)**

15:55-16:15 NANORAD trial, AGuIX. **Camille Verry (CHU Grenoble)**

16:15-16:35 A phase I trial of NBTXR3 activated by external beam radiotherapy for locally advanced or borderline resectable pancreatic cancer. **Eugene Koay (MD Anderson Cancer Center)**

16:35 – 17:15 Discussion (Chair, Kate Ricketts, UCL)

Close at 17:15 GMT