



Wednesday 17 March

- Welcome - Jean-Pierre Pouget, Institut de Recherche en Cancérologie de Montpellier, France

Chairs: Bart Cornelissen, Danny Feijtel

14h00 Invited live lecture
MRT in neuroendocrine tumours: role of radiobiology
Emmanuel Deshayes, Institut du Cancer de Montpellier, France

- Live talks:

14h30 **Target heterogeneity in models for peptide receptor radionuclide therapy influences therapeutic response**
Danny Feijtel, Erasmus MC, Netherland

14h45 **Auger electrons for molecular radionuclide therapy: the potential of the radionuclide technetium-99m**
Inès Costa, King's College of London, United-Kingdom

15h00 **High-throughput screening and bioinformatics analysis of 2,000 ^{177}Lu -PSMA and Radiotherapy + drug combinations**
Tiffany Chan, University of Oxford, United-Kingdom

15h15 **α -Particle-induced DNA damage tracks in peripheral blood mononuclear cells of [^{223}Ra]RaCl₂-treated prostate cancer patients**
Uta Eberlein, University of Wurzburg, Germany

15h30 *Break*

Chairs: Samantha Terry, Sophie Poty

15h45 Invited live lecture on the therapy of micrometastasis and residual disease
Choice of the radionuclide and target in the therapy of metastatic and residual disease: needs in radiobiology
Elif Hindie, CHU Bordeaux, France

- 16h15** **Presentation and discussion around the future work of the MRT Radiobiology working group –**
Bart Cornelissen, Julie Nonnekens, Jean-Pierre Pouget, Samantha Terry and all attendees
- 16h45** **Surprising presentation of Montpellier’s way of life!**
- 16h55** **Teaser for Thursday’s “for and against” debate**
- 16h56** **Summary of the day - Jean-Pierre Pouget, Bart Cornelissen**
-

Thursday 18 March

Chairs: Manuel Bardiès, Marta Cremonesi

- 10h00** Invited live lecture
Dose-effect relationship in clinical MRT: a place for radiobiology?
Mark Konijnenberg, Erasmus MC Rotterdam, Netherlands

Chairs: Julie Nonnekens

- 10h30** **Entertaining and passionate debate followed by one final vote of participants**
This house believes that radiobiology is useful for improving MRT?
For: Frederik Verburg (Nucl. Med. Physician, Erasmus MC Rotterdam, Netherlands)
Against: Christophe Badie (Radiobiologist, Public Health England Oxfordshire, United Kingdom)

Chairs: Bart Cornelissen, Jean-Pierre Pouget

- 11h00** **Round table: “What are the immediate clinical questions in MRT?”**
Participants: Emmanuel Deshayes (Institut du Cancer de Montpellier, France), Elif Hindie (CHU Bordeaux, France), Katherine Vallis (University of Oxford, United Kingdom), Mark Gaze (University College London Hospitals, United Kingdom)

11h45 *Break*

Chairs: Bart Cornelissen, Samantha Terry

- 12h00** **Round table about the future work of the MRT Radiobiology working group**
Participants: all
Expert view: Kevin Prise / Simon Bouffler

12h45 *Lunchbreak*

- 13h15** Sponsors’ time

Chairs: Christophe Badie, Edouard Azzam

- 14h00** Invited live lecture
Low dose and low dose rate radiobiology of MRT
Eva Forssell-Aronsson, University of Gothenburg, Sweden

14h30 E-posters: 8 preselected abstracts

Potential of targeted radionuclide therapy using gadolinium-based nanoparticles.

Clara Diaz Garcia-Prada, Institut de Recherche en Cancérologie de Montpellier, France

Extensive preclinical evaluation of Lutetium-177 labeled PSMA-specific tracers for prostate cancer radioligand therapy

Eline Ruigrok, Erasmus MC, Rotterdam, The Netherlands

Multicellular prostate tumor spheroids for evaluation of the therapeutic potential of copper-64

Catarino Pinto, Instituto Superior Técnico, Universidade de Lisboa

DNA Damage response speed imaging predicts is survival following Lutetium-177 radionuclide therapy in vivo

Edward O'Neill, University of Oxford, Oxford, United Kingdom

Dosimetry at the cellular level: measuring reactive oxygen species induced by ionizing radiation

Eero Hippeläinen, University of Helsinki and Helsinki University Hospital, Finland

Role of small extracellular vesicles in the non-targeted bystander effects of targeted radiotherapy

Jihad Karam, Institut de Recherche en Cancérologie de Montpellier, France

Relating DNA damaging effects of radionuclides to those from external beam radiotherapy

Elise Verger, King's College London, London, United Kingdom

15h15 *Break*

Chairs: Sandra Heskamp, Julie Constanzo

- Live talks:

15h30 **Molecular response of head and neck squamous cell carcinoma (HNSCC) upon a combination treatment with molecular- and external radiotherapy**

Treewut Rassamegevanon, National Center for Radiation Research in Oncology, Germany

15h45 **P53-mediated radiosensitization of ¹⁷⁷Lu-DOTATATE treatment in neuroblastoma tumor spheroids**

Sara Lundsten, Uppsala University, Sweden

16h00 **Reversing cold tumor microenvironment with targeted alpha-therapy**

Justine Perrin, Centre de Recherche en Cancérologie et Immunologie Nantes Angers, France

16h15 **Cytosolic dsDNA and extracellular vesicles participate to antitumor immunity induced by external and targeted radiotherapy**

Julie Constanzo, Institut de Recherche en Cancérologie de Montpellier, France

16h30 Invited live lecture

Radiation oncology and immunology

Claire Vanpouille-Box, Weill Cornell Medicine, New-York, USA

17h00 Awards ceremony + summary

17h30 End of workshop by Jean-Pierre Pouget

ORGANISING COMMITTEE

Jean-Pierre POUGET
Julie CONSTANZO
Emmanuel DESHAYES
Alexandre PICHARD
Sophie POTY
Lore SANTORO
Vanessa GUILLAUMON
Aurore MARQUIS
Karine SAGET

*Institut du Cancer de Montpellier, France
INSERM, Montpellier France*

SCIENTIFIC COMMITTEE

Samantha TERRY, King's College London, UK
Julie NONNEKENS, Erasmus MC, Rotterdam, NL
An AERTS SCK-CEN, Mol, BE
Bart CORNELISSEN, University of Oxford, UK
Jean-Pierre POUGET, Inserm, FR

SCHOLAR-IN-TRAINING COMMITTEE

Jihad KARAM, INSERM, Montpellier, FR
Malick Bio IDRISOU, INSERM, Montpellier, FR
Clara DIAZ García-Prada, INSERM, Montpellier FR
Laura ORDAS, INSERM, Montpellier, FR

ABOUT THE "MRT-RADIOBIOLOGY MEETING"

The **1st International Workshop on Radiobiology of Molecular Radiotherapy ("MRT Radiobiology meeting 1")** initially planned in Montpellier in May 2020 will be converted into a virtual conference on March 17th and 18th 2021.

This workshop is the first of a series of workshops launched by the European MRT radiobiology working group (<https://www.mrtradiobiology.com/>) that will be held in Europe every two years. The series will be dedicated to Radiobiology in the field of MRT.

The objective of the workshop is to identify and answer specific questions that are relevant for the field of clinical MRT from a radiobiological perspective. The workshop welcomes all stakeholders interested in MRT including radiobiologists, medical physicists, radiochemists, radiopharmacists, nuclear medicine clinicians, radiation oncologists, medical oncologists, technologists, referring clinicians, radiation protection advisors, radioactive waste advisors, societies (EANM, ERRS), industry partners, and funding bodies where radiobiology is highlighted as a priority research area.

CONTACT: Siric.montpellier@icm.unicancer.fr



IN PARTNERSHIP WITH



MOLECUBES
MODULAR
BENCHTOP
IMAGING

