













## Winter School

## **Dosimetry-Guided Treatment Planning** for Radionuclide Therapy

March 04-06, 2020 Bern, Switzerland

## Mission & Scope:

This winterschool targets medical physicists, physicians, technologists and researchers involved and interested in the workflow of clinical dosimetry in support to precision radionuclide therapy. The aim of this winter school is to present bases of quantitative imaging and dosimetry methodologies to support patient-based treatment planning and verification in clinic. The school also aims to promote a common/shared knowledge and cooperation of different partners involved (physicians, physicists, technologists and researchers). Research and commercial solutions to assist quantitative imaging and dosimetry workflows will be also presented and discussed.

## **Program**

March 04, 2020:

08:00-09:00 Registration

09:00-09:30 Opening Ceremony Moderator: Prof. Axel Rominger

Prof. Mark Konijnenberg

Prof. John Prior

**EANM Dosimetry Committee** 

Swiss Nuclear Medicine Society

Prof. Michael Fix

Swiss Society of Radiobiology and Medical physics

Dr. MER Sébastien Baechler

Federal Office of Public Health (BAG)

**Session 1: Imaging and Quantification** 

09:30-10:30 Quantitative imaging to assist personalized dosimetry

Prof. Mark Konijnenberg

10:30-11:00 Coffee Break

10:45-11:30 Calibration of imaging and non-imaging devices

Dr. Johannes Tran-Gia

11:30-12:30 Quantitative accuracy in activity and dose determination (MRT-projects)

Dr. Johannes Tran-Gia

Session 2: Simplistic approach vs individualized approach 14:00-14:35 Physician's point of view

Prof. A. Rominger, Prof. N. Schaefer

14:35-15:10 Physicist's point of view

Prof. M. Konijnenberg, Prof. M. Lassmann, Prof. G. Flux 15:10-15:30 Industry/Pharma point of view

Dr. Germo Gericke

15:30-16:00 Coffee Break

**Session 3: Practical Session** 

16:00-17:00 Vendor procedures for quantitative calibration of Imaging devices

March 05, 2020:

**Session 4: Dose Calculation** 

08:30-09:15 Methodologies for Dose Calculation (From bases to Monte-Carlo)

Prof. Ernesto Amato

09:15-10:00 Future of dose calculation methodologies

Prof. Glenn Flux

10:00-10:30 Coffee Break

**Session 5: Clinical Application and Results** 

10:30-11:10 Predictive dose planning and post-treatment verification in I-131 DTC and Y-90-Radioembolisation

Dr. Elisa Richetta 11:10-11:50 Lu-177-somatostatin analogues and PSMA

**Prof.** Axel Rominger

11:50-12:30 Bone metastasis

Dr. Iain Murray

12:30-14:00 Lunch Break

**Session 6: Dose Calculation** 

14:00-14:40 OPENDOSE Collaboration

Mr. Alex Vergara

14:40-15:30 Industry presentations: Commercial solutions for personalized dosimetry 15:30-16:00 Coffee Break

**Session 7: Round Table** 

16:00-17:00 The need of, and practical implementation of clinical dosimetry. Including presentation/discussion of the experience of the Italian societies AIMN/AIFM

Dr. Marco Maccauro

March 06, 2020:

**Session 8: Biokinetics** 

09:00-09:45 Set-up of Multicenter trials Involving Dosimetry Prof. Michael Lassmann

11:10-11:50 From Time-activity Data to Pharmacokinetic Modelling

**Prof. Gerhard Glatting** 

10:30-11:00 Coffee Break

11:00-11:45 Treatment Planning with PBPK/PD Models

**Prof. Gerhard Glatting** 

11:45- 12:30 Biodosimetry and its Application to NM Prof. Michael Lassmann

12:30-14:00 Lunch Break

**Session 9: Research topics in MRT Dosimetry** 

14:00-14:45 How AI can support personalized dosimetry

PD Dr. Kuangyu Shi

14:45-15:30 Pre-clinical dosimetry

Dr. Francesco Cicone

15:30-16:15 Novel Isotopes for Theranostics

PD. Dr. Cristina Mueller

**Registration:** 

The registration fee is 250 CHF.

Please send your name, affiliation and address to dosimetrywinterschool2020@gmail.com

We will send you the confirmation and invoice.

**Endorsement or Accreditation:** 

Dosimetry Committee of European Association of Nuclear Medicine (EANM)

European Federation of Organisations For Medical Physics (EFOMP)

Federal Office of Public Health of Switzerland (BAG) Swiss Nuclear Medicine Society (SGNM)

Swiss Society of Radiobiology and Medical Physics (SSRMP) Italian Association of Medical Physics (AIFM)

Association Suisse des Techniciens en Radiologie Medicale (ASTRM)





























**Prof. Ernesto Amato** University of Messina, Italy

Dr. MER Sébastien Baechler

Swiss Federal Office of Public

Health, Switzerland



Prof. Mark Konijnenberg Erasmus Medical Center. The Netherlands



**Prof. Axel Rominger** Dept. Nuclear Medicine. Inselspital, University of Bern, Switzerland



Prof. Michael Lassmann Dept. Nuclear Medicine, University of Würzburg, Germany



Prof. Niklaus Schaefer Dept. Nuclear Medicine, Lausanne University Hospitals CHUV, Switzerland



Dr. Francesco Cicone Magna Graecia University of Catanzaro, Italy



Dr. Marco Maccauro Fondazione IRCCS "Istituto Nazionale dei Tumori" Milano, Italy



Dr. Johannes Tran-Gia Dept. Nuclear Medicine, University of Würzburg, Germany



Prof. Michael Fix University of Bern, Switzerland



PD. Dr. Cristina Mueller Center for Radiopharmaceutical Sciences ETH-PSI-USZ. Paul Scherrer Institute, Villigen-PSI, Switzerland



Mr Alex Vergara CRCT, UMR 1037, Inserm, Université Toulouse III Paul Sabatier, Toulouse, France



Prof. Glenn Flux Royal Marsden Hospital and Institute of Cancer Research, UK



**Dr. lain Murray** Royal Marsden Hospital and Institute of Cancer Research, UK



Organizers:

PD Dr. Kuangyu Shi Dept. Nuclear Medicine. Inselspital, University of Bern, Switzerland



Dr. Germo Gericke Advanced Accelerator Applications, Novartis



Prof. John Prior Dept. Nuclear Medicine, Lausanne University Hospitals CHUV, Switzerland



Dr. Silvano Gnesin Institute of Radiation Physics, Lausanne University Hosptial, Switzerland



**Prof. Gerhard Glatting** Dept. Nuclear Medicine, Ulm University, Germany



Dr. Elisa Richetta Azienda Ospedaliera Mauriziano di Torino, Italy



Dr. Thiago VM Lima Radiation Protection Group, Aarau Cantonal Hospital, Switzerland