WELCOME TO THE

ICPO ACADEMY FOR THERANOSTICS

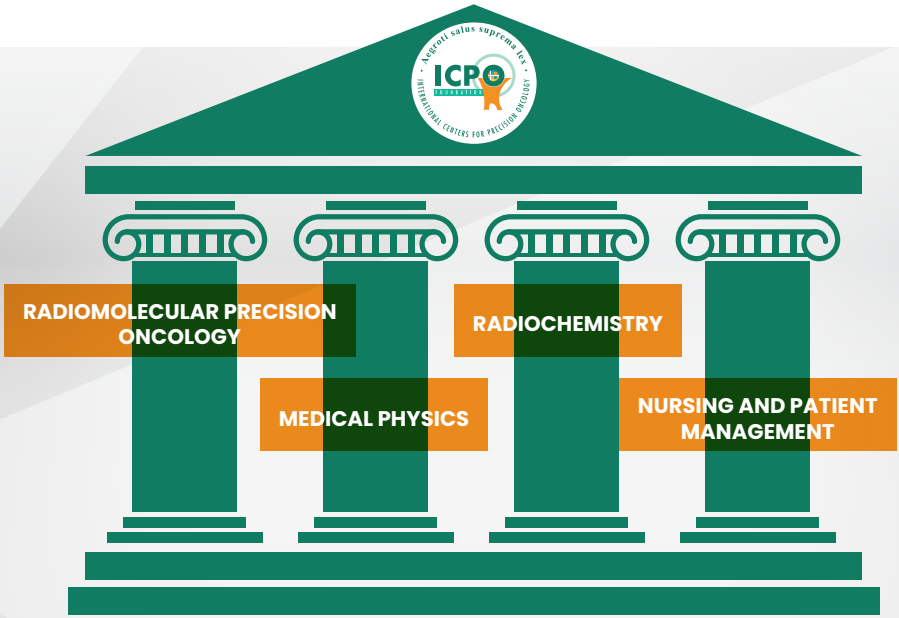
Powered by the
ICPO Foundation Global Community

Radiomolecular Precision Oncology represents a paradigm shift in cancer care today, therefore **world-class standardized education of healthcare professionals** is key to ensure sustainable patient access at a global scale.

The ICPO Academy for Theranostics offers a **comprehensive online educational programme,** developed by the ICPO Foundation and powered by its global Community of experts. It features over 50 hours of content taught by over 30 leaders and experts. The content is available in different languages.

The primary audiences of the ICPO Academy for Theranostics are **clinicians, researchers, physicists and radiochemists as well as nurses and technologists,** who seek to **integrate Radiomolecular Precision Oncology in patient care.**

The main objective of the Academy programme is to disseminate knowledge in Radiomolecular Precision Oncology to improve outcome of a patient treated with radiopharmaceutical therapies.



Leadership and Faculty

The curriculum by the ICPO Academy for Theranostics has been developed under the guidance of its President, Prof. Richard P. Baum, world leader and pioneer in Nuclear Medicine and Radiomolecular Precision Oncology, together with prominent Pillar Leaders, international experts in their respective field, namely Prof. Vikas Prasad, Prof. Thomas Beyer, Prof. Frank Rösch, Linda Gardner and Josh Mailman. Thanks to their extensive cumulated knowledge and experience as well as personal dedication, they have crafted an exclusive and comprehensive online educational programme that engages over 30 carefully selected Faculty to cover each of the teaching units.

Prof.
RICHARD P. BAUM
President of the Academy

Prof.
VIKAS PRASAD
Radiomolecular Precision Oncology

Prof.
THOMAS BEYER
Medical Physics

Prof.
FRANK RÖSCH
Radiochemistry

LINDA GARDNER
Nursing and Patient Management

JOSH MAILMAN
Nursing and Patient Management

Curriculum

ICPO Academy participants have the opportunity to acquire fundamental knowledge and expertise in Radiomolecular Precision Oncology. Each Teaching Unit takes about 45 minutes to complete. Each Teaching Unit contains 3 teaching videos, each about 10 minutes long, and may offer additional teaching content such videos and links to external videos, animations, interviews and further readings.

After completing each Teaching Unit, the participant will take a multiple-choice test to assess whether the key learning points have been acquired. To successfully complete a teaching unit, 80% of the questions must be answered correctly. Furthermore, the teaching units offer additional and optional introductions of the lecturers, interludes in form of interviews and videos as well as links to external support material.

Radiomolecular Precision Oncology Pillar

This pillar covers medical and scientific content targeting physicians and also complementing content of the other four pillars.

Firstly, the Neuroendocrine tumor teaching units allow to delve into the epidemiology and historical evolution of these tumours, explore their classification, and examine their pathological basis. The participant will then understand the clinical presentation and role of molecular imaging techniques such as PET/CT, as well as to learn about treatment response evaluation to peptide receptor radionuclide therapy (PRRT) using SPECT/CT and the significance of biomarkers.

Secondly, in the prostate cancer teaching units, the participant will explore the epidemiology and historical evolution of the disease, examine its tumour classification, and focus on pathology and genomics. This will allow to gain insights into molecular imaging techniques, with a specific focus on PSMA PET/CT, including potential pitfalls, as well as to understand treatment response evaluation to PRRT using SPECT/CT and the significance of PSA as a tumour marker. Systemic therapy guidelines and basic principles of PRRT will be covered for both cancer types above.

Finally, radioiodine therapy and its application in thyroid cancer will be introduced.

NEUROENDOCRINE TUMOURS

Name of Teaching Unit	Lecturer	Name of Teaching Unit	Lecturer
Epidemiology and historical evolution, and tumor classification	Nicola Fazio	**Treatment response evaluation to PRLT with SPECT/CT in Neuroendocrine Tumors**	Heying Duan
Pathological bases of Neuroendocrine Neoplasms	Massimo Milione	**Biomarkers (CgA, NETest / PPQ)**	Andrea Frilling
Clinical Presentation	Christos Toumpanakis	**Systemic Therapy for GEP-NETs – Guidelines and Recommendations**	Angela Lamarca
Molecular Imaging – SSTR PET/CT	Vikas Prasad	**Basic Principles of PRRT**	Vikas Prasad
Metabolic Imaging – FDG PET	Valentina Ambrosini		

PROSTATE CANCER

Epidemiology and historical evolution, and tumor classification	Lucas Kastner	**Treatment Response Evaluation to PRLT with SPECT/CT in Prostate Cancer**	Hong Song
Pathology and Genomics	Francesca Khani	**PSA as Tumor Marker**	Daniel Childs
Clinical Presentation	Jacob Orme	**Systemic therapy for Prostate Cancer – Treatment guidelines and recommendations**	Oliver Sartor
Molecular Imaging – PSMA PET/CT	Ashwin Singh Parihar	**Basic Principles of PRLT**	Robert Seifert
Pitfalls in PSMA PET Imaging	Matthias Eiber		

OTHER TUMOR ENTITIES

Radioiodine Therapy (Thyroid cancer, introduction)	Vikas Prasad		

Medical Physics Pillar

This pillar explores diverse topics in medical imaging, radiomolecular/nuclear medicine and Theranostics targeting an audience of physicists thereby complementing the content of other pillars. Participants may expect to understand SPECT/CT and PET/CT imaging principles, radiobiology and radiotherapy fundamentals, as well as learn about essential topics such as activity measurements, quality control, radiation safety, patient dosimetry and clinical dosimetry and discover strategies to address imaging artifacts and optimize protocols. In summary, participants will appreciate the crucial role of medical physicists in Radiomolecular Precision Oncology.

Name of Teaching Unit	Lecturer	Name of Teaching Unit	Lecturer
Medical imaging, Nuclear medicine and theranostics – A primer	Elif Hindie	**Quantitative Imaging for Dosimetry: SPECT**	Kathy Willowson
Radioisotopes and Transformation	Frank Rösch	**Quantitative Imaging for Dosimetry: PET**	Dale Bailey
SPECT(/CT) Imaging – Basics	John Dickson	**Clinical Dosimetry (Dx and Th) – Part 1**	Manuel Bardiès
PET(/CT) Imaging – Basics	Thomas Beyer	**Clinical Dosimetry (Dx and Th) – Part 2**	Manuel Bardiès
Radiobiology	Yaser Gholami	**Imaging Artifacts and Optimized Protocols 1**	Bernhard Sattler
Radiotherapy – Basics	Andreas Renner Nicole Nesvacil Petra Trnkova	**Imaging Artifacts and Optimized Protocols 2**	Bernhard Sattler
Activity Measurements	Ana Denis-Bacelar	**PACS, Data Handling 1**	Markus Diemling
Quality Control	Ivo Rausch, PhD	**Clinical Routine and Ethics**	Harun Ilhan
Radiation Safety	Søren Holm	**Inter-Domain Communication in Clinical Routine**	Roy Sheppard
Basic Patient Dosimetry	Ana Denis-Bacelar	**The Medical Physicists**	

Radiochemistry Pillar

Addressing chemists and being a great complement to other pillars, this pillar is a strong primer on radiochemistry and nuclear chemistry, exploring the composition of atomic nuclei as a mixture of nucleons, as well as the structure and characteristics of stable and unstable atomic nuclei. Participants will understand the rationale of unstable atom nuclei and the philosophy of nuclear transformation pathways and kinetics. This pillar gives an opportunity to delve into the various emissions specific to individual transformation pathways, in particular relevant to Theranostics. Participants will finally become familiar with radionuclide production processes at nuclear reactors, cyclotrons and generators.

Name of Teaching Unit	Lecturer	Name of Teaching Unit	Lecturer
Radiochemistry / Nuclear Chemistry – A Primer	Frank Rösch	**The Rational of Alpha Transformation**	Frank Rösch
The Stable Atomic Nucleus	Frank Rösch	**Secondary Transformations**	Frank Rösch
The Atomic Nucleus: a Mixture of Nucleons	Frank Rösch	**Post-effects & the Origin of 511 keV Annihilation Photons**	Frank Rösch
The Atomic Nucleus – Nucleon Shells	Frank Rösch	**The Emissions Relevant to Theranostics**	Frank Rösch / Ivo Rausch, PhD
The Rational of Transformation	Frank Rösch	**Radionuclide Production – A Primer**	Frank Rösch
Transformation Kinetics	Frank Rösch	**Radionuclide Production Mechanisms**	Frank Rösch
The Rational of Beta Minus Transformation	Frank Rösch	**Radionuclide Production at Nuclear Reactors**	Frank Rösch
Beta Plus Transformation & Elementary Particles	Frank Rösch	**Radionuclide Production at Cyclotrons**	Frank Rösch
Excited Nuclear States	Frank Rösch	**Radionuclide Production via Radionuclide Generators**	Frank Rösch

Nursing and Patient Management Pillar

This pillar offers nurses and in general clinicians interacting with patients to acquire basic knowledge and essential skills to effectively support patients in Radiomolecular Precision Oncology. Indeed, nursing plays a crucial role in patient care, thus learning effective patient communication strategies to address their decisions, answer their questions and meet their needs is a major component of the Academy for Theranostics. Moreover, this pillar content explores various therapy video samples to enhance the understanding of procedures and protocols.

Name of Teaching Unit	Lecturer	Name of Teaching Unit	Lecturer
Nursing – Basic Knowledge	Linda Gardner	**Patient Communication – Patient Decisions, Questions and Communication**	Josh Mailman
Therapy Information – Therapy Video Samples	Linda Gardner		

Application

At the Academy for Theranostics, we believe in widened accessibility to education as well as its scalability worldwide. While there are no specific prerequisites, our content is particularly tailored to provide fundamental knowledge and learning experiences to healthcare professionals specializing in radiomolecular/nuclear medicine and oncology related specialties as well as medical students.

There are **two options to apply** depending on whether **(1)** you are willing to **cover the costs for yourself, or (2)** you are an **academic looking for a stipend sponsored by a third-party organization** active in a given country, in this case ICPO will facilitate your application process.

Option 1: Application to Sponsored Stipend

Prospective applicants for a sponsored stipend are required to provide the following documents, which are essential for **ICPO to identify a suitable sponsor for your stipend, ensuring that the support aligns with your individual needs and objectives.**

Up-to-date Resume	Motivation Letter	Detailed Educational and Career Plan

Option 2: Self-Payment

As part of the registration process, please ensure to provide an up-to-date resume. **The registration fee is 1,500.00 EUR per participant, inclusive of one certificate.** VAT of 19% may be applicable subject to your country and would be added to this amount.

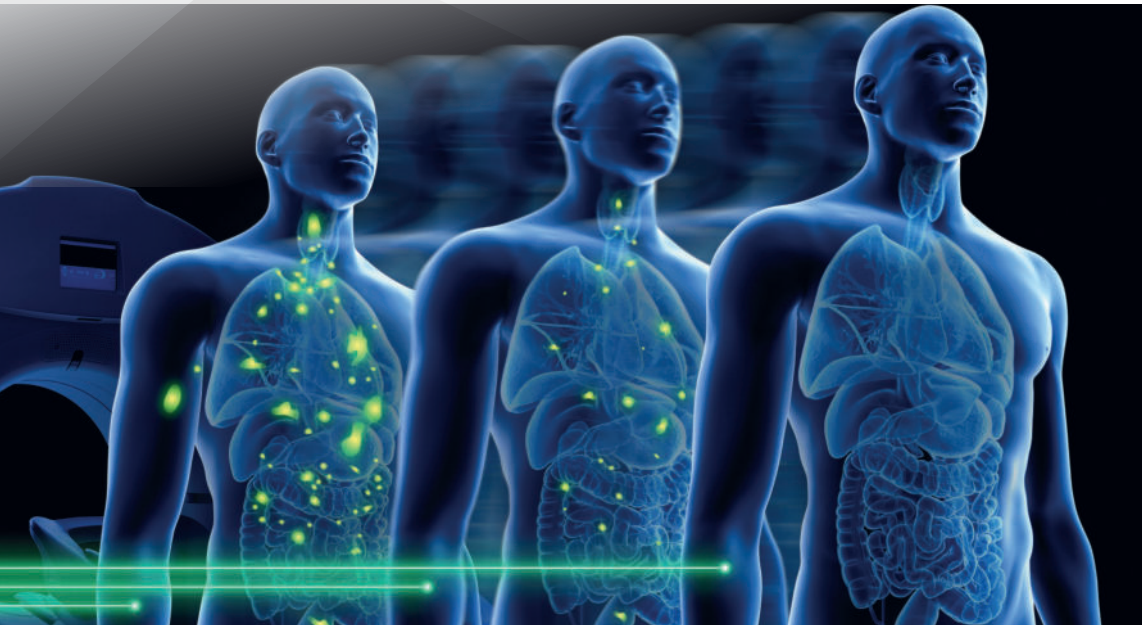
Certification and Endorsement

An **international certification issued by the ICPO Foundation** validates the educational achievements of the participant for a given Pillar. It is signed by **Professor Richard P. Baum,** President of the Academy, **as well as the respective Pillar Leader.**

Moreover, in an effort to further enhance the international significance and value of the ICPO Academy certificate and to provide successful participants with broad recognition for their competence and expertise, the ICPO Academy for Theranostics is awaiting **accreditation as continued medical education.** Also, multiple **endorsements** are in the works and **further content is being developed in a co-certification collaboration.** All the above are **with prestigious societies and institutions** in the field of radiomolecular/nuclear medicine globally.

For the latest update, please check the Academy website at **www.theranostics.academy**

Please register at www.theranostics.academy



For further information, please contact **info@icpo.foundation**

ICPO 10/2023

ICPO FOUNDATION
BANNEGGSTR. 57
88214 RAVENSBURG
GERMANY

PHONE +49 (0) 611 - 3 41 14 86 30
FAX +49 (0) 611 - 3 41 14 86 36
E-MAIL INFO@ICPO.FOUNDATION