

# PROGRAM - Day 1

Thursday April 21, 2022

SPEAKER	TITLE	TIME	DURATION
<b>Registration and Breakfast</b>		7:30-8:00 am	30 min
<b>Fei-Fei Liu</b> <i>University Health Network</i>	<b>Welcome and Introductions</b>	8:00 am	
<b>Leah Cowen</b> <i>University of Toronto</i>	<b>Opening Remarks</b>	8:00-8:10 am	10 min
<b>SESSION 1A: CLINICAL ADVANCES</b>			
<b>Session Chairs:</b> Fei-Fei Liu (University Health Network), Tim Craig (University Health Network)			
<b>Topics:</b> What did light ions enable you to do for your patients? What is the state of the art in technology and science? Where is the field going?			
<b>Hiroshi Tsuji</b> <i>National Institutes for Quantum Science and Technology</i>	<b>Keynote Presentation</b> <b>Clinical Experience of Carbon Ion Therapy in Japan</b>	8:10-8:45 am	35 min
<b>Robert Timmerman</b> <i>University of Texas Southwestern</i>	<b>PULSAR: The Adaptation of SABR Toward Personalized Medicine</b>	8:45-9:10 am	25 min
<b>Yong Bae Kim</b> <i>Yonsei University</i>	<b>Current Status of Carbon Ion Therapy in Korea</b>	9:10-9:35 am	25 min
<b>Roberto Orecchia</b> <i>European Institute of Oncology</i>	<b>Light Ions Therapy: Clinical Outcomes, Development and Future Directions</b>	9:35-10:00 am	25 min
<b>Break</b>		10:00-10:15 am	15 min
<b>SESSION 1B: CLINICAL ADVANCES (Continued)</b>			
<b>Session Chairs:</b> Laura Dawson (University Health Network), Michael Velec (University Health Network)			
<b>Jürgen Debus</b> <i>Heidelberg Ion-Beam Therapy Centre</i>	<b>Keynote Presentation</b> <b>Carbon Ion Radiotherapy - From Clinical Studies to Routine Treatment</b>	10:15-10:50 am	35 min
<b>Verity Ahern</b> <i>University of Sydney</i>	<b>A Vision for Proton Beam, Carbon and Other Ion Therapy for Cancer Patients</b>	10:50-11:15 am	25 min
<b>Piero Fossati</b> <i>MedAustron</i>	<b>Can We Do Better than Homogenous RBE Weighted Dose in Carbon Ion Radiotherapy?</b>	11:15-11:40 am	25 min
<b>Robert Foote</b> <i>Mayo Clinic</i>	<b>Reducing Toxicity and Lowering Cost with Particle Therapy</b>	11:40 am-12:05 pm	25 min
<b>T. Rock Mackie</b> <i>University of Wisconsin</i>	<b>Are There Physiological and Anatomical Benefits to Upright Radiotherapy?</b>	12:05-12:30 pm	25 min
<b>Lunch</b>		12:30-1:30 pm	1 hr

## Thursday April 21, 2022 (Continued)

SPEAKER	TITLE	TIME	DURATION
<b>SESSION 2: RADIATION BIOLOGY</b>			
<b>Session Chairs:</b> Michael Milosevic (University Health Network), Michael Story (University of Texas Southwestern) <b>Topics:</b> Cell response models, treatment planning approaches, modeling, immunotherapy			
<b>Michael Milosevic, Michael Story</b>	<b>Session Introduction</b>	1:30-1:40 pm	10 min
<b>Marco Durante</b> <i>GSI Helmholtzzentrum für Schwerionenforschung</i>	<b>Keynote Presentation Combined Treatments in Particle Therapy: Pre-clinical Studies</b>	1:40-2:15 pm	35 min
<b>Taku Inaniwa</b> <i>National Institutes for Quantum Science and Technology</i>	<b>Biological Modeling for Ion Beam Therapy</b>	2:15-2:45 pm	30 min
<b>Michael Story</b> <i>University of Texas Southwestern</i>	<b><i>In silico</i> Modeling of Radioresistant H&amp;N Tumors Treated with Carbon Ions Supports the Concept of Patient Specific RBEs in Treatment Planning</b>	2:45-3:15 pm	30 min
<b>Break</b>		3:15-3:45 pm	30 min
<b>Brita Singers Sørensen</b> <i>Aarhus University</i>	<b>Experimental Data of Proton Radiobiology</b>	3:45-4:15 pm	30 min
<b>Takashi Shimokawa</b> <i>National Institutes for Quantum Science and Technology</i>	<b>Biological Advantages of Heavy Ion Irradiation for Cancer Therapy</b>	4:15-4:45 pm	30 min
<b>Break</b>		4:45-5:30 pm	45 min
<b>Dinner</b>		5:30-6:30 pm	1 hr
<b>Discussion Panel</b>			
<b>Panel Chairs:</b> <b>Markus Stock</b> <i>MedAustron</i> <b>Brad Wouters</b> <i>University Health Network</i>	<b>Discussion Topic: Data Needs, Clinical Trial Results and Evidence for Light Ion Therapy</b>  <b>Invited Panelists:</b> Jürgen Debus, Marco Durante, Robert Foote, Marianne Koritzinsky (UHN), Robert Timmerman, Mack Roach III (UCSF)	6:30-7:30 pm	1 hr
<b>Fei-Fei Liu</b>	<b>Closing Remarks</b>	7:30 pm	

# PROGRAM - Day 2

Friday April 22, 2022

SPEAKER	TITLE	TIME	DURATION
<b>Breakfast</b>		7:30-8:00 am	30 min
<b>Jan Seuntjens</b> <i>University Health Network</i>	<b>Welcome and Opening Remarks</b>	8:00-8:10 am	10 min
<b>SESSION 3A: PHYSICS AND TECHNOLOGICAL INNOVATIONS</b> <b>Session Chairs:</b> Jan Seuntjens (University Health Network), Derek Tsang (University Health Network) <b>Topics:</b> Technology, implementation, motion management, new acceleration methods			
<b>Oliver Jäkel</b> <i>German Cancer Research Center</i>	<b>Keynote Presentation</b> <b>Light Ion Beam Therapy: Why Stop with Protons and Carbon Ions?</b>	8:10-8:45 am	35 min
<b>Toshiyuki Shirai</b> <i>National Institutes for Quantum Science and Technology</i>	<b>Next Generation Carbon-Ion Radiotherapy Machine - Quantum Scalpel</b>	8:45-9:10 am	25 min
<b>Marco Pullia</b> <i>National Centre for Oncological Treatment</i>	<b>The CNAO Experimental Facility</b>	9:10-9:35 am	25 min
<b>Yolanda Prezado</b> <i>Institut Curie</i>	<b>Divide and Conquer: Charged Particles and Spatial Fractionation</b>	9:35-10:00 am	25 min
<b>Break</b>		10:00-10:15 am	15 min
<b>SESSION 3B: PHYSICS AND TECHNOLOGICAL INNOVATIONS (Continued)</b> <b>Session Chairs:</b> David Hodgson (University Health Network), Miller MacPherson (The Ottawa Hospital)			
<b>Markus Stock</b> <i>MedAustron</i>	<b>Keynote Presentation</b> <b>Chances and Challenges in Light Ion Beam Therapy: A Medical Physics Point of View</b>	10:15-10:50 am	35 min
<b>Katia Parodi</b> <i>Ludwig Maximilian University</i>	<b>Advanced Imaging for Particle Therapy</b>	10:50-11:15 am	25 min
<b>Arnold Pompos</b> <i>University of Texas Southwestern</i>	<b>Heavy Ion System: Design that Meets your Needs</b>	11:15-11:40 am	25 min
<b>Harald Paganetti</b> <i>Massachusetts General Hospital</i>	<b>Addressing Physical and Biological End-of-range Effects in Proton Therapy Planning and Delivery</b>	11:40 am-12:05 pm	25 min
<b>Alexander Gottberg, Oliver Kester</b> <i>TRIUMF</i>	<b>Beyond Proton Therapy: Defining Future Accelerator Technology for Particle Therapy in Cancer Care</b>	12:05-12:30 pm	25 min
<b>Lunch</b>		12:30-1:30 pm	1 hr

## Friday April 22, 2022 (Continued)

SPEAKER	TITLE	TIME	DURATION
<b>SESSION 4: TECHNOLOGICAL DEVELOPMENTS IN TREATMENT SOLUTIONS</b>			
<b>Session Chairs:</b> Daniel Létourneau (University Health Network), Arnold Pompos (University of Texas Southwestern)			
<b>Topic:</b> Rapid fire academic presentations on technology development roadmaps for light ion therapy			
<b>Daniel Létourneau, Arnold Pompos</b>	<b>Session Introduction</b>	1:30-1:40 pm	10 min
<b>Jeffry Simmons</b> <i>Toshiba</i>	<b>Introduction of Toshiba Heavy Ion Therapy System</b>	1:40-1:55 pm	15 min
<b>Laurent Collignon, Raymond Dalfsen</b> <i>Elekta</i>	<b>LET Optimization: A New Wave for Proton Therapy?</b>	1:55-2:10 pm	15 min
<b>Frédéric Genin</b> <i>IBA</i>	<b>IBA, a (R)Evolution in Particle Therapy</b>	2:10-2:25 pm	15 min
<b>Harris Targovnik</b> <i>Varian Medical</i>	<b>Advancing Proton Therapy Through Innovation</b>	2:25-2:40 pm	15 min
<b>Erik Traneus</b> <i>RaySearch</i>	<b>Treatment Planning for Light Ions</b>	2:40-2:55 pm	15 min
<b>Niek Schreuder</b> <i>Leo Cancer Care</i>	<b>Particle Therapy in Existing LINAC Rooms – Now Possible with the LEO Technologies</b>	2:55-3:10 pm	15 min
<b>Joe Ting-Chang Hsu</b> <i>B dot Medical</i>	<b>Development of Ultra-compact Proton Therapy System</b>	3:10-3:25 pm	15 min
<b>Howard Shearer</b> <i>Hitachi</i>	<b>An Introduction to Hitachi's Particle Beam Therapy Business</b>	3:25-3:40 pm	15 min
<b>Discussion Panel</b>			
<b>Panel Chairs:</b> <b>Thomas Bortfeld</b> <i>Massachusetts General Hospital</i> <b>Jason Pantarotto</b> <i>Ontario Health</i>	<b>Discussion Topic: Physics, Biology and Medical Advances in Light Ion Therapy</b>  <b>Invited Panelists:</b> Marco Durante, Piero Fossati, Oliver Jäkel, Katia Parodi	3:45-4:30 pm	45 min
<b>Jan Seuntjens</b>	<b>Closing Remarks</b>	4:30 pm	