

Workshop on the future Science programme of the ID17 Biomedical beamline at the ESRF

5 & 6 October 2023, ESRF Auditorium

Thursday 5 October 2023

13:30		Badge delivery	ESRF Central building entrance hall
13:45	14:00	Welcome & Introduction	Gema Martinez Criado & Michael Krisch , ESRF Directors of Research
14:00	16:00	Session 1	Chaired by Paul Tafforeau , ESRF
14:00	14:05	Presentation of the consortium and its mission	Paola Coan , Dept. of Radiology and Department of Physics, Ludwig Maximilian University, Munich, Germany
14:05	14:15	Why in-vivo functional imaging: the medical perspective	Gaetano Perchiazzi , Dept. of Surgical Sciences, Anaesthesiology and Intensive Care, Uppsala University, Uppsala, Sweden
14:15	14:27	Selected scientific applications	Philippe Douek , Service d'Imagerie Diagnostique et thérapeutique, Hôpital Cardio-Vasculaire et Pneumologique Louis Pradel, Lyon, France
14:27	14:37	Technical aspects of the project	Rajmund Mokso , DTU Compute Technical University of Denmark, Copenhagen, Denmark
14:37	14:45	Implementation of the Synchrotron4Life project and wrap-up	Paola Coan
14:45	14:50	The need for three-dimensional in vivo imaging with true micrometer resolution	Steven Proulx , University of Bern, Switzerland <i>(by zoom)</i>
14:50	15:00	Swiss concept for a beamline to image murine brains in vivo	Bert Müller , Thomas Straumann Chair for Materials Science in Medicine, University of Basel, Switzerland
15:00	15:25	Recent progress in mouse brain imaging using synchrotron radiation	Willy Kuo , Institute of Physiology, The Interface Group, University of Zurich, Switzerland
15:25	15:30	Combining the Swiss proposal on in vivo imaging with the other initiatives for the future of the beamline ID17	Bert Müller
15:30	16:00	Discussion	
16:00	16:30	Group photo & Coffee break	ESRF Central building
16:30	18:30	Session 2	Chaired by Oleg Kononov , ESRF
16:30	16:39	MRT, History, milestones and future	Jeffrey Crosbie , Maynooth University, Ireland
16:39	16:48	Evidences from Preclinical research	Elisabeth Schültke , MRT task Force Group, Rostock University Medical Center, Germany
16:48	16:57	Synchrotron microbeam radiation – a paradigm shift in radiobiological mechanisms and treatment efficacy	Valentin Djonov , Institut Anatomy, University of Bern, Switzerland
16:57	17:06	Clinical transfer of MRT, Phase 1 Vet trial on spontaneous glioma in dogs	Susan Calvet , Veterinary Clinic, Pontcharra, France
17:06	17:15	Clinical relevance of MRT	Stephanie Combs , Department of Radiation Oncology, Technical University of Munich <i>(by zoom)</i>
17:15	17:24	Creation of the first International Radiosurgery Platform using Microbeams. Phase 1 trial on recurrent glioblastoma patients	Camille Verry , Department of Radiation Oncology, Grenoble University Hospital, France
17:24	17:33	ID17 MRT human clinical trial transition. Advanced dosimeters, treatments planning, Medical Physics	Michael Lerch , School of Physics/ CMRP, University of Wollongong, Australia
17:33	17:42	Translation of MRT to hospital based compact source	Uwe Oelke , Department Physics, Royal Marsden Hospital, United Kingdom
17:42	17:51	Clinical Board Conclusions - Why MRT must be transferred to clinics using synchrotron X rays	Michael Grams , Mayo Clinic, Rochester, USA <i>(by zoom)</i>
18:00	18:30	Discussion	
18:30	21:00	Aperitif & Cocktail dinner	ESRF central building

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08:30	10:30	Session 3	Chaired by Alexandra Joita-Pacureanu, ESRF
08:30	08:35	Joint introduction: Imaging at nanoscale with EBS – large volumes and high-throughput	Kristina Djinovic Carugo , EMBL, Grenoble, France Andreas Schaefer , Francis Crick Institute, United Kingdom
08:35	08:40	Introduction to imaging tissues and organs at the nanoscale	Andreas Schaefer
08:40	08:55	The promise and challenge of connectomics – imaging large brain volumes at nanoscale	Moritz Helmstaedter , MPI for Brain research, Frankfurt, Germany
08:55	09:05	Towards X-ray connectomics	Adrian Wanner , Paul Scherrer Institute, Villigen, Switzerland
09:05	09:15	Outlook – nanoscale imaging of tissues and organs at ID17	Andreas Schaefer
09:15	09:25	Correlative Imaging: from ultrastructure to molecular profiling	Alvaro Crevenna , EMBL, Rome, Italy
09:25	09:35	Nano-scale X-ray imaging for biologist	Thomas Schneider , EMBL Hamburg, Germany
09:35	09:45	EasyGrid/Sample environment	Gergely Papp , EMBL, Grenoble, France
09:45	09:55	Imaging host parasite interactions from cells to atoms	Matthew Bowler , EMBL, Grenoble, France
09:55	10:00	Joint wrap up	Kristina Djinovic Carugo & Andreas Schaefer
10:00	10:30	Discussion	
10:30	11:00	Coffee break	ESRF Central building
11:00	11:30	Conclusions	