Monday, October 29, 2018

CHANG YUNG-FA FOUNDATION International Convention Center

08:50-09:20	**Opening Ceremony**	**R 1101**
09:20-10:50	**Hatanaka Award Lecture**	**R 1101**

10:50-11:10	**Coffee Break**

11:10-12:30	**Invited Lecture**	**R 1101**

11:10-11:30

Current status of i-BNCT project at Tsukuba & Tokai

Akira Matsumura, Department of Neurosurgery, University of Tsukuba, Japan

11:30-11:50

BNCT in Finland

Leena Kankaanranta, HUCH, Helsinki University Central Hospital, Finland Comprehensive Cancer Center Departments of Oncology and Radiation Therapy, Finland

11:50-12:10

Comparison of the BPA-BNCT for unresectable liver metastases at KUR and at Triga Mark II

Minoru Suzuki, Institute for Integrated Radiation and Nuclear Science, Kyoto University / Particle Radiation Oncology Research Center, Japan

12:10-12:30

Albumin-Based Boron Delivery to Tumor

Hiroyuki Nakamura, Laboratory for Chemistry and Life Science (CLS), Institute of Innovative Research, Tokyo Institute of Technology, Japan

12:30-13:30	**Luncheon Seminar**	**R1001**

Research and Development of Boron Drugs for BNCT by Industry-University Collaboration in Japan.

STELLA PHARMA

13:30-14:30	**Plenary Lecture**	**R1001**

13:30-13:45

Accelerator-based BNCT at Southern TOHOKU general hospital--The world's first BNCT Hospital-Roadmap to Pharmaceutical Affairs Regulatory Approval

Yoshihiro Takai, Southern TOHOKU BNCT research center, Japan

13:45-14:00

Successful result in Overall Survival from Phase II Clinical Study of BNCT with XRT/TMZ in Patients with Newly Diagnosed Glioblastoma

Shinji Kawabata, Osaka Medical College / Neurosurgery, Japan

14:00-14:15

Biodistribution studies of boronophenylalanine-fructose complex in different types of skin melanoma

Zi-zhu Zhang, Beijing Nuclear Industry Hospital/Nuclear Medicine Department Beijing Capture Technology Limited Co./ Research and Development Department, China

14:15-14:30

Boron neutron capture therapy (BNCT) combined with image-guided intensity modulated radiotherapy (IG-IMRT) for treatment of recurrent Head & Neck cancer

Ling-Wei Wang, Taipei Veterans General Hospital/Department of oncology, Taiwan

14:40-15:40	Parallel Session	R1001, R1002, R1003

Clinical matters — **R1001**

14:40

Salvage Boron Neutron Capture Therapy (BNCT), Treatment Experiences of Recurrent Malignant Brain Tumors in Taiwan

Tien-Li Lan, Division of Radiotherapy, Department of Oncology, Taipei Veterans General Hospital, Taipei City, Taiwan

14:52

Results of phase 1 clinical trial of accelerator-based BNCT for recurrent malignant gliomas

Shin-Ichi Miyatake, Cancer Center, Osaka Medical College, Japan

15:04

BNCT for Head and Neck Cancer : Summary of reactor irradiation.

Teruhito Aihara, Kansai BNCT Medical Center, Osaka Medical College, Takatsuki, Japan

15:16

Defining the molecular characteristics of boron compounds proposes the concept of precision medicine in BNCT field

Seiji Yasui, Neutron Therapy Research Center, Okayama University, Japan

15:28

Comparison between SUVmax, TNR, and TBR in 18F-BPA PET. Which index is correlated best with 18FDG uptake?

Hiroshi Igaki, Department of Radiation Oncolcogy, National Cancer Center Hospital, Tokyo, Japan

Boron determination & Imaging technology	R1002

14:40

A virtual neutron anti-scatter grid for future Cd(Zn)Te based BNCT-SPECT systems

Alexander Winkler, Helsinki Institute of Physics, University of Helsinki, Finland

14:52

Boron analysis and imaging of 2hr-BPA-exposured cells by using micro proton particle induced gamma-ray emission (PIGE).

Kei Nakai, Ibraki prefectural University of Health Sciences, Ibaraki, Japan

15:04

Neutron autoradiography combined with UV-C sensitization: towards intracellular localization of boron

Agustina Portu, National Atomic Energy Commission (CNEA), Argentina

15:16

Neutron autoradiography approaches to study microdistribution of boron compounds in a diffuse lung metastases experimental model

Agustina Portu, National Atomic Energy Commission (CNEA), Argentina

15:28

Single Cell ICP-MS: Quantification of Metal Content in Individual Cells - An Insight into Cancer Treatment

Chady Stephan, PerkinElmer Canada, Ontario, Canada

Chemistry & Pharmacology	R1003

14:40

Metabolism-controlled boron delivery systems composed of p-boronophenylalanine and poly(vinyl alcohol)

Takahiro Nomoto, Laboratory for Chemistry and Life Science, Institute of Innovative Research, Tokyo Institute of Technology, Yokohama, Japan

14:52

Preclinical study on boron neutron capture therapy for bone metastasis with human breast cancer cell lines

Tooru Andoh, Faculty of Pharmaceutical Sciences and Cooperative Research Center of Life Sciences, Kobe Gakuin University, Kobe, Japan

15:04

Synthesis and radiolabelling (124I) of multifunctionalised gold nanorods (AuNRs) as boron drug delivery agents using a pretargeting strategy based on bioorthogonal 'click reaction' with application in Boron Neutron Capture Therapy.

Irene V. J. Feiner, Radiochemistry and Nuclear Imaging, CIC biomaGUNE, San Sebastian, Spain

15:16

Enhanced tumor-targeted delivery of p-boronophenylalanine using fructose-functionalized polymers for boron neutron capture therapy

Ying Yao, Laboratory for Chemistry and Life Science, Institute of Innovative Research, Tokyo Institute of Technology, Yokohama, Japan

15:40-16:00	**Coffee Break**	**R1010**

16:00-18:00	**Parallel Session**	**R1001, R1002, R1003**

Physics & Engineering **R1001**

16:00

Accelerator Neutron Source for in-vitro and in-vivo BNCT studies

Sergey Taskaev, Budker Institute of Nuclear Physics, Russia

16:12

In Situ Observations of Blistering of a Metal Irradiated with 2-MeV Protons

Sergey Taskaev, Budker Institute of Nuclear Physics, Russia

16:24

A real-time neutron monitor for BNCT

Kiyotaka Akabori, Sumitomo Heavy Industries, Ltd., Japan

16:36

Development of the accelerator based Boron Neutron Capture Therapy system for cancer treatment within 1-hour therapeutic time

D.S. Kim, Department of pulse and accelerator, Dawonsys, Gyeonggi-do, Korea

16:48

Development and experimental verification of a liquid moderator based neutron spectrometer

Shingo Tamaki, Graduate school of Engineering, Osaka University, Japan

17:00

Monte Carlo Simulation and Experimental Characterization of Tissue Equivalent Proportional Counter (TEPC) for Neutron Dosimetry

Justin Malimban, Program in Biomedical Radiation Sciences, Department of Transdisciplinary Studies, Graduate School of Convergence Science and Technology, Seoul National University, Seoul, Korea

17:12

Study of the role of neutron induced nuclear reactions on chlorine in healthy tissue dosimetric calculations for BNCT. Measurement of their cross sections at n_TOF (CERN).

Francisco Ogallar, University of Granada, Spain

17:24

Evaluation of silicon based microdosimetry for boron neutron capture therapy Quality Assurance using fast neutron beams

James Vohradsky, Centre for Medical Radiation Physics, University of Wollongong, Australia

17:36

Uncertainties in the absorbed dose determination in irradiations with epithermal neutrons due to the dependence of neutron transport on shape and size of the exposed volume

Grazia Gambarini , Department of Physics, University of Milan, Milan, Italy

17:48

Commissioning of The Nubeam BNCT Neutron Source at Helsinki University Hospital Cancer Center

Liisa Porra, Comprehensive Cancer Center, Helsinki University Hospital, Helsinki, Finland

Physics & Engineering **R1002**

16:00

Beam characteristics and in phantom dosimetry for accelerator-based boron neutron capture therapy: Comparative study of Monte Carlo simulations using Geant4 and MCNP6

Hyegang Chang, Program in Biomedical Radiation Sciences, Department of Transdisciplinary Studies, Graduate School of Convergence Science and Technology, Seoul National University, Seoul, Korea

16:12

Development status of BNCT Treatment Planning System: SACRA planning

Tetsuya Mukawa, Sumitomo Heavy Industries Ltd., Japan

16:24

Neutron beam quality measurement of accelerator-based neutron source using microdosimetric technique

Naonori Hu, Graduate School of Engineering, Kyoto University, Kyoto, Japan

16:36

Characterization Study of Boron-10 Doped Nanodiamonds Made by Ion Implantation

Bo-Rong Lin, Institute of Electronics, National Chiao Tung University, Hsinchu, Taiwan

16:48

A New Boron Delivery Agent: Boron-10 Doped Nanodiamonds Made by Ion Implantation

Tzung-Yuang Chen, Health Physics Division, Nuclear Science and Technology Development Center, National Tsing Hua University, Hsinchu, Taiwan

17:00

BNCT Research Facility at Maria Reactor (NCBJ, Poland) – Numerical Models and First Measurements

Katarzyna Tyminska, National Centre for Nuclear Research, Otwock, Poland

17:12

Verification for dose estimation performance of a Monte-Carlo based treatment planning system in University of Tsukuba

Hiroaki Kumada, University of Tsukuba, Faculty of Medicine, Japan

17:24

Development of a novel patient setting & real-time monitoring system using motion capture technology for boron neutron capture therapy

Hiroaki Kumada, University of Tsukuba, Faculty of Medicine, Japan

17:36

Effect of fast neutron and gamma-ray ratios on a dose distribution in a water phantom

Yoshiaki Kiyanagi, Research Laboratory of Accelerator-based BNCT system, Graduate School of Engineering, Nagoya University, Nagoya, Japan

17:48

Radiation quality dependence of polymer gel dosimeters in therapeutic neutron irradiation field

Ryohei Uchida, Graduate School of Engineering, Kyoto University, Kyoto, Japan

Miscellaneous **R1003**

16:00

A practical handling of the limitation of absorbed dose in BNCT

Tooru Kobayashi, K2BNCT Science & Engineering Laboratory Co. Ltd, Japan

16:12

Development of Proton Linear Accelerator based Boron Neutron Capture Therapy System in Republic of Korea

Hyo Jung Seo, Department of R & D, Dawonmedax, Seoul, Korea

16:24

Cherenkov radiation and its application in Boron Neutron Capture Therapy

Diyun Shu, Department of Nuclear Science and Engineering, Nanjing University of Aeronautics and Astronautics, Nanjing, China

16:36

Strategies for consistently assessing the response of radiochromic film using flatbed scanners

Xudong Zhang, Department of Nuclear Science and Engineering, Nanjing University of Aeronautics and Astronautics, Nanjing, China

16:48

Current Status of BNCT Clinical Trials in Japan

SHIN Masui, Sumitomo Heavy Industries, Ltd., Industrial Equipment Division, Tokyo, Japan

17:00

Preparation of Water-in-Oil-in-Water Emulsion as Drug Delivery System Using Mixing Medical Device for Neutron Capture Therapy

Hironobu Yanagie, Research Institute of Healthy Living, Niigata University of Pharmacy & Applied Life Sciences, Niigata, Japan

17:12

Development of remote-changeable Bonner sphere spectrometer

Sadaaki Shirashi, Graduate School of Engineering, Kyoto University, Kyoto, Japan

17:36

Reactor Laboratory for Biomedical Research in The National Centre for Nuclear Research, Poland

Edyta Michas, National Centre for Nuclear Research, Poland

17:48

The overview and prospects of BNCT facility at Tsing Hua Open-pool Reactor

Shiang-Huei Jiang, Institute of Nuclear Engineering and Science, National Tsing Hua University, Taiwan