



Tuesday, October 30, 2018

CHANG YUNG-FA FOUNDATION International Convention Center

09:00-10:40	Invited Lecture	R 1001
<p>09:00-09:20</p> <p>Translational Radiobiological BNCT Studies for the Treatment of Head and Neck Cancer, Liver and Lung Metastases, Rheumatoid Arthritis and Induction of Abscopal Effect: A Bench to Bedside Approach</p> <p>Amanda E. Schwint, Department of Radiobiology, National Atomic Energy Commission, Argentina</p>		
<p>09:20-09:40</p> <p>A realistic appraisal of boron neutron capture therapy as a cancer treatment modality</p> <p>Rolf Barth, Department of Pathology, Ohio State University, Columbus, Ohio, USA</p>		
<p>09:40-10:00</p> <p>Dosimetry assessment in patients using a neutron beam based on RFQ accelerator for future installation in a hadrontherapy centre.</p> <p>Silva Bortolussi, Department of Physics, University of Pavia and INFN, Unit of Pavia, Italy</p>		
<p>10:00-10:20</p> <p>Neutron induced charged particles spectrometry for Boron concentration measurement</p> <p>Saverio Altieri, Physics Department, Pavia University, Italy</p>		
<p>10:20-10:40</p> <p>A Retrospective Analysis of Dose Responses after Boron Neutron Capture Therapy for Locally Recurrent Head and Neck Squamous Cell Carcinoma</p> <p>Hanna Koivunoro, Neutron Therapeutics Inc., Finland</p>		
10:40-11:00	Coffee Break	R 1010
11:00-12:00	Invited Lecture	R 1001
<p>11:00-11:20</p> <p>Macro- and microdosimetry for BNCT based on PHITS</p> <p>Tatsuhiko Sato, Japan Atomic Energy Agency, Nuclear Science and Engineering Center, Japan</p>		
<p>11:20-11:40</p> <p>Status of Accelerator-Based BNCT worldwide and in Argentina</p> <p>Andres J. Kreiner, CNEA. National Atomic Energy Commission of Argentina</p>		
<p>11:40-12:00</p> <p>Carbon or Boron: Does it matter in BNCT drugs?</p> <p>Detlef Gabel, Jacobs University Bremen/ Life Sciences and Health, Germany</p>		



12:00-12:30	Plenary Lecture	R1001
12:00-12:15	Development of thermal neutron irradiation port for cells and small animals using 20MeV cyclotron and beryllium target Hiroki Tanaka , Institute for Integrated Radiation and Nuclear Science, Kyoto University, Japan	
12:15-12:30	The history of the development of reactor-based neutron source for BNCT Yoshinori Sakurai , Institute for Integrated Radiation and Nuclear Science, Kyoto University, Japan	
12:30-13:30	Luncheon Seminar	R1001
Neutron Therapeutics Lunch Symposium Neutron Therapeutics, Inc.		
13:30-15:00	Poster Viewing & Presentation	R1010
Poster Group I (Clinical matters / Boron determination & Imaging technology)		
13:30	Reirradiation of Locally Recurrent Head and Neck Cancer with BNCT or Proton Therapy: a Systematic Review Chi-Shuo Lin , Taipei Veterans General Hospital, Taiwan	
13:36	Recycling 10B-enriched Boronophenylalanine in Urine of Patients with Recurrent Brain Tumor Nai-Chun Huang , Institute of Biomedical Engineering and Nanomedicine, National Health Research Institutes, Miaoli, Taiwan	
13:42	Boron neutron capture therapy in 45 patients with recurrent head and neck cancers who have no other treatment options. Itsuro Kato , Department of Oral and Maxillofacial Surgery II, Osaka University, Graduate School of Dentistry, Osaka, Japan	
13:48	Evaluation of the impact on a change of patient's posture from preplan with diagnostic images to treatment position in boron neutron capture therapy Tomoaki Motoyanagi , Southern Tohoku BNCT Research Center, Koriyama, Japan	



13:54	Design of collimator for T/N-SPECT for BNCT Saki Shibata , Division of Sustainable Energy and Environmental Engineering, Graduate School of Engineering Osaka University, Japan
14:00	The specific retention of boric acid in liver tumor for BNCT in a single liver tumor-bearing rat and a multifocal liver tumor-bearing rabbit models Y. C. Lin , Nuclear Science and Technology Development Center, National Tsing Hua University, Hsinchu, Taiwan
14:06	Simulations of an imaging system based on a CZT photon detector for a future BNCT-SPECT. Setareh Fatemi , National Institute of Nuclear Physics INFN, Unit of Pavia, Pavia, Italy
14:12	Preliminary performance studies of a CZT photon detector using a highly thermalized neutron beam. Nicoletta Protti , National Centre for Nuclear Research, Italy
14:18	High performance 3D CZT spectro-imager for BNCT-SPECT: preliminary characterization. Nicoletta Protti , National Centre for Nuclear Research, Italy
14:24	Feasibility study of using IRT-T research reactor for BNCT applications Mikhail Anikin , National Research Tomsk Polytechnic University, Russia
14:30	Data processing automatization and improvements of D-Pace OWS-30 wire scanner Timofey Bykov , Budker Institute of Nuclear Physics, Novosibirsk, Russia
14:36	Visualization of a negative hydrogen ions beam in a vacuum insulation tandem accelerator Timofey Bykov , Budker Institute of Nuclear Physics, Novosibirsk, Russia
14:42	Optimization of the beam shaping assembly and local protection of the accelerator source of epithermal neutrons Tatiana Sycheva , Budker Institute of Nuclear Physics, Novosibirsk, Russia
14:48	PGNAA facility at RA-3: numerical approach towards first measurements of biological samples for BNCT Lucas Provenzano , National Atomic Energy Commission (CNEA), Argentina



Poster Group II (Physics & Engineering)	
13:30	Study of the potential application of low energy neutrons from neutron guides to BNCT radiosurgery Pablo Torres , Universidad de Granada, Spain
13:36	Neutron control method for an accelerator-based BNCT system with a solid-state Li target Satoshi Nakamura , Department of Radiation Oncology, National Cancer Center Hospital, Tokyo, Japan
13:42	A High Flux Thermal Neutron Source for Small Animal Models for the Development of Drugs for Boron Delivery to Cancer Sites Melvin Piestrup , Adelphi Technology, USA
13:48	Neutron Beams Optimization of Nuclear Medical Ship Yizheng Chong , China Zhongyuan Engineering Corporation, China
13:54	Calculation of the response matrix of a PMMA cylindrical neutron spectrometer in consideration of angle distribution Kentaro Baba , Graduate School of Biomedical Science and Engineering, Hokkaido University, Sapporo, Japan
14:00	Investigation of ^{124}Sb-Be neutron source for BNCT. Yoshinori Sakurai , Kyoto University, Japan
14:06	Investigation of beam component monitor for BNCT using gel detector Yoshinori Sakurai , Kyoto University, Japan
14:12	Design of a model for BSA to meet free beam parameters for a 3.5 MeV linear accelerator Kuo-Wei Lee , HEC Pharm Co., Ltd., China
14:18	Development of a treatment planning system for BNCT Kuo-Wei Lee , HEC Pharm Co., Ltd., China
14:24	Quality assurance of an accelerator-based boron neutron capture therapy system: Dosimetric and mechanical aspects based on initial experience Takahiro Kato , Southern Tohoku BNCT Research Center, Japan



14:30	<p>Evaluation of a newly developed water-equivalent bolus technique in accelerator-based boron neutron capture therapy for skin tumors</p> <p>Kazuhiro Arai, Southern Tohoku BNCT Research Center, Koriyama, Japan</p>
14:36	<p>Development of Thermal Neutron Moderator for Testing Boron Agents for Boron Neutron Capture Therapy (BNCT)</p> <p>Go Ichikawa, Department of Physics, Graduate School of Science, Nagoya University, Nagoya, Japan</p>
14:42	<p>Patient-Position Monitoring System for BNCT Irradiation</p> <p>Takushi Takata, Institute for Integrated Radiation and Nuclear Science, Kyoto University, Japan</p>
<p>Poster Group III (Radiation biology / Chemistry & Pharmacology)</p>	
13:30	<p>Folate-modified cyclodextrin improves the intratumoral accumulation of existing boron compounds.</p> <p>Yoshitaka Matsumoto, Faculty of Medicine, University of Tsukuba, Tsukuba, Japan</p>
13:36	<p>The role of GM-CSF during early cellular responses after BNCR and gamma irradiation</p> <p>Lichao Chen, Division of Cell Signaling, Research Institute, and Division of Boron Neutron Capture Therapy, EPOC, National Cancer Center, Tokyo, Japan</p>
13:42	<p>¹⁸⁸Re-liposome, a high energy beta-particle radiopharmaceutical shows enhanced efficacy on suppression of head and neck squamous cell carcinoma progression by repeated doses</p> <p>Chun-Yuan Chang, Department of Biomedical Imaging and Radiological Sciences, National Yang-Ming University, Taiwan</p>
13:48	<p>The combination effect of neutron irradiation and exposure to DNA-alkylating agent on glioblastoma cell lines with different MGMT and p53 status</p> <p>Yuko Kinashi, Institute for Integrated Radiation and Nuclear Science, Kyoto University, Osaka, Japan</p>
13:54	<p>Biological evaluation of boric acid uptake at different administration times. Comparative study between BPA and BA accumulation curves.</p> <p>Agustina Portu, National Atomic Energy Commission (CNEA), Argentina</p>
14:00	<p>Overexpression of LAT1 by lipofection enhances BPA intracellular incorporation in glioblastoma cells</p> <p>Ken Ohnishi, Department of Biol., Ibaraki Prefectural University of Health Sciences, Ibaraki, Japan</p>



14:06	Radiolabeling and In Vivo Image Evaluation of Boron containing neuropeptide(NPY) analogue in breast cancer Su-jung Chen , Division of Isotope Application, Institute of Nuclear Energy Research, Taoyuan, Taiwan
14:12	Disruption of Hif-1α enhances the sensitivity to BNCT in murine squamous cell carcinoma Yu Sanada , Institute for Integrated Radiation and Nuclear Science, Kyoto University, Japan
14:18	Boron Tracedrugs: Drug-Design Challenge For Neutron Dynamic Therapy Hitoshi Hori , Niigata University of Pharmacy and Applied Life Sciences, Higashijima, Akiha-ku, Niigata, Japan
14:24	Difference in BPA uptake between glioma stem cells and their cancerous cells Fumiyo Yoshida , Department of Neurosurgery, Faculty of Medicine, University of Tsukuba, Japan
14:30	The T/N boron ratios correlation between low and high BPA dose in an orthotopic nude mouse model of tongue squamous cell carcinoma Yu-Chuan Lin , Nuclear Science and Technology Development Center, National Tsing Hua University, Taiwan
14:36	In vitro studies of new boron-rich nanostructures for BNCT Ignacio Porras , Universidad de Granada, Granada, Spain
14:42	Development of cyclic RGD-functionalized maleimide-containing closo-dodecaborate albumin conjugate (MID-AC) as an active tumor targeting boron carrier for neutron capture therapy Kazuki Kawai , Laboratory for Chemistry and Life Science, Institute of Innovative Research, Tokyo Institute of Technology, Yokohama, Japan
14:48	Gadolinium-loaded chitosan nanoparticles (Gd-nanoCPs) for neutron capture therapy of cancer: Influence of particle size of Gd-nanoCPs on tumor-killing effect in vitro Tooru Andoh , Faculty of Pharmaceutical Sciences and Cooperative Research Center of Life Sciences, Kobe Gakuin University, Kobe, Japan

15:00-16:00	Parallel Session	R1001, R1002, R1003
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Chemistry & Pharmacology	R1001
15:00 New self-assembling peptide Drug Delivery System with BSH toward clinical application Hiroyuki Michiue , Neutron Therapy Research Center, Okayama University, Japan	
15:12 Development of closo-dodecaborate-containing water-soluble folate derivatives targeting to folate receptor α for boron neutron capture therapy Shangze WU , Laboratory for Chemistry and Life Science, Institute of Innovative Research, Tokyo Institute of Technology, Yokohama, Japan	
15:24 Development of Boron-Containing Monosaccharide Derivatives for Boron Neutron Capture Therapy Taiki Itoh , Faculty of Pharmaceutical Sciences, Tokyo University of Science, Chiba, Japan	
15:36 Dodecaborate-sugar conjugates as delivery system for BNCT Luigi Panza , Department of Pharmaceutical Sciences, Universita del Piemonte Orientale, Italy	
15:48 Microfluidic technology for the synthesis of liposomes encapsulating boron compounds in Argentina Agustina Portu , National Atomic Energy Commission (CNEA), Argentina	
Radiation biology	R1002
15:00 Hybrid gold and boron nanoparticles for treatment and boron dose estimation in boron neutron capture therapy for malignant glioma Alexander Zaboronok , Faculty of Medicine, University of Tsukuba, Tsukuba, Japan	
15:12 Electroporation to optimize boron targeting for Boron Neutron Capture Therapy (BNCT): a study of boron biodistribution with Boric Acid in the hamster cheek pouch oral cancer model Veronica A. Trivillin , National Atomic Energy Commission (CNEA), Argentina	
15:24 Using LDR to enhance the therapeutic efficacy of BNCT for lymph node metastasis in an orthotropic mouse model of tongue squamous cell carcinoma Yu-Chuan Lin , Nuclear Science and Technology Development Center, National Tsing Hua University, Taiwan	
15:36 Radiobiological in vitro and in vivo investigations on accelerator neutron source in Budker Institute of Nuclear Physics Aleksandr Kichigin , Budker Institute of Nuclear Physics, Novosibirsk, Russia	



Boron determination & Imaging technology		R1003
15:00	<p>Development of a prompt gamma ray imaging detector using LaBr₃(Ce) scintillator and arrayed MPPC for Boron Neutron Capture Therapy</p> <p>Keita Okazak, Graduate School of Engineering, Kyoto University, Kyoto, Japan</p>	
15:12	<p>Uptake of p-borono-phenylalanine by brain tumor stem cells analyzed by mass cytometry</p> <p>Natsuko Kondo, Particle Radiation Oncology Research Center, Institute for Integrated Radiation and Nuclear Science, Kyoto university, Osaka, Japan</p>	
15:24	<p>Development of the electron tracking Compton camera for on-line imaging of 478 keV prompt gamma rays in BNCT</p> <p>Tetsuya Mizumoto, Kyoto Space Gamma, Inc., Kyoto, Japan</p>	
15:36	<p>Response of a CZT detector to the neutron and gamma radiation field of an accelerator based BNCT facility.</p> <p>Setareh Fatemi, National Institute of Nuclear Physics INFN, Unit of Pavia, Via A. Bassi 6, IT-27100 Pavia, Italy</p>	
15:48	<p>Exploring neutron autoradiography and alpha spectrometry techniques for boron measurements in bone.</p> <p>Lucas Provenzano, Comision Nacional de Energia Atomica (CNEA), Argentina</p>	

16:00-16:20	Coffee Break	R1010
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16:20-18:00	Parallel Session	R1001, R1002, R1003
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Physics & Engineering		R1001
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16:20	<p>Development of real-time neutron detector for beam quality discrimination measurement using LiCAF scintillator and neutron moderator</p> <p>Michtaka Sato, Graduate School of Engineering, Kyoto University, Kyoto, Japan</p>	
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16:32	<p>Design of a BNCT irradiation room based on proton accelerator and Be target</p> <p>Chiara Magni, National Institute of Nuclear Physics (INFN), Unit of Milan, Italy</p>	
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16:44	<p>Comparison of relative biological effectiveness (RBE) doses and the photon iso-effective dose model for predicting the normal tissue complication probability in boron neutron capture therapy (BNCT) of head and neck cancer patients</p> <p>Hanna Koivunoro, Neutron Therapeutics Finland Oy, Helsinki, Finland</p>
16:56	<p>On the upper limit for the energy of epithermal neutrons for BNCT</p> <p>Pablo Torres-Sanchez, Universidad de Granada, Spain</p>
17:08	<p>Computational assessment of BNCT neutron beams using radiobiological models</p> <p>Lucas Provenzano, Comision nacional de energia atomica (CNEA), Argentina</p>
17:20	<p>How do photon iso-effective tumor doses derived from in-vitro BNCT studies compare to those from in-vivo cancer model data?</p> <p>Sara Gonzalez, Comision nacional de energia atomica (CNEA), Argentina</p>
17:32	<p>Extension of the photon iso-effective dose model to the dose-limiting normal tissues for BNCT of head and neck cancer</p> <p>Sara Gonzalez, Comision nacional de energia atomica (CNEA), Argentina</p>
17:44	<p>Development of Real-Time BNCT Neutron Beam Monitor Using Thin Silicon Sensor</p> <p>Masashi Takada, National Defense Academy of Japan</p>
Clinical matter	R1002
16:20	<p>Boron neutron capture therapy for vulvar melanoma and extramammary Paget's disease of the genital regions</p> <p>Junichi Hiratsuka, Department of Radiation Oncology, Kawasaki Medical School, Kurashiki, Japan</p>
16:32	<p>Reporting BNCT: A new approach towards an international standard</p> <p>Wolfgang Sauerwein, BNCTeam, Department of Radiation Therapy, University Hospital Essen, University Duisburg-Essen (D), Germany</p>
16:44	<p>"Boron neutron capture therapy for malignant pleural mesothelioma: A case report"</p> <p>Minoru Suzuki, Institute for Integrated Radiation and Nuclear Science, Kyoto University, Japan</p>



16:56	Boron Neutron Capture Therapy for High-Grade Gliomas –Consolidating Published Evidence in One Place Daniel Song Chiek Quah , Department of Radiation Oncology, National Cancer Center, Singapore, Singapore
17:08	First Patient from Singapore to Receive Boron Neutron Capture Therapy - Challenges Met and Lessons Learnt Daniel Song Chiek Quah , Department of Radiation Oncology, National Cancer Center, Singapore, Singapore
17:20	Dosimetric Comparison of Boron Neutron Capture Therapy, Proton Therapy and IG-IMRT for Recurrent Anaplastic Meningioma Daniel Song Chiek Quah , Department of Radiation Oncology, National Cancer Center, Singapore, Singapore
17:32	B-10 concentration kinetics in the tumor and blood in patients administered with BPA: a critical review Hiroshi Fukuda , Department of Radiology, Tohoku Medical and Pharmaceutical University, Sendai, Japan
17:44	How much does tumor location affect the treatment field size passively determined by a dose constraint to the mucosa in head and neck boron neutron capture therapy? Katsumi Hirose , Department of Radiation Oncology, Southern Tohoku BNCT Research Center, Japan
Physics & Engineering	R1003
16:20	Improvement of gamma-ray telescope system for BNCT at Kyoto University Reactor Yoshinori Sakurai , Institute for Integrated Radiation and Nuclear Science, Kyoto University, Japan
16:32	Dosimetric influence of respiratory motion in boron neutron capture therapy for plumonary tumor Ryoichi Hinoto , Graduate School of Comprehensive Human Sciences, University of Tsukuba, Japan
16:44	e_LiBANS project: thermal and epithermal neutron sources based on a medical Linac Valeria Monti , University of Turin and National Institute of Nuclear Physics, Turin, Italy



16:56

The influences of moderator geometry on beam quality of Li-target based AB-BNCT

Wei-hua Lu, Neuboron Medtech Ltd., Nanjing, China

17:08

A Simplification in BNCT Treatment Planning: Two-component Treatment of Inhomogeneous, Multi-component Dose Distributions, Based on Dose-Fraction Regularity

Ryoichi Seki, Research Center for Nuclear Physics, Osaka University, Japan

17:20

Evaluation of Multi-field Technique Applied to Boron Neutron Capture Therapy for Brain Tumors

Shih-De Yoe, Institute of Nuclear Engineering and Science, National Tsing Hua University, Taiwan

17:32

Status of BNCT Neutron Generator Development at the IAP RAS

Vadim Skalyga, Institute of Applied Physics of the Russian Academy of Sciences, Russia