



## The 2<sup>nd</sup> International Workshop on BNCT - Basic Science and Technology for BNCT -

Sponsored by the BNCT promotion program of Kyoto University Research Reactor Institute

**December 9-10 2014**

**Venue : Kyodai Rakuyu Kaikan**

### Organizing Committee

Honorary Chairman : Prof. Sentaro Takahashi

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Vice Chairman : Prof. Shin-ichiro Masunaga

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Chemistry: Prof. Mitsunori Kirihata

Prof. Hiroyuki Nakamura

Physics : Prof. Yoshinori Sakurai

Prof. Hiroki Tanaka

BNCT research in the world has reached a new stage by the start of clinical trial with accelerator neutron irradiation system in Kyoto University Research Reactor Institute (KURRI). KURRI started a new program to accelerate BNCT research in the last fiscal year. As a part of this program, we held the first international workshop at the end of March of 2014 to identify tumor types which may be effectively treated with BNCT. The BNCT is highly interdisciplinary and specialized cancer treatment regimen which involves clinical radiation oncology, radiation biology, boron pharmaceutical chemistry and physics. It is clear that close collaborative research among these three basic science areas is indispensable for the advancement of clinical BNCT. Therefore, this upcoming 2<sup>nd</sup> meeting will be focused on the basic research area of BNCT.

The committee invited several distinguished researchers who are expert in biology, chemistry and physics of BNCT from oversea and also from Japan. In addition to them, several distinguished scientists will be invited to deepen and enrich the discussion at the meeting.

We hope you and many of your colleagues will be able to attend the Workshop for the promotion of collaborative research on BNCT.

Organizing Committee  
September 29 2014

## Guest Speakers from Oversea

Dr. Mandy Schwint: National Atomic Energy Commission (Argentina)  
Prof. Chang W. Song: University of Minnesota (USA)  
Prof. Detlef Gabel : Jacobs University Bremen (Germany)  
Dr. Silva Bortolussi : INFN (Italy)  
Prof. Fong-In Chou : Tsing Hua University (Taiwan)  
Dr. Po-Shen Pan: TamKang University (Taiwan)  
Prof. Gann Ting : Institute of Nuclear Energy Research (Taiwan)

## Guest Speakers From Japan

Prof. Yoshiaki Kiyonagi : Nagoya University  
Dr. Koichi Ando : Gunma University  
Prof. Mitsunori Kirihata : Osaka Prefecture University  
Prof. Hiroyuki Nakamura : Tokyo Institute of Technology  
Prof. Takeshi Nagasaki : Osaka City University  
Prof. Yoshinori Sakurai : KURRI  
Prof. Hiroki Tanaka : KURRI  
Prof. Shin-ichiro Masunaga : KURRI  
Prof. Yuko Kinashi : KURRI

**Registration Fee : Free**

**Contact for information of the meeting :**

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## Schedule of the Meeting

**1<sup>st</sup> Day (December 9)**

**Morning session 9:30~11:40**

**Yoshinori Sakurai :**

The past, present, and future of the reactor-based neutron source at Kyoto University Reactor

**Hiroki Tanaka**

Development of the real time neutron monitor for BNCT

**Yoshiaki Kiyonagi**

Electrostatic accelerator based BNCT project at Nagoya University

**Takeshi Nagasaki**

Melanoma-targeting boron delivery system using kojic acid-carborane Conjugate

**Lunch 11:40~13:00**

**Afternoon session 13:00~17:20**

**Detlef Gabel**

Designing compounds for BNCT: Lessons learned

**Po-Shen Pan**

The Synthesis of Multiple Boron-containing Analogues via Multicomponent Reactions

**Mitsunori Kirihata**

Detection of Boron pharmaceuticals Using Fluorescent Boron-Sensor

**Gann Ting**

Cancer Nanotargeted Radionuclides for Nuclear Imaging and Internal Radiotherapy

**Amanda Shwint**

Optimizing the therapeutic efficacy of BNCT in experimental oral cancer: boron delivery and radiobiological studies

**Silva Bortolussi**

BNCT of thoracic tumors and osteosarcoma: preclinical research in Pavia

**Yuko Kinashi**

Biological effective dose estimation using blood samples of BNCT patients

**Evening discussion session with meal 18:00~21:00**

**2nd Day (December 10)**

**Morning session 9:10~12:00**

**Fong-In Chou**

Boric acid-mediated boron neutron capture therapy for liver cancer  
– Efficacy and mechanism of action

**Chang Song**

Implication of vascular damage in BCNT

**Shin-ichiro Masunaga**

The dependency of CBE factors on the concentration of administered neutron capture agents in BNCT

**Hiroyuki Nakamura**

Albumin-bound closo-Dodecaborate as a Promising Boron Carrier to Tumor

**Koichi Ando**

Survival Parameters and RBE of high-LET radiation

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**Kyodai Rakuyu Kaikan**

