

Final Announcement



3rd Japan-US Technical Information Exchange Forum on BLAST INJURY (JUFBI 2018) *with International Partnership*

May 9 (Wed) – 11 (Fri), 2018

Keio Plaza Hotel Tokyo (Tokyo, Japan)

<http://www.ndmc.ac.jp/schoolnews/jufbi2018/>

Objective and Scope

In recent years, attacks using explosive devices have been occurring frequently not only in battle fields and regions of conflict but also in normal cities, resulting in a large number of victims of blast injuries. The number of patients diagnosed as having mild blast-induced traumatic brain injury (mild bTBI), who show higher order brain dysfunction but do not show any abnormalities by conventional diagnostic imaging methods, has been greatly increasing. It has been pointed out that mild bTBI may be associated with post-traumatic stress disorder (PTSD) and other neurodegeneration-related pathologies, such as chronic traumatic encephalopathy (CTE). However, the complex causes and environments and hence the intricate clinical consequences make it difficult to understand the mechanism and pathophysiology of blast injuries.

On the basis of the injury mechanism, blast injuries can be assigned to several categories. Primary injury results from the blast itself; blast overpressure (shock wave) can cause internal injuries, a unique feature of blast injury that is thought to be related to mild bTBI. Secondary injury is caused by fragments and debris propelled by the blast force, resulting in blunt and penetrating injuries. The blast winds can also cause acceleration of the body, resulting in blunt force injuries similar to those caused by car accidents, sports and falls (tertiary injury). In addition, heat, light and toxic gases generated by explosions can cause burn injury, blindness and inhalation injury (quaternary injury). The clinical consequences of post-detonation

environmental contaminants, including bacteria, radiation (dirty bombs), and fuel and metals causing tissue reactions, are also involved (quinary injury). To investigate and establish methods for protection against and medical countermeasures to such complex blast injuries, international and cross-disciplinary collaboration is very important.

To bring together broad knowledge and expertise, as well as to share national experiences and evidence-based approaches for blast injuries, the previous two Japan-US Technical Information Exchange Forum on Blast Injury were held in June 2016 and in April 2017 in Tokyo. These meetings have been very productive involving active, fruitful discussions and exchange of creative ideas on a broad spectrum of blast injuries, identifying critical issues involving experimental and computational studies of blast-induced injuries and creating new partnerships on joint research explorations to address the scientific and technical challenges. Building upon these successful meetings, the next Japan-US Technical Information Exchange Forum on Blast Injury (JUFBI 2018) will be held from May 9 to 11, 2018 in Tokyo, Japan. The objectives of the 3rd Forum include but not limited to:

- a. Assemble a Japan-US forum focused on multi-disciplinary science and medicine necessary to increase our understanding of blast injury.
- b. Achieve a mutual understanding of Japan-US efforts in blast injury research.
- c. Identify knowledge gaps requiring collaborative research.
- d. Increase understanding and collaborate to improve prevention, clinical diagnosis and treatment of brain, lung and auditory blast injuries.

The meeting agenda includes the following broad topic areas:

- 1) Blast injury epidemiology - brain (mild bTBI), lung and ear injuries; blast energy/physics; improvised explosive device (IED) blast injuries
- 2) Primary blast injury:
 - a. Brain
 - b. Lung
 - c. Ear (Auditory)
 - d. Effects of repeated exposure
- 3) Long-term effects/Chronic symptoms
 - a. Aberrant protein expression and accumulation
 - b. Chronic traumatic encephalopathy (CTE)-like symptoms
 - c. Correlation with post-traumatic stress disorder (PTSD)
- 4) Prevention/Protection/Mitigation:
 - a. Lessons learned from military operations
 - b. Prevention practices, e.g., psychological resilience
 - c. Biomedical design criteria for protection (head, lung, ear)
 - d. Clinical current practices, interventions, neurosurgeries, etc.
- 5) Diagnosis/Markers – Assessment of injury severity (mild, moderate, severe)
- 6) Generation, sensing and characterization of blast/shock waves
- 7) New Technology and methods for blast injury research and medicine:
 - a. Imaging technology and modalities
 - b. Optogenetics

- c. Computer-based analysis
- d. Drug delivery system (DDS)
- e. Photobiomodulation

Contributions from countries other than Japan and the US as well as from young investigators are welcome.

General Information

Meeting Title:

The 3rd Japan-US Technical Information Exchange Forum on Blast Injury (JUFBI 2018)

Organized by:

National Defense Medical College (NDMC)

Tokyo University of Agriculture and Technology (TUAT)

U.S. Army, Medical Research and Materiel Command (USAMRMC)

U.S. Army, Research Development and Engineering Command (RDECOM)

Important Dates:

Abstract submission deadline: February 28, 2018 (Wednesday)

Paper acceptance notification: March 14, 2018 (Wednesday)

Preregistration deadline: April 10, 2018 (Tuesday)

Hotel reservation deadline: April 25, 2018 (Wednesday)

JUFBI 2018: May 9 (Wednesday) - 11 (Friday), 2018

A closed meeting for planning committee members will be held on May 14 (Monday), 2018.

Venue: (Please also refer to the Access section below.)

Keio Plaza Hotel Tokyo

<https://www.keioplaza.com/>

Room: **47th Floor**, Aozara (あおぞら)

2-2-1 Nishi-Shinjuku, Shinjuku-Ku, Tokyo 160-8330, Japan

Limousine bus is available between the Narita International Airport and the Keio Plaza Hotel, and between the Haneda International Airport and the Keio Plaza Hotel.

Information on the bus time schedules, fares and boarding places is available at:

https://www.limousinebus.co.jp/en/platform_searches/index/2/18 (Narita Airport)

https://www.limousinebus.co.jp/en/platform_searches/index/4/18 (Haneda Airport)

Registration:

Pre-registration is required for all the participants. The preregistration deadline is **April 10 (Tue)**. Absolutely No “On-Site” registration. Registration is free of charge.

Please complete the preregistration form posted at the conference website and submit it by email or fax to the JUFBI 2018 secretary office.

Email: jufbi-sec@ndmc.ac.jp

Fax: +81-4-2996-2081

Hotel Accommodation:

For the participants who want to stay at the Forum venue, the JUFBI 2018 secretary office plans to reserve a block of rooms. Please send the hotel reservation form posted at the conference website not later than **April 25 (Wed)** by email or fax to the JUFBI 2018 secretary office.

Email: jufbi-sec@ndmc.ac.jp

Fax: +81-4-2996-2081

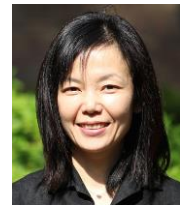
Keynote and Tutorial Lectures:

Keynote 1

“Molecular mechanism of cytoarchitecture formation of cerebellar neurons”

Prof. Mineko Kengaku

Institute for Integrated Cell-Material Sciences,
Kyoto University



Keynote 2

“Innovation in military medicine and collaboration”

Dr. George Ludwig

Principal Assistant for Research and Technology,
US Army Medical and Materiel Command (USA)



Tutorial 1

“Primary blast-induced traumatic brain injury – A Canadian perspective”

Dr. Yushan Wang

DRDC, Suffield Research Centre (Canada)



Tutorial 2

“Quantification of microscopic 3D cell structures in in vivo animal brains”

Kazuto Masamoto

Brain Science Inspired Life Support Research Center,
University of Electro-communications (Japan)

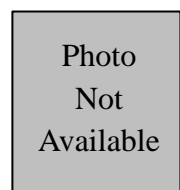


Tutorial 3

“Trends of IED”

Dr. Reiko I. Hiyoshi

National Research Institute of Police Science (Japan)



Tutorial 4

“Late-life neurodegenerative disorders due to traumatic brain injury:
Epidemiology, clinical symptoms and in vivo quantification of neuropathology”

Dr. Keisuke Takahata

National Institute of Radiological Sciences (Japan)



Get-Together and Conference Dinner:

Join the get-together and conference dinner for more exciting discussion and communication!
Please pay the fees by cash (JPY or USD) on site at the conference registration desk. No credit card is accepted.

Get-Together:

17:00 - May 9 (Wed)

Forum Dinner:

17:00 - May 10 (Thu) at the Forum venue.

Publication:

The Forum Proceedings containing a record of presentations (presentation slides) will be published in the form of a DVD.

Meeting Organization Committee:

General Chair:

Mr. Michael Leggieri (USAMRMC, USA)

General Co-chairs:

Prof. Daizoh Saitoh (NDMC, Japan)

Program Chair:

Dr. Raj Gupta (USAMRMC, USA)

Program Co-Chair:

Prof. Shunichi Sato (NDMC, Japan)

Members:

Prof. Nariyoshi Shinomiya (NDMC, Japan)

Mr. Katsuo Doki (NDMC, Japan)

Mr. Shuji Sue (NDMC, Japan)

Prof. Satoshi Tomura (NDMC, Japan)

Dr. Satoko Kawauchi (NDMC, Japan)

Dr. Masaki Takeda (ATLA, Japan)

Dr. Keisuke Fujii (ATLA, Japan)

Prof. Izumi Nishidate (TUAT, Japan)

Dr. Shashi Karna (US Army RDECOM, ARL, USA)

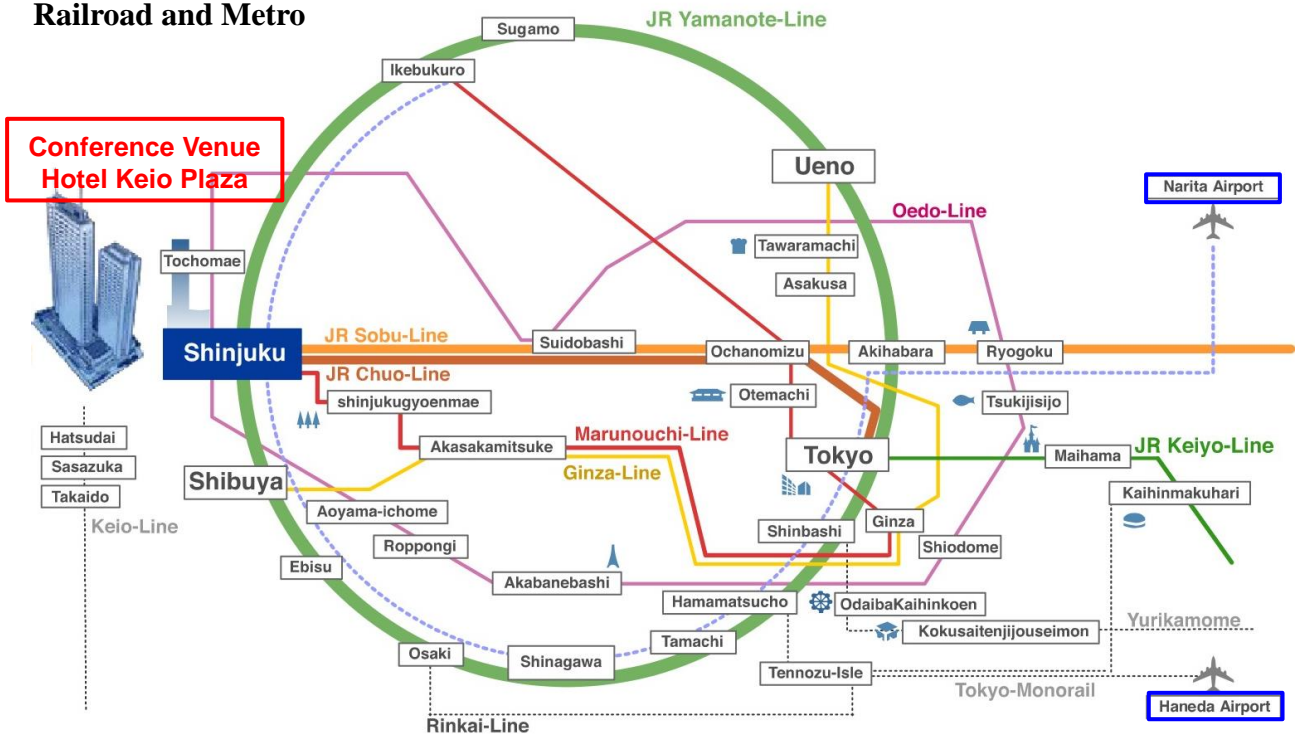
Dr. Richard Shoge (USAMRMC, USA)

Dr. Therese West (USAMRMC, USA)

Dr. Kyungho Park (US Army RDECOM, ITC-PAC, USA)

Access:

Railroad and Metro



Shinjuku Area



Partners and Sponsors



Meeting Secretaries:

Shunichi Sato (NDMC)

Izumi Nishidate (TUAT)

Raj Gupta (USAMRMC)

Kyungho Park (ITC-PAC)

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