



International Neurotrauma Symposium 2011

April 27 – May 1, 2011 • Shanghai

Highlights of the Scientific Program

Dear Colleague:

It is with great pleasure that I announce that the 10th International Neurotrauma Society Meeting will be held in Shanghai, China in April 2011. On behalf of the International Neurotrauma Society (INTS), I would like to express a cordial welcome to all engaged in the study and treatment of traumatic injury to the brain, spinal cord, and cranial and spinal nerves.

Neurotrauma remains one of the leading causes of death and morbidity in the world. To address this problem, the 10th International Neurotrauma Society Meeting will cover a wide range of topics that the participants are certain to find interesting and informative from both a basic science and clinical perspective. Additionally, we believe that this meeting will offer the added benefit of enhancing the close interaction of practicing clinicians and bench scientists throughout the world.

Shanghai is the largest city in China and is the host city of Expo 2010. I hope that all our guests will enjoy the culture and heritage of Shanghai and China.

With my best wishes,

Ji-yao Jiang, MD, PhD
Organizing Committee Chair, INTS 2011
Professor and Chair,
Department of Neurosurgery
Shanghai Jiao Tong University
School of Medicine

Guidelines for Neurotrauma

- Recommendations for Trials and Prognosis: The Impact of IMPACT
- Development and Implementation of Guidelines for TBI
- Guidelines for the Treatment of Spinal Cord Injury

Experimental Therapeutic Approaches

- Neuroprotection in TBI
- Neuropeptide Modulation in TBI
- Activation of Hypo-active NMDA Receptors Provides Neuroprotection

The Future of Clinical Trials in TBI

- NIH Perspective
- Report of the World Health Organization
- Combinational Therapies Report
- The Chinese Perspective
- The Potential of Comparative Effectiveness Research for TBI

Reparative Mechanisms following CNS Injury

- Reorganization of Brain Function after CNS Injury
- Axonal Regeneration after Spinal Cord Injury

Neuroimaging

- MR/DWI/FLAIR
- MR Spectroscopy
- Functional Connectivity MR

CNS Regeneration and Repair

- Therapeutic Approaches in Axon Regeneration
- Guiding Neuronal Migration and Nerve Growth Electrically

Bioengineering in TBI

- Biomaterials and Nanotechnology
- Bioengineering/Brain Computer Interface

DAI Revisited

- Electrophysiology
- MRI Visualization of DTI in the Human Brain
- Channelopathy

Glia in CNS Injury

- Astrogliosis after Spinal Cord Injury
- Astrocytes and Neural Plasticity

TBI-Induced Neuronal Injury and Death

- Atrophy and Reorganization
- Mechanoporation and Cell Injury and Death
- Apoptosis vs Necrosis and Autophagy

Controversies in TBI Metabolism

- Altered Brain Metabolism without Ischemia
- Altered Brain Metabolism with Post-TBI Ischemia
- Relevance of Global Metabolic Change to Regionally Monitored Events

Controversies in TBI Rehabilitation

- Pediatric Issues
- Neurocognitive Rehabilitation
- Organic Basis of Recovery

Decompressive Strategies in TBI and SCI

- The European Experience in TBI
- The Chinese Experience in TBI
- The Australian Experience in TBI

Patient Management in CNS Injury

- The Importance of Prevention
- Can We Target ICP and CPP Management Better?

Biomarkers and Novel Approaches to Monitoring

- Protein Biomarkers Discovery and Validation in TBI
- Proteomic Profile Changes after Human TBI

Inflammation in CNS Injury

- Modulation of the Immune Response by TBI
- Neuroinflammation: Beneficial or Detrimental?

Monitoring in the Neuro ICU

- Cortical Spreading Depression after TBI
- The Potential for Microdialysis To Monitor Inflammatory Response In Vivo

Recent and Ongoing Large Clinical Trials in Neurotrauma

- Antifibrinolytic Treatment in TBI
- TBI Trials in Asia
- The Global Experience in Spinal Cord Injury
- Future of Traumatic Brain Injury in the World

Visa

Visas are required for traveling to China for this conference. Please contact your travel agent and/or the Chinese Consulate/Embassy in your country for details as soon as possible in order to initiate visa application procedures. Visa processing times can vary. Please Note: Participants are encouraged to apply for a Tourist Visa. The organizing committee cannot issue official letters of invitation for your visa application.

Registration

All speakers and attendees are asked to register online at www.ints2011.com.

Abstract Submission

Abstracts can be submitted through the official INTS website: www.ints2011.com. The deadline for abstract submission is December 31, 2010. All accepted abstracts will be published in the Journal of Neurotrauma.

Payment Method

Online payment is available on the congress website: www.ints2011.com.

Awards

The congress organizing committee will issue awards to young investigators and hopes to provide up to 30 travel grants for young physicians and scientists. Please see details on our website: www.ints2011.com.

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EXPERT
REVIEWS

Synopsis of the 10th International Neurotrauma Symposium: from bench to bedside in neurotrauma translational research

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10th International Neurotrauma Symposium
Shanghai International Convention Center, Shanghai, China,
27–30 April 2011

The 10th International Neurotrauma Symposium was held in Shanghai, China, on 27–30 April 2011. This meeting marked the 20th anniversary of International Neurotrauma Symposia. The vision of the International Neurotrauma Society is to unite clinicians and scientists to discuss and present the latest in translational clinical and basic science research related to neurotrauma. The Shanghai meeting brought together 1000 delegates from over 70 countries. Key areas discussed included current guidelines of neurotrauma management, the latest advances in neuroimaging, the latest concepts in cell death mechanisms after neurotrauma, the role of decompressive techniques for cranial and spinal neurotrauma, advances in biomarkers for CNS injury, and the future of clinical management and research in neurotrauma.

KEYWORDS: biomarkers • CNS inflammation • CNS regeneration • decompressive craniectomy • neuroimaging • neurotrauma • spinal cord injury • TBI

The 10th International Neurotrauma Society (INTS) meeting marked the 20th anniversary of International Neurotrauma Symposia, with the first being held in Fukushima, Japan in 1991. The recent meeting was hosted by the INTS President David Hovda (University of California, Los Angeles, CA, USA). The Chair of the local organizing committee was Ji-yao Jiang. The local organizing institutions included Renji Hospital, Shanghai Jiaotong University School of Medicine and the Shanghai Institute of Head Trauma. The meeting brought together 1000 delegates from over 70 countries across the world and allowed the sharing and dissemination of the latest research findings and the discussion of hot and controversial topics in the clinical and translational/basic science arenas of neurotrauma and spinal cord injury (SCI).

The 10th INTS was comprised of six plenary sessions and eight break-out sessions, as summarized in TABLES 1 & 2. In addition to these, there was

also a round table discussion on the indications and techniques for decompressive craniectomy in the setting of traumatic brain injury (TBI).

Highlights of the meeting

The clinical aspects of TBI

Andrew Maas (Antwerp University Hospital, Edegem, Belgium) opened the meeting and plenary session 1 by discussing the International Mission for Prognosis and Analysis of Clinical Trials in TBI (IMPACT) head injury research consortium, which has undertaken a pool analysis of several large trials in TBI [1,2]. Maas emphasized the importance of comparative effectiveness studies in neurotrauma and articulated the position that such an approach had numerous advantages over prospective randomized controlled trials, which tended to be narrower in scope and had limited generalizability. One of the major innovations of IMPACT has been the development of a sliding dichotomous

Table 1. Plenary sessions at the 10th International Neurotrauma Symposium.

Session	Title of session and speakers
Session 1	Guidelines for Neurotrauma Recommendations for Trials and Prognosis: The impact of IMPACT – Andrew Maas Development and Implementation of Guidelines for TBI – Geoffrey Manley Guidelines for the Treatment of Spinal Cord Injury – Michael Fehlings
Session 2	Neuroimaging Advanced MRI Detection of Blast-Related TBI – David Brody Recovery from Glutamate and Energy Metabolism Alterations after Mild TBI – Charles Gasparovic Neurotraumatology in Japan and Asia – Minoru Shigemori
Session 3	TBI-induced Neuronal Injury and Death Evidence for Neuronal Atrophy as well as Cell Death Following Diffuse Brain Injury – John Povlishock Mechanisms Underlying Cell Death After Brain Injury – Robert W Keane Guideline-Based Management of Severe Head Injury in Japan – Katsuji Shima
Session 4	Decompressive Strategies in TBI and SCI The European Experience in TBI – Peter Hutchinson Efficacy of Standard Craniectomy for Refractory Intracranial Hypertension with Cerebral Contusion – Ji-yao Jiang Early Decompressive Craniectomy for Patients with Severe TBI and Refractory Intracranial Hypertension (DECRA): A Prospective Randomized Clinical Trial – Jamie Cooper
Session 5	Biomarkers and Novel Approaches to Monitoring Clinical Studies of the Utility of Serum Biomarkers for Diagnosis, Prognosis and Management of TBI – Ronald Hayes Improvement on Spatial Learning in Morris Water Maze Following Recombinant Adenovirus Vector-mediated Hes1 in Adult Mice Hippocampus After Fluid Percussion Injury – Shu-Yuan Yang Neuroproteomics and Systems Biology-based Protein Biomarkers Discovery and Validation for Traumatic and Blast Brain Injury – Kevin Wang
Session 6	The Future of Neurotrauma CRASH2: Antifibrinolytic Treatment in TBI – Ian Roberts The Global Experience in Spinal Cord Injury – Michael Fehlings Future of Head Trauma in the World – Ross Bullock

CRASH: Clinical Randomisation of an Antifibrinolytic in Significant Haemorrhage; IMPACT: International Mission for Prognosis and Analysis of Clinical Trials in TBI; TBI: Traumatic brain injury.

Glasgow outcomes scale. This is felt to have greatly enhanced sensitivity to detect meaningful changes in outcome in individuals with TBI.

Maas' lecture was followed by a plenary address by G Manley (University of California, San Francisco; San Francisco General Hospital, CA, USA), who discussed the development and implementation of guidelines for TBI [3]. Manley reviewed the guidelines for closed and penetrating TBI and discussed the challenges in managing pediatric neurotrauma. A major focus of Manley's lecture was the need for more accurate pathophysiological classifications of TBI and the importance of unified and validated methods of prospective data collection.

In plenary session 4, a spirited discussion occurred relating to the role of decompressive craniectomy in TBI. Jamie Cooper (The Alfred Hospital, Prahran, Victoria, Australia) presented the results of the Early Decompressive Craniectomy in Patients with Severe Traumatic Brain Injury (DECRA) trial, which examined the role of early decompressive craniectomy for patients with severe TBI and refractory intercranial hypertension [4,5]. This landmark prospective, randomized clinical trial, which has recently been published in the *New England Journal of Medicine* [6], found that decompressive craniectomy did not improve outcome and might be harmful in patients with diffuse TBI (with no focal lesion) and refractory intercranial

hypertension. Peter Hutchinson (Wolfson Brain Imaging Center, University of Cambridge, Cambridge, UK) discussed an ongoing clinical trial related to decompressive craniectomy and TBI [7]. Hutchinson's trial is felt to be complementary to the DECRA trial in that patients with focal brain injuries will be included. These lectures were followed by a round table discussion on the technique. Despite the DECRA trial, it was felt that a role still exists for decompressive craniectomy in selected patients who failed maximal medical management.

In the closing session (plenary session 6), Ian Roberts (Antwerp University Hospital, Edegem, Belgium) discussed the Clinical Randomisation of an Antifibrinolytic in Significant Haemorrhage (CRASH)-2 trial, which is a large multicenter, randomized clinical trial examining the role of antifibrinolytic treatment in TBI [8]. The initial results of this trial appear to be promising and Roberts indicated the need to recruit additional centers into the trial. Ross Bullock (University of Miami, FL, USA) closed the INTS symposium with an overview lecture on the future of head trauma in the world. Bullock emphasized the need to develop more accurate classification systems for TBI [9], and to link this enhanced clinical methodology with state-of-the-art imaging and biomarker-based strategies. The potential of neuroprotective treatments and the impact of regenerative neuroscience were also discussed.

Clinical issues in traumatic spinal cord injury

Michael Fehlings presented on the guidelines for the treatment for traumatic SCI in opening plenary session 1. The important contribution of vascular mechanisms to the secondary injury was emphasized. While methylprednisolone continues to be a topic of controversy, Michael Fehlings advocated the continued use of the National Acute Spinal Cord Injury Study (NASCIS)-2 protocol in patients with cervical SCI and incomplete thoracic lesions. Ongoing clinical trials, including Phase I trial of a sodium glutamate antagonist (riluzole) being undertaken by the North American Clinical Trials Network, emergent studies using neural stem cells (e.g., the Phase I Geron trial) and emerging regenerative therapeutics including Cethrin® and anti-Nogo were also discussed [10]. The author also presented a lecture on the global experience in SCI in closing session 6. It was emphasized that due to the lack of standardized prospective international registries, it is likely that both the incidence and prevalence of traumatic SCI are underestimated. The need for international efforts at data collection was emphasized. Results of the Surgical Treatment of Acute Spinal Cord Injury Study (STASCIS) trial related to the role and timing of surgical intervention in traumatic SCI were discussed [11]. This study has shown promising beneficial effects of early decompressive surgery (performed within 24 h) in individuals with a traumatic cervical SCI. Based on these promising data, the opportunity was presented to develop best-practice standards

for early medical and surgical management of traumatic SCI on a global level. The opportunity for large, global, multicenter trials of promising neuroprotective drugs such as riluzole was also discussed. Finally, the need to achieve global consensus on how to move forward with potential clinical trials of autologous stem cells was emphasized.

Neuroimaging

David Brody (Washington University School of Medicine, MO, USA) opened the second plenary session with interesting findings from a study of US military personnel showing symptoms of blast-related TBI, which is difficult to detect using ordinary MRI techniques. They used an advanced MRI technique known as diffusion tensor imaging to examine the hypothesis that traumatic axonal injury is a process that contributes to blast-related TBI [12].

Brody reported that areas consistent with traumatic axonal injury were found in a significant number of the patients examined, suggesting that this technique is useful for assessing and diagnosing blast-related MRI, as well as potentially aiding therapeutic development and triage decisions.

Charles Gasparovic (Mind Research Network and University of New Mexico, NM, USA) discussed the benefits of using MRI – specifically magnetic resonance spectroscopy – in analyzing metabolic changes in patients with mild TBI whose cognitive deficits are not detectable by clinical measures [13]. His findings that higher estimated preinjury intelligence was related to a quicker return to normal metabolism within the brain, and his suggestion that this may indicate that biological factors underlying intelligence may also predict better recovery from brain injury, were intriguing. Furthermore, the metabolic changes associated

Table 2. Summary of speakers at break-out sessions at the 10th International Neurotrauma Symposium.

Session	Title of session and speakers		
Session 1	Experimental Therapeutic Approaches and the Future of Clinical Trials in TBI Andras Buki Bruce Lyeth Esthme Shohami Liang-Fu Zhou Hester Lingsma		
Session 2	CNS Regeneration and Repair – session 2.1 John Houle Min Zhao Rutledge Ellis-Behnke Thomas Reeves Deborah A Shear Jungfeng Feng Krieg Sandro	DAI Revisited – session 2.2 Enoch Wei Doug Smith Junghoon Kim Edwin Yan Baiyan Liu Meiqing Lou Liyang Zhang Surakrant Yutthakasemsunt	Clinical Management of TBI – session 2.3 Francis Lockie Deepak Gupta Virginia Newcombe Hitoshi Kobata Jin Hu Yumin Liang Lijun Hou Bob Roozenbeek Zhou Fei
Session 3	Glia in CNS Injury – session 3.1 Michael Sofroniew S Hellewell Stefania Mondello Elham Rostami Adel Helmy Yutaka Shigemori Masahiro Tado Zhiye Zhuang	Controversies in TBI Metabolism – session 3.2 David A Hovda Natalia Notkina Dong Sun Anthony Figaji Frances Corrigan Valeriya Tenedieva Tim Ham Elizabeth Moore	
Session 4	Patient Management in CNS Injury – session 4.1 Nino Stocchetti Wai S Poon Dafin F Muresanu Ivan Timofeev Gourikumar Prusty Safi Ur Rehman	Inflammation and Neurotrauma – session 4.2 Philip Popovich Peter Hutchinson Cristina Morganti-Kossmann Carmen Chan Eric Thelin Nicole Bye Jennie Ponsford	

DAI: Diffuse axonal injury; TBI: Traumatic brain injury.

with mild TBI were found to be different to the changes reported for more severe TBI, supporting the need for techniques and diagnoses specific to these milder traumatic brain events.

Finally, Minoru Shigemori (Kurume University, Kurume City, Japan) reported on the progress being made by the Japan Society for Neurotraumatology and the Asia Oceania Neurotrauma Society in developing guidelines and consensus for the treatment and management of severe TBI with reference to the importance of imaging techniques in diagnosis [14].

CNS inflammation

Discussions on inflammation in the CNS are inevitably complex as inflammation has been shown to have both positive and negative effects on outcomes after injury.

Phillip Popovich (Center for Brain and Spinal Cord Repair, Ohio State University, OH, USA) was the first to speak in the break-out session focused on inflammation and neurotrauma [15]. He tackled the seemingly contradictory roles of macrophages in both cell death and in axonal regrowth and regeneration. He spoke of evidence that the microenvironment around a lesion and CNS macrophages can be manipulated so that inflammation continues, but favors tissue repair without the accompanying cell death.

Peter Hutchinson (Wolfson Brain Imaging Center, University of Cambridge, Cambridge, UK) next spoke of the potential of using microdialysis in order to monitor the inflammatory response *in vivo* [16].

Cristina Morganti-Kossmann and Nicole Bye (National Trauma Research Institute, Alfred Hospital, and Department of Medicine, Monash University, Victoria, Australia) presented complementary talks on their research, which has provided evidence that suppression of inflammation does not increase neurogenesis; however, neuroprotection can be achieved with low-level suppression of inflammation as with a low dose of minocycline over a longer time period [17,18]. Minocycline was also shown to improve functional recovery after focal TBI in mice.

Carmen Chan (Department of Neurobiology, Graduate School of Medicine, Chiba University, Chiba, Japan) added to the voices stressing that inflammation in SCI has a role to play in both neurogenesis and cell death and that combinatorial therapies may be the way forward to maximize recovery and neuroprotection.

Eric Thelin (Karolinska Institute, Stockholm, Sweden) discussed the potential benefits of monitoring levels of S100B in serum following TBI in order to predict outcome [19], while Jennie Ponsford (The Alfred Hospital, Victoria, Australia) discussed sleep disturbances in patients after TBI and the likelihood that some of this is due to mechanical damage to the brain [20].

Biomarkers

Ronald Hayes and Kevin Wang (Banyan Biomarkers Inc., FL, USA) presented complementary talks on the topic of biomarkers [21,22]. Hayes outlined the numerous clinical trials and feasibility studies indicating that biomarkers, in particular UCH-L1, GFAP and SBDP150, are useful in identifying acute injury, as well as sports concussion and brain injury due to overpressure after blast-exposure, in addition to helping predict outcomes.

Wang went on to delineate proteomic and systems biology methods of discovering potentially useful biomarkers that can then be validated in both animal models and in humans. Shu-Yuan Yang (Tianjin Medical University General Hospital, Tianjin Neurological Institute, Tianjin, China) discussed how induced overexpression of Hes1 was shown to enhance functional recovery after fluid percussion injury in mice, neatly representing a biomarker that can be indicative of better outcomes.

CNS regeneration

Min Zhao (University of California, Davis, CA, USA) reported on the potential of exploiting endogenous electric fields, as well as applied electric fields, to guide the migration of neural stem cells to the site of damaged tissue and thus potentially assist in tissue repair [23]. Jungfeng Feng (University of California, Davis, CA, USA) elaborated on this and described work *in vitro* characterizing the migration of human neural stem cells derived from human embryonic stem cells in small applied electric fields.

Rutledge Ellis-Behnke (MIT, MA, USA) described a scaffold technology, called RADA4, which has been successful in facilitating the regeneration of axons and functional recovery in hamsters. Promising results with robust migration of cells, growth of axons and blood vessels, and repair of the spinal cord have also been seen in rats with this self-assembling peptide [24].

Thomas Reeves (Virginia Commonwealth University, VA, USA) discussed the differential effects of drugs on myelinated axons compared with unmyelinated ones post-injury [25,26]. Neither drug tested – CsA or FK506 – was able to prevent suppression of compound action potentials in unmyelinated axons, but they were able to in myelinated ones, emphasizing the importance of taking differences in fiber type into account when developing therapeutic strategies.

Deborah Shear (Walter Reed Army Institute of Research, DC, USA) presented findings from her ongoing work to assess the neuroprotective effects of progesterone and dextromethorphan in a rat model of a penetrating ballistic-like brain injury [27,28]. Findings indicated both were effective in reducing neurological and motor deficits when applied postinjury, but only dextromethorphan showed efficacy in improving performance on the Morris Water Maze task. The work to establish the dose–response curve for both treatments is ongoing.

The final speaker in the break-out session on CNS regeneration and repair was Krieg Sandro (Technical University Munich, Munich, Germany), who presented work on a novel strategy to help prevent secondary damage caused by brain edema formation [29]. His team investigated the role of arginine vasopressin in the formation of brain edemas in a mouse model and found that the administration of an arginine vasopressin v1a receptor antagonist reduced edema formation and contusion growth. The overall results suggest that central inhibition of these receptors could act as a treatment for TBI.

Closing comments & summary

The 10th International Neurotrauma Symposium in Shanghai, China featured the latest advances in clinical science and cutting-edge translational research related to traumatic brain and SCI.

This meeting clearly showed that neurotrauma is an exciting, dynamic and interdisciplinary field. The next decade will witness major changes in neurotrauma management, which will be of great benefit to patients and to society.

Acknowledgements

The authors would like to acknowledge the work done by the organizers of the meeting to make it such a success, as well as the contribution of all the speakers and those who presented posters.

Financial & competing interests disclosure

The authors have no relevant affiliations or financial involvement with any organization or entity with a financial interest in or financial conflict with the subject matter or materials discussed in the manuscript. This includes employment, consultancies, honoraria, stock ownership or options, expert testimony, grants or patents received or pending, or royalties.

No writing assistance was utilized in the production of this manuscript.

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International Neurotrauma Society

Executive and Scientific Advisory Board Meeting

Minutes

Wednesday, April 27, 2011

Shanghai International Conference Center, Shanghai, PRC

In attendance:

Andras Büki, Ross Bullock, Anthony Figaji, Michael Fehlings, Guoyi Gao, David A. Hovda, Ji-Yao Jiang, Takeshi Maeda, Andrew Maas, John T. Povlishock, Gourikumar K. Prusty, Minoru Shigemori, Katsushi Shima, Esther Shohami, Nino Stocchetti

Agenda:

1. Outstanding bill of \$1,900 to close out the INTS corporation (Hovda)
2. Current status of the 10th INTS meeting (Jiang)
3. Issues related to the Journal of Neurotrauma (Povlishock)
4. Bids for the next INTS meeting and timing (Hovda)

Dr. Hovda called the meeting to order at 20:00. He thanked all the attendees for their participation and welcomed them to Shanghai.

Dr. Hovda then informed the board members that he had instructed the INTS Treasurer (Pickard and now Hutchinson) to pay the invoice in the amount of \$1,900 (USD) for the final tax reports of the INTS United States Corporation.

Dr. Hovda then turned the floor over to Dr. Jiang who gave a brief review of the current 10th INTS meeting. Dr. Jiang stated that there were 124 posters presented and that he anticipated the attendance to be close to 1,000. He stated that most of the attendees were neurosurgeons and that 300 of the attendees were from outside of China. Dr. Hovda asked Dr. Jiang if the two year gap between the current and last INTS meeting (2009; Santa Barbra) was enough time to organize the meeting as well as to secure funding. Dr. Jiang stated that he felt that an extra year would have been helpful. This resulted in a discussion of the time between meetings and it was unanimously agreed that the interval between INTS meetings should be 3 years.

NOTE added By Fehlings: I think we should also consider a process to discuss selection of the North American site in 4-5 years. This would allow sufficient lead time to plan this meeting.

Dr. Jiang stated that he had received the \$40,000 contribution from the INTS for travel support for the current meeting. He also stated that from what he could tell, the finances for the current

meeting looked to be solid and he hoped that there would be a small profit. Dr. Jiang agreed that any profit made from the current meeting would be split 50/50 between his local organization and the INTS.

Dr. Hovda stated that Dr. Hutchinson has requested that the bank account be moved to an institution close to where he works so that he would have easy access thereby being able to act more prudently to appropriate requests of fund transfers. The board members discussed this, and it was decided that the funds should remain in the same bank account.

Dr. Hovda then turned the floor over to Dr. Povlishock who gave a brief update on the status of the Journal of Neurotrauma. This resulted in revisiting the issue of subscriptions for INTS members. This led to a lengthy discussion about the status of INTS membership and whether the society should remain as it is where the only activity is the convening of an international symposium every 3 years in different continents around the world. In addition, the hiring of a professional management organization for the meetings and the society was discussed. The concept of a virtual society was also put forth as well as the idea of establishing a separate website.

NOTE added by Fehlings: Should INTS be more than a society that plans meetings every 2-3 years? For example, what opportunities exist around courses, symposia, partnering with other societies?

It was generally agreed that the INTS should remain a distinct, separate entity from the US National Neurotrauma Society (NNS); however, Dr. Bullock (the current President of the National Neurotrauma Society) stressed the need for closer communication and cooperation between the INTS and the NNS to assure the reduction of overlap of funding initiatives. It was stressed that both the INTS and the NNS meetings were changing in their attendance characteristics (more clinical); consequently, they are becoming more similar in their goals and objectives. Dr. Hovda suggested that since significant gaps remain in the science presented at both meetings (e.g. spinal cord, rehabilitation, etc) that, perhaps, a complementary approach should be taken between the respective scientific program committees. Dr. Hovda then asked Dr. Povlishock to present the proposal to separate the Journal of Neurotrauma into two separate issues, one related only to traumatic brain injury and the other only dedicated to spinal cord injury. The board members rejected this proposal unanimously.

It was decided that the current membership list (attendees to the current INTS meeting, along with any previous membership list) should be polled via a website to determine if they would like a more active society which would incorporate additional meetings, journal subscription(s) and other activities that may be beneficial for the international efforts behind the education and research on the topic of neurotrauma. Dr. Hovda stated that he would craft up a brief survey to be distributed by Dr. Jiang (the incoming President of INTS). In addition, Dr. Hovda stated he would contact the leadership of the International Brain Injury Association (IBIA) to explore the possibility joint meetings.

Dr. Hovda then stated that he had not received any proposals for the 11th INTS meeting which is to be held in 2014 in the Near East, the European or African continent. It was decided that people would be approached at the current meeting to determine levels of interest. There was a lot of concern regarding the current state of the economy and how anyone person could accept

the challenge of hosting a meeting of the size of the INTS given the potential difficulty in fund raising.

It was decided that the Board would reconvene, Saturday, April 30, 2011 in room 3E of the Shanghai International Conference Center to allow Dr. Jiang to give another update on the current meeting and its financial status. It was stressed to Dr. Jiang that a final financial and demographic report would not be expected until May of 2012. Also at this second Board meeting potential future venues will be discussed with the hope of having formal proposals from which a vote could be taken.

There being no new business, Dr. Hovda adjourned the meeting at 21:15.

International Neurotrauma Society

Executive and Scientific Advisory Board Meeting

Minutes

Wednesday, April 30, 2011

Shanghai International Conference Center, Shanghai, PRC

In attendance:

Andras Büki, Ross Bullock, Anthony Figaji, Michael Fehlings, Guoyi Gao, David A. Hovda, Ji-Yao Jiang, Takeshi Maeda, Andrew Maas, John T. Povlishock, Gourikumar K. Prusty, Minoru Shigemori, Katsushi Shima, Esther Shohami, Nino Stocchetti

Agenda:

1. Update of state of the 10th INTS meeting (Jiang)
2. Bids for the next INTS meeting and timing (Hovda)

Dr. Hovda convened the meeting at 14:00

Dr. Hovda gave the floor to Dr. Jaing who summarized the current status of the 10th INTS meeting. Dr. Jaing stated that the meeting appeared to be a great success and that the budget still looked very good. He reported that 952 people from 27 countries had registered for the meeting. There were 35 invited speakers, 38 free presentations, 36 Chinese delegates were chosen for speakers and there were 80 posters. The excursion on Thursday was well attended and the local organizing committee was able to secure hotel fees and meals for all speakers. Dr. Jaing specifically thanked Drs. Povlishock, Maas and Hovda for their help.

Dr. Hovda then opened the floor to anyone interested in hosting the 11th INTS meeting which would be held in 2014. Three parties expressed an interest:

1. Stockholm Sweden: Dr. Bo-Michael Bellender
2. Cape Town, South Africa: Dr. Anthony Figaji
3. Budapest, Hungary: Dr. Andras Buki

Dr. Hovda asked each person proposing to host the next meeting to say a few words about their ideas for a venue and justification. This resulted in a lengthy discussion regarding the importance of having the next INTS meeting in Europe. Dr. Maas suggested that the next meeting be held in Europe in three years time and that in 5 years it should be held in Cape Town, South Africa. There was general agreement to this proposal. It was decided that giving Dr. Figaji 5 years from now would allow sufficient time for planning and fundraising. The board members suggested that both Dr. Bellender and Büki submit formal proposals and that the Executive Board would then vote on the best proposal using the criteria of timing, cost and

access. The board members asked Dr. Hovda to craft an outline of what should be included in the formal proposal and to have it vetted by the Executive Board members.

The following time line was established for actions regarding the 11th INTS meeting

May 15, 2011: Letters of intent from are to be received by Drs. Hovda and Jiang.

June 1, 2011: Outline of the proposals will be sent to people who submitted a letter of intent.

July 1, 2011: This is the deadline for formal proposals for the 11th INTS meeting to be received by Drs. Hovda and Jiang.

Formal completed proposals will be distributed to the Executive Committee and a two week voting period will be allowed. Dr. Jiang will then inform the Executive Committee of the final decision and the 11th INTS meeting will be awarded accordingly.

There being no new Business, Dr. Hovda adjourned the meeting at 15:00.