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Editorial: The Xi'an International Neurotoxicology Conference

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Dear Readers, The Xi'an International Neurotoxicology Conference (XINC) is a successful joint conference of the 13th International Neurotoxicology Association Biennial Meeting (INA-13) and the 11th International Symposium on Neurobehavioral Methods and Effects in Occupational and Environmental Health (NEUREOH-11). The conference, which took place June 5–9, 2011 in the Xi'an Jian-Guo Hotel in Downtown Xi'an, China, has fulfilled its original goal, that is, to bring together in one place worldwide experts from academia, clinics, industry, government and non-government organizations to assess the research advances, to identify the knowledge gaps, and to define future research and regulatory needs in one of the fast growing research areas – the environmental and occupational causes of neurotoxicity and neurodegeneration. With the meeting venue in the world's largest developing country, the XINC addressed the neurodegenerative and neurobehavioral disorders with emphasis on genetics, molecular and cellular mechanisms of neurodegeneration (Theme 1), exposure, regulation, and risk assessment of neurotoxicities (Theme 2), advances in diagnosis, treatment and prevention of neurotoxicities (Theme 3), behavioral neurotoxicity testing (Theme 4), and neurotoxicological epidemiology (Theme 5).

The success of the XINC is multifaceted. First, the XINC is truly an international celebration of neurotoxicologists. The largest conference by far in the neurotoxicology field, the XINC attracted a total of 281 registered participants, representing researchers from all five continents including 68 from the United States, 9 from The Netherlands, 5 from Italy, 4 each from France, Germany and United Kingdom, 3 each from Canada and Sweden. The XINC also set forth its goal to attract researchers from Asia and Africa regions in order to promote environmental and occupational health and safety research and advocacy among economically fast advancing nations. There were 129 researchers from China, 16 from Japan, 11 from Korea and 4 from South Africa. In addition, there were participants from Algeria, Aruba, Belgium, Cameroon, Costa Rica, Denmark, Egypt, Finland, India, Lebanon, Norway, Saudi Arabia, Spain and Slovenia.

Second, the rich diversity has always been the trait of INA and NEUREOH. The diversity of the XINC is not only reflected in participant's diverse occupational background, but also in their very diverse cultural origins, skin colors, and gender differences. Remarkably, 42% of the conference participants were women and the same percentage women scientists served as the chairs or cochairs of all 23 scientific sessions. During the conference, the XINC invited all meeting attendees for culture tours to Mt. Huashan and the Terra-Cotta Museum. The casual and relaxing environment helped facilitate collaboration as well as develop a more friendly relationship among participants.

Third, the XINC has successfully presented two well-attended keynote lectures. The Hooisma Lecture, a keynote lecture by INA, was presented by Dr. David Bellinger of

Harvard University on Sunday afternoon; Dr. Bellinger discussed the pressure of the global population burden on neurological diseases in children. The Hanninen Lecture, organized by NEUREOH, was presented on Monday morning. Dr. Donna Mergler of University of Quebec addressed the gender issues in neurotoxicology.

Fourth, the XINC's attempt in the meeting structural design has proven to be successful. The conference includes five joint symposia in the morning for topics with shared interest to both organizations. The 12 afternoon symposia were run in parallel by each organization in two smaller meeting rooms for more specialized topics germane to each organization. There were also student symposia by each organization, along with the poster sessions. By estimation, the joint symposia usually attracted more than 250 audiences and the parallel symposia usually were attended by about 50–80 people, the effort maximizing the impact of each session.

The last and foremost achievement of the XINC is its success in advancing the neurotoxicology as a field of science. The central theme of the XINC is “Neurotoxicity and Neurodegeneration: Local Effect and Global Impact”, which was originally developed through several brainstorm sessions with Will Boyes and Don Fox. During the meeting, the speakers explored the current state of research on the “local” molecular and cellular mechanisms of injury, selected mammalian and non-mammalian models for neurotoxicology research, small-scale in vitro methods to assess developmental neurotoxicology, as well as observations from “local” human cohort studies. In the meantime, the XINC attendees discussed the “global” implication of neurotoxins on the entire nervous systems, consequential “global” neurobehavioral changes, as well as broader “global” worldwide environmental health preventions and internationally occupational safety promotion. The current volume collects the research achievements presented in the XINC.

As a neurotoxicologist working on both ends of local and global approaches and as the chairman of the XINC, I was fortunate to have the opportunity to be a part of the organizational team and work with several brilliant and seasoned colleagues in both organizations to bring the XINC to full fruition. Among the leaders who made the XINC possible, I would like to thank Don Fox, the president of INA and chair of INA scientific program committee, Roberto Lucchini, the president of NEUREOH and chair of NEUREOH scientific program committee, and Will Boyes, Jordi Llorens and Michael Aschner, among many others, for their selfless contributions. I would also like to congratulate our award-winning students for their outstanding thesis research and their mentors who brought them up: Julia Sisnaiske (Mentor: Christoph van Thriel, Germany), Jinfei Jing (Mentor: Jingyuan Chen, China), Sherleen Fu (Mentor: Wei Zheng, USA), Mo Dan (Mentor: Yokel, Robert, USA), Zaiyang Long (Mentor: Ulrike Dydak), and Xiaoting Lu (Mentor: Qiao Niu, China).

Finally, I am truly thankful to my dear friend Julian (Jingyuan) Chen, chair of the local organizational committee, for his time, skill, energy, and resource devoted to this more than 3-year's planning event, without which however wishful is, the XINC would not be possible.