



# THE THIRD ISN SPECIAL NEUROCHEMISTRY CONFERENCE

## 8th International Meeting for Brain Energy Metabolism

"Neurodegeneration and Regeneration" Beijing, China 中国 • 北京 June 27th - July 1st 2008



## CONFERENCE REPORT

July 28, 2008

From June 27 to July 1, 2008, ISN held in Beijing, China the 3rd ISN Special Neurochemistry Conference, the 8<sup>th</sup> International Meeting for Brain Energy Metabolism – Neurodegeneration and Regeneration. This was the first official ISN conference in this country. The conference was co-organized by the Neuroscience Research Institute, Peking University, the Beijing Society for Neuroscience and the Chinese Society for Neuroscience.

Professor Albert C.H. Yu  
(Conference President)

Neuroscience Research  
Institute - Peking University  
38 Xue Yuan Road, Beijing  
100083, China

secretariat@isnbeijing2008.org

This conference was attended by 353 participants including 42 accompanying persons. They were from Australia, Belarus, Canada, Chile, China, Czech Republic, Denmark, France, Germany, Greece, Hungary, India, Indonesia, Ireland, Israel, Japan, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Korea, Spain, Sri Lanka, Sweden, Switzerland, Taiwan, Thailand, UK, and USA. There were three keynote lecturers (Mary C. McKenna, Philip G. Haydon and Yi Rao), 48 speakers and many special guests in the field of brain energy metabolism to chair the scientific sessions (please refer to [www.isnbeijing2008.org](http://www.isnbeijing2008.org) for details). Students from 7 countries gave 11 excellent oral presentations in a student data blitz session. The social events included a reception featuring Chinese cultural dances, a visit to the world famous "Great Wall", and a farewell banquet featuring the Peking Opera, Sichuan Face Changing Art and Chinese Lion Dance. In order to create a higher impact of this ISN special conference for the future development of neurochemistry in China, the speakers were introduced and spoke to Chinese high school students and teachers through a Chinese popular science web site: [www.dnaq.cn/isn/index.html](http://www.dnaq.cn/isn/index.html).

The conference focused on one important topic - "Brain Energy Metabolism." It began with a discussion on glucose, pyruvate, lactate, glutamate, glutamine and glycogen as metabolic substrates for cells in CNS with data from both *in vitro* and *in vivo* models collected by direct content determination and NMR studies. A consequent profoundly important question was whether these substrates move among these cell types through diffusion, gap junctions and/or from one cell to another. Gliotransmission was discussed with very much interest. Now gliotransmitter release has been demonstrated in the brain, this mechanism was highlighted by describing the ability of ATP released from astrocytes being converted to adenosine to induce sleep in intact animals. Epilepsy and drug development including a ketogenic diet and abnormalities in glucose metabolism were discussed. We heard about the roles of reactive oxygen species, calcium, mitochondria fission and fusion, and NADPH oxidase in neurodegenerative processes; microglia, Tau and oxidative stress in Alzheimer diseases; glutamate dehydrogenase variant in Parkinson's disease; transglutaminase in Huntington's disease; and HP012 isolated from traditional Chinese medical plants in spinal cord injury. In ischemia, we discussed oligodendrocytic and myelin damage by glutamate; and the protective roles of CD36, 14-3-3 gamma, inhibition of cAMP-activated protein

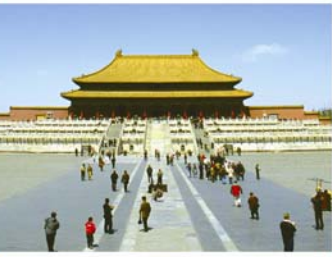




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kinases and new neuron formation.

Many scientists took the opportunity to tour around China before and after the conference. You are welcome to view some of the conference high-lights in a photo album at [www.isnbeijing2008.org](http://www.isnbeijing2008.org).

Professor Albert C.H. Yu  
(Conference President)

Neuroscience Research  
Institute - Peking University  
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**Albert Cheung-Hoi YU**  
Conference President

**A group photo taken on the Great Wall as the yellow ISN and white Peking University flags could be seen in the foggy background.**

