PRESS RELEASE

12th July 2008

SINGAPORE SCIENTISTS BEAT MORE THAN 140 TEAMS TO CLAIM TOP AWARD AT THE PRESTIGIOUS 46TH AMERICAN SOCIETY OF NEURORADIOLOGY 2008 MEETING

1. A team of Singapore Scientists from A*STAR’s Biomedical Imaging Laboratory (BIL) has once again gained international recognition for its research capabilities in bioimaging. Professor Wieslaw L. Nowinski and his team were recently awarded the *Summa Cum Laude* award (Gold Award) for their electronic scientific exhibit entitled “A Three-Dimensional Interactive Atlas of Cerebral Arterial Variants” at the prestigious 46th American Society of Neuroradiology (ASNR) 2008 meeting in New Orleans, USA, (June 2 – 5, 2008).

2. BIL was one of only two research groups out of more than 140 award-qualifying scientific exhibits to receive the *Summa Cum Laude* top award from the American Society of Neuroradiology (ASNR). It topped participants from reputable hospitals and institutions from the United States, which formed about 73% of the competition, as well as the other international participants. BIL was the only international group awarded at this meeting.

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1 *Summa Cum Laude* award is a prestigious Gold award given out by to outstanding organisations that meet the three primary criteria for their exhibits – creative use of multimedia, eye-catching visual appearance and ease of use.
3. BIL’s 3D interactive human brain atlas exhibit, which features 60 cerebral arterial variants and branching patterns, will assist clinicians, medical students and educators to understand and be familiarised with the variations and branching patterns of the cerebral arteries in a human brain. Thieme, a leading medical publisher who has already been distributing six other brain atlas products created by BIL, expressed an interest in releasing this atlas as a commercial product.

4. Knowledge of cerebrovascular variants is critical in diagnosis and clinical treatment; and these variants are typically described and presented in the form of drawings or autopsy photographs in numerous textbooks and articles. The 3D interactive atlas that BIL has created will allow users to be familiarised with cerebral arterial variants easily. The vessels are fully labelled with names and diameters, and the incident rates for the variants are provided. It also aids in the presentation of vascular variants and understanding of their spatial relationships either individually or embedded into the surrounding reference cerebrovasculature. The atlas is easily extendable with new variants and branching patterns.

5. Elaborating on their exhibit, Prof Nowinski, the Director and Principal Scientist of BIL, said, “The human brain is the most complex living organ and what we have created is a detailed, fully segmented and completely labelled reference three-dimensional model of the cerebrovasculature correlated with neuroanatomy and extended with vascular variants. The uniqueness of our approach is that it combines expertise in anatomy, information technology and medical imaging.”

6. Commenting on the team’s success, Sir George Radda, Chairman of A*STAR’s Singapore Bioimaging Consortium, said “The team has once again made us proud of their achievements. They have emerged from a group of elite international researchers and showed the world that Singapore is doing excellent and cutting-edge scientific research. I would like to congratulate Prof Nowinski and his team on winning this prestigious award.”
Background

The Biomedical Imaging Lab (BIL) is one of the laboratories within the A*STAR Singapore Bioimaging Consortium (SBIC) with more than 10 years’ experience in biomedical imaging research and development. Headed by Prof Nowinski, a respected scientist with research activities in neuroinformatics, brain atlases and computer-aided diagnosis and treatment, BIL has previously won numerous international awards for its research efforts, including recent Certificate of Merit (Bronze Award) from the Radiological Society of North America for an education exhibit on “A Stroke CAD in the ER” in 2007, and in 2006 a Cum Laude award (Silver Award) for “Interactive Atlas of Cerebral Vasculature” (released now as a commercial product) and Certificate of Merit for “A CAD system for stroke MR and CT” from the same society.

Agency for Science, Technology and Research (A*STAR)

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Notes to Editor: Pictures and photos are available upon request.

Biomedical Imaging Lab
http://www.sbic.a-star.edu.sg/bil/

The Biomedical Imaging Lab, a lab within the Singapore Bioimaging Consortium, has numerous years of experience in medical imaging. The group’s R&D activities have concentrated on neuroimaging with expertise in anatomic, functional and vascular atlases and atlas-based applications, computer-assisted intervention, human body models, stroke image processing, and biomedical imaging tools. This research involves segmentation, modelling, visualization, registration, and analysis. BIL has published over 400 scientific papers, filed 55 patent applications (11 patents are already granted), received 17 international and 4 local awards, and developed 17 brain atlas products incorporated in
more than 1,100 neurosurgical workstations worldwide and distributed on CD-ROMs to over 4,100 medical schools and individual clinicians.

The uniqueness of the lab is in approaching problems from research, clinical, and market demand perspectives. Besides expertise in medical imaging, BIL also has in-house domain knowledge including neuroanatomy, neurosurgery, neuroradiology, and stroke. This multi-disciplinary and multi-national group is composed of researchers, engineers, mathematicians and clinicians.

**Singapore Bioimaging Consortium**

http://www.sbic.a-star.edu.sg

The Singapore Bioimaging Consortium (SBIC) is led by Professor Sir George Radda, a noted expert on magnetic resonance in medicine, who has served on numerous scientific committees in the UK and is a member of the International Advisory Council to the Biomedical Research Council (BMRC). The Consortium plans to harness existing imaging expertise and capabilities in Singapore and develop them into a focused national platform to support the growth of multi-disciplinary research activities and speed the development of biomedical research discoveries.

**Agency for Science, Technology and Research**

http://www.a-star.edu.sg

The Agency for Science, Technology and Research, or A*STAR, is Singapore’s lead agency for fostering world-class scientific research and talent for a vibrant knowledge-based Singapore. A*STAR actively nurtures public sector research and development in Biomedical Sciences, Physical Sciences and Engineering, with a particular focus on fields essential to Singapore’s manufacturing industry and new growth industries. It oversees 14 research institutes and supports extramural research with the universities, hospital research centres and other local and international partners. At the heart of this knowledge intensive work is human capital. Top local and international scientific talent drive knowledge creation at A*STAR research institutes. The Agency also sends scholars for undergraduate, graduate and post-doctoral training in the best universities, a reflection of the high priority A*STAR places on nurturing the next generation of scientific talent.