

PRESS RELEASE
4 MAY 2009

NEW TWISTS BEHIND SCIENTIFIC UNDERSTANDING OF FEAR, ANXIETY, AGEING & JET LAG

First ever meeting of EMBO Gold medalists attracts 300 researchers in Singapore

1. Twelve eminent scientists, winners of the prestigious European Molecular Biology Organisation (EMBO) Gold Medal award from 1990-2008, will be in Singapore from 4 to 6 May at the Euro Gold Singapore 2009 symposium. Together with researchers based here, they will discuss a range of topics in developmental, cell and molecular biology which have widespread and profound implications on human health and disease.

2. Some topics that will be covered at the symposium include (the detailed programme of the symposium is attached at the [Annex](#)):

- a. “Origami with no hands: how genes influence growth and form” – an opening talk by Enrico Coen¹, from the John Innes Centre, Biotechnology and Biological Sciences Research Council, UK. Professor Coen used a combination of approaches to demonstrate how genes modify growth of multicellular tissues to give rise to different 3-dimensional shapes of organisms during development. He has developed models to describe how genes interact to dictate flower and petal formation, and believed that the basic principles could be applied to understand the development of shape and form in animals.

¹ Professor Enrico Coen has won numerous awards and recognition for his work, such as a 1998 election to the Royal Society in Britain and a 2001 election as a foreign associate of the National Academy of Sciences. He is also author of the book titled, “The Art of Genes: How Organisms Make Themselves”, that was published in 2000.

- b. “Metabolism to chromatin remodelling: the CLOCK connection” – a talk by Paolo Sassone-Corsi from the University of California, Irvine, USA. Professor Sassone-Corsi will discuss the molecular factors controlling circadian rhythms, which are intrinsic time-tracking systems in the body. Disruptions in circadian rhythms can lead to a host of diseases including depression, insomnia and jet lag, which is a huge concern of frequent intercontinental travellers or those on shift work.

- c. “A paradigm for fear” – a talk by Dr Suresh Jesuthasan from the A*STAR–Duke-NUS Graduate Medical School Neuroscience Research Partnership programme. Dr Jesuthasan is studying the mechanisms of fear and anxiety in vertebrates at the molecular level. He will share about his work using stress-induced pheromones to evoke the “alarm response” that leads to behaviour like freezing or darting, and how he uses this response to study the neural circuitry underlying innate fear in the vertebrate brain.

- d. “The role of p38MAPK with advancing age” – a talk by Dr Dmitry Bulavin, from the A*STAR Institute of Molecular and Cell Biology. Dr Bulavin will speak about the factors of aging at the molecular level. He will demonstrate how modulation of gene activity in mice may provide new avenues for treating certain age-related degenerative diseases.

3. Professor Philip Ingham, Deputy Director at A*STAR’s Institute of Molecular and Cell Biology (IMCB), and the main coordinator for the symposium, said, “We are extremely delighted to have such distinguished colleagues join us at this landmark gathering. We hope that the intellectual discourse and exchange of ideas will foster new collaborations and lead to ground-breaking solutions for existing clinical problems.”

4. Said Professor Neal Copeland, Executive Director of IMCB, “This meeting is an excellent opportunity for networking and scientific progress. Increasingly, the Biopolis is becoming the choice meeting point for such high-level, international

science meetings, and IMCB is proud to be part of this growth process. This is also in line with IMCB's mission to develop and foster a vibrant research culture in Singapore for the advancement of basic biomedical sciences."

5. Three hundred researchers will attend the Euro Gold Singapore 2009 symposium, which is organized by IMCB and jointly supported by the British High Commission, swissnex Singapore and EMBO. It is incidentally the first organised meeting for EMBO Gold medalists since the inception of the annual award in 1986.

6. Many of the invited EMBO Gold medalists, whose outstanding research contributions had earned them the award when they were under the age of 40, have since assumed key leadership roles in international research institutes. Past EMBO Gold Medal winner Dr Jim Smith who now heads the National Institute for Medical Research in UK, said, "I would like to congratulate and thank Prof Ingham and his colleagues at IMCB for the successful organisation of this event. It is indeed an honour to present my latest research findings at this backdrop of cutting-edge research technologies at the Biopolis."

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

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About the Institute of Molecular and Cell Biology (IMCB)

The Institute of Molecular and Cell Biology (IMCB) is a member of Singapore's Agency for Science, Technology and Research (A*STAR) and is funded through A*STAR's Biomedical Research Council (BMRC). It is a world-class research institute that focuses its activities on six major fields: Cell Biology, Developmental Biology, Structural Biology, Infectious Diseases, Cancer Biology and Translational Research, with core strengths in cell cycling, cell signalling, cell death, cell motility and protein trafficking. Its recent achievements include leading an international consortium that successfully sequenced the entire pufferfish (Fugu) genome. The IMCB was awarded the Nikkei Prize 2000 for Technological Innovation in recognition of its growth into a leading international research centre and its collaboration with

industry and research institutes worldwide. Established in 1987, the Institute currently has 35 independent research groups with more than 400 staff members.

For more information about IMCB, please visit www.imcb.a-star.edu.sg.

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

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 22 research institutes, consortia and centres, 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.

For more information about A*STAR, please visit www.a-star.edu.sg.

About the EMBO Gold Medal

The European Molecular Biology Organisation (EMBO) Gold Medal has been awarded annually since its inception in 1986, in recognition of the outstanding achievements and exceptional promise of a young scientist working in an EMBO member state in the broad field of molecular biology. EMBO Gold Medal winners are regarded as role models for other young scientists in Europe, and have invariably gone on to become leaders in their fields.

For more information about EMBO, please visit www.embo.org.

ANNEX

EURO GOLD SINGAPORE 2009

Venue: *Breakthrough & Discovery Theatrettes, Level 4, Matrix Building, Biopolis*

MONDAY, MAY 4th

(DAY 1)

2.00pm – 2.05pm	Opening Remarks by Philip Ingham Institute of Molecular and Cell Biology Singapore
2.05pm – 2.10pm	Amanda Brooks British High Commission Singapore
2.10pm – 2.15pm	Suzanne Hraba-Renevey swissnex Singapore Singapore
2.15pm – 2.50pm	Enrico Coen John Innes Centre Biotechnology and Biological Sciences Research Council United Kingdom <i>Title: "Origami with no hands: how genes influence growth and form"</i>
2.50pm – 3.25pm	Konrad Basler Institute of Molecular Biology, University of Zürich Switzerland <i>Title: "The role of histone modifications in Wnt signaling"</i>
3.25pm – 4.00pm	Ernesto Guccione Institute of Molecular and Cell Biology Singapore <i>Title: "Histone H3 Arginine 2 methylation plays a pivotal role in transcription regulation"</i>
4.00pm – 4.35pm	Coffee/Tea Break
4.35pm – 5.10pm	Matthew Freeman MRC Laboratory of Molecular Biology United Kingdom <i>Title: "Rhomboid proteases and their functions in development and signalling"</i>
5.10pm – 5.45pm	Frederic Bard Institute of Molecular and Cell Biology Singapore <i>Title: "The sweet tooth of Src"</i>

TUESDAY, MAY 5th (DAY 2)

9.30am – 10.05am	Andy McMahon Harvard University, USA Visiting Scientist at Institute of Molecular and Cell Biology, Singapore <i>Title: "From signal to response: generating neural diversity in the mammalian central nervous system."</i>
10.05am – 10.40am	James Briscoe MRC National Institute of Medical Research United Kingdom <i>Title: "Graded Sonic Hedgehog Signaling and the Control of Neuronal Subtype Identity in the Vertebrate Neural Tube"</i>
10.40am – 11.20am	Coffee/Tea Break
11.20am – 11.55am	Dmitry Bulavin Institute of Molecular and Cell Biology Singapore <i>Title: "The role of p38MAPK with advancing age"</i>
11.55am – 12.30pm	Dario Alessi MRC Protein Phosphorylation Unit, University of Dundee United Kingdom <i>Title: "Disruption on the highways of cell communication"</i>
12.40pm – 2.00pm	Lunch
2.00pm – 2.35pm	Paolo Sassone-Corsi University of California, Irvine USA Plenary Lecture – 'The EMBO Lecture' <i>Title: "Metabolism to Chromatin Remodeling: the CLOCK connection"</i>
2.35pm – 3.05pm	Suresh Jesuthasan Neuroscience Research Partnership Singapore <i>Title: "A paradigm for fear"</i>
3.05pm – 3.40pm	Patrick Stragier Institut de Biologie Physico-Chimique (IBPC) France <i>Title: "Delaying the switch to late development in a simple differentiation system"</i>
3.40pm – 4.10pm	Coffee/Tea Break

4.10pm – 4.45pm	<p>Christof Niehrs German Cancer Research Center (DKFZ) Germany</p> <p><i>Title: “Mechanism of vertebrate embryonic head induction and LRP6/Wnt signalling”</i></p>
4.45pm – 5.20pm	<p>Jim Smith MRC National Institute for Medical Research United Kingdom</p> <p><i>Title: “Upstream and Downstream of No tail: Making Mesoderm in the Zebrafish Embryo”</i></p>
5.20pm – 5.55pm	<p>Nadia Rosenthal European Molecular Biology Laboratory Italy</p> <p><i>Title: “Enhancing mammalian regeneration”</i></p>

WEDNESDAY, MAY 6th (DAY 3)

9.30am – 10.05am	<p>Pernille Rorth Temasek Life Sciences Laboratory Singapore</p> <p><i>Title: “Guidance of collective cell migration”</i></p>
10.05am – 10.40am	<p>Richard Treisman London Research Institute, Cancer Research United Kingdom</p> <p><i>Title: “MAL: linking the actin cytoskeleton to transcriptional regulation”</i></p>
10.40am – 11.15am	Coffee/Tea Break
11.15am – 11.50am	<p>Wanjin Hong Institute of Molecular and Cell Biology Singapore</p> <p><i>Title: “Interaction with TEAD proteins mediates nuclear retention of TAZ to transform mammary epithelial MCF10A cells”</i></p>
11.50am – 12.25pm	<p>Carl-Hendrik Heldin Ludwig Institute for Cancer Research Sweden</p> <p><i>Title: “Signaling via receptors for PDGF and TGF-β – possible targets in tumor treatment”</i></p>
12.25pm – 1.00pm	<p>Erwin Wagner CNIO - Spanish National Cancer Research Centre Spain</p> <p><i>Title: “Inflammation and Cancer: Role of AP-1 (Fos/Jun)”</i></p>

~ End of Symposium ~