



Press release

24th Neuronal Plasticity Prize of the *Fondation Ipsen*: Tim V.P. Bliss, Richard G. Morris and Yadin Dudai awarded for their works in the domain of “Mechanisms of memory”

Paris (France), 30 May 2013 – The 24th annual Neuronal Plasticity Prize of the Fondation Ipsen has been awarded to three researchers for their pioneer works in the domain of “Mechanisms of memory”: Tim V.P. Bliss (NIMR - Division of Neurophysiology, London, UK), Richard G. Morris (University of Edinburgh, Edinburgh, UK) and Yadin Dudai (Weizmann Institute of Science, Rehovot, Israel). The discovery of the LTP (long-term potentiation) forty years ago by Terje Lomo (Fondation Ipsen Neuronal Plasticity Prize Laureate in 1992) and Tim Bliss represented a major event in the comprehension of the physiological mechanisms of the memory. This finding was enhanced by the discovery of the implication of the glutamate receptors on which many pioneers in the field of the memory worked. Among them Richard Morris elaborated the well-known ‘watermaze’ test. Moreover, the advances in neurogenetics allowed, in particular thanks to Yadin Dudai’s work, to better decode the molecular mechanisms of memorization. The €60,000 prize was awarded on May 24, 2013 at the 11th *Colloque de la Société des Neurosciences* in Lyon, France by an international jury¹ led by Professor Nikos Logothetis (*Max Planck Institute for Biological Cybernetics, Tübingen, Germany*).

About the laureates

Tim V.P. Bliss was born in England in 1940. He went to Canada in 1958 to read Physics and Physiology at McGill University, and stayed on to do a PhD on cortical plasticity with Ben Burns. When B. Burns was appointed Head of the Division of Neurophysiology at the National Institute for Medical Research in London, Tim returned to England with him, and remained at NIMR until he retired in 2006. In 1968-9 Tim V.P. Bliss spent a year in Per Andersen’s laboratory at the University of Oslo. While there he and Terje Lømo made a systematic study of a phenomenon that Terje Lømo had noted a couple of years previously, and now known as LTP.

This set the course for the rest of his career, during which he has worked on several aspects of LTP, and in particular, the locus of its expression and its role in learning and memory. Tim Bliss is currently a visiting worker at NIMR, and a visiting professor at University College London (UCL) and at Seoul National University. He was elected a Fellow of the Royal Society in 1994, and is a founding Fellow of the Academy of Medical Sciences.

¹ Albert Aguayo (*Montreal General Hospital, Montréal, Canada*), Joël Bockaert (*Institut de Génomique Fonctionnelle, Montpellier, France*), Alexis Brice (*Hôpital de la Salpêtrière, Paris, France*), Stanislas Dehaene (*Inserm U562, Orsay, France*), Stephen Dunnett (*Cardiff University, Cardiff, UK*), Kjell Fuxe (*Karolinska Institute, Stockholm, Sweden*), Christine Petit (*Institut Pasteur, Paris, France*), Wolf Singer (*Max-Planck Institute for Brain Research, Frankfurt, Germany*).



Yadin Dudai from the Weizmann Institute of Science, Rehovot, Israel, received his PhD. in Biophysics from the Weizmann Institute, and conducted his postdoctoral training at the California Institute of Technology, where he had been on the team that pioneered neurogenetic analysis of memory. He has been a visiting Professor of Neuroscience at many academic and research institutions in the US and Europe. Prof. Dudai has over 190 professional publications, including key books, in the field of brain and behavioral mechanisms of memory. He has been awarded numerous honors, and is a member of professional bodies in the fields of science, education, and science-society interaction. He has held multiple national and international posts in public and academic life, including Dean of the Faculty of Biology and Chair of the Department of Neurobiology and of the Brain Research Centers at the Weizmann Institute. He is the director of the Israeli Center for Research Excellence (I-CORE) in the cognitive sciences, and on the team of the European Flagship Program, The Human Brain Project. He also serves as the Albert and Balanche Willner Family Global Distinguished Professor of Neural Science, New York University.

Richard Morris is Professor of Neuroscience at the University of Edinburgh. He graduated in Natural Sciences at the University of Cambridge in 1969 and completed a D.Phil at the University of Sussex.

He had time out of academic life in the 1970s helping to build an exhibition at the Natural History Museum in London and then working for BBC Television. He then took a Lectureship in St Andrews before moving to Edinburgh. He has also been seconded to other activities, most recently, as Head of Neuroscience at the Wellcome Trust from 2007 to 2010. He has been active in public awareness of neuroscience, and is a member of the Council of the European Dana Alliance for the Brain.

His principal research interest is the neurobiology of learning and memory. In 1986, he made the observation that activation of NMDA receptors in the hippocampus is critical for memory encoding. Other contributions include the development of the 'watermaze', joint development (with Julie Frey) of the 'synaptic tagging and capture' hypothesis, and new behavioural paradigms to study paired-associate learning in animals associated with the assimilation of new information into mental schemas.

He is an elected Fellow of the Royal Society (1997), served as President of the Federation of European Neuroscience Societies (2006-2008), and was awarded a CBE in 2007.

About the Neuronal Plasticity Prize

Founded in 1990, the Neuronal Plasticity Prize of *La Fondation Ipsen* has been awarded to renowned specialists: Albert Aguayo (*Montréal, 1990*), Anders Björklund (*Lund, 1990*), Fred Gage (*La Jolla, 1990*), Ursula Bellugi (*La Jolla, 1991*), Wolf Singer (*Frankfurt, 1990*), Torsten Wiesel (*New York, 1991*), Philippe Ascher (*Paris, 1992*), Kjell Fuxe (*Stockholm, 1992*), Terje Lomo (*Oslo, 1992*), Per Andersen (*Oslo, 1993*), Masao Ito (*Wako Saitama, 1993*), Constantino Sotelo (*Paris, 1993*), Mariano Barbacid (*Princeton, 1994*), Yves Barde (*Planegg-Martinsried, 1994*), Hans Thoenen (*Planegg-Martinsried, 1994*), Jacques Mehler (*Paris, 1995*), Brenda Milner (*Montreal, 1995*), Mortimer Mishkin (*Bethesda, 1995*), Friedrich Bonhoeffer (*Tubingen, 1996*), Corey Goodman (*Berkeley, 1996*), Marc Tessier-Lavigne (*San Francisco, 1996*), Antonio Damasio (*Iowa City, 1997*), Richard Frackowiak (*London, 1997*), Michael Merzenich (*San Francisco, 1997*), Heinrich Betz (*Frankfurt, 1998*), Gerald Fischbach (*Boston, 1998*), Uel McMahan (*Stanford, 1998*), Masakazu Konishi (*Pasadena, 1999*), Peter Marler (*Davis, 1999*), Fernando Nottebohm (*Millbrook, 1999*), Tomas Hökfelt (*Stockholm, 2000*), Lars Olson (*Stockholm, 2000*), Lars Terenius (*Stockholm, 2000*), Albert Galaburda (*Boston, 2001*), John Morton (*Londres, 2001*), Elisabeth Spelke (*Cambridge, USA, 2001*), Arturo Alvarez-Buylla (*San Francisco, 2002*), Ronald Mc Kay (*Bethesda, 2002*), Sam Weiss (*Calgary, 2002*), François Clarac (*Marseille, 2003*), Sven Grillner (*Stockholm, 2003*), Serge Rossignol (*Montréal, 2003*), James Gusella (*Boston, 2004*), Jean-Louis Mandel (*Strasbourg, 2004*), Huda Y. Zoghbi (*Houston, 2004*), Ann



Graybiel (*Cambridge, USA, 2005*), Trevor Robbins (*Cambridge, UK, 2005*), Wolfram Schultz (*Cambridge, UK, 2005*), Eckhart D. Gundelfinger (*Magdeburg, 2006*), Mary B. Kennedy (*Pasadena, 2006*), Morgan Sheng (*Cambridge, USA, 2006*), Nikos K. Logothetis (*Tübingen, 2007*), Keiji Tanaka (*Wako, 2007*), Giacomo Rizzolatti (*Parma, 2007*), Jean-Pierre Changeux (*Paris, 2008*), Peter W. Kalivas (*Charleston 2008*), Eric J. Nestler (*Dallas, 2008*), Alim-Louis Benabid (*Grenoble, 2009*), Apostolos P. Georgopoulos (*Minneapolis, 2009*), Miguel A. L. Nicolelis (*Durham, 2009*), Thomas Insel (*Bethesda, 2010*), Bruce Mc Ewen (*New York, 2010*) and Donald Pfaff (*New York, 2010*), Helen Neville (*Eugene, 2011*), Isabelle Peretz (*Montreal, 2011*), Robert Zatorre (*Montreal, 2011*), Catherine Dulac (*Boston, 2012*), Richard G. Morris (*Edinburgh, 2012*), J. David Sweatt (*Birmingham, 2012*).

La Fondation Ipsen

Established in 1983 under the aegis of the Fondation de France, the mission of the Fondation Ipsen is to contribute to the development and dissemination of scientific knowledge. The long-standing action of the Fondation Ipsen aims at fostering the interaction between researchers and clinical practitioners, which is indispensable due to the extreme specialisation of these professions. The ambition of the Fondation Ipsen is to initiate a reflection about the major scientific issues of the forthcoming years. It has developed an important international network of scientific experts who meet regularly at meetings known as Colloques Médecine et Recherche, dedicated to six main themes: Alzheimer's disease, neurosciences, longevity, endocrinology, the vascular system and cancer science. Moreover the Fondation Ipsen has started since 2007 several meetings in partnership with the Salk Institute, the Karolinska Institutet, the Massachusetts General Hospital, the Days of Molecular Medicine Global Foundation as well as with the science journals Nature, Cell and Science. The Fondation Ipsen produced several hundreds publications; more than 250 scientists and biomedical researchers have been awarded prizes and research grants.

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