

Health Science Innovation though Neuroscience / Neuroesthetics and Neurowellness

For health science to advance in order to combat the heavy daily stresses that we experience, and which often leads, among other syndromes, to the debilitating chronic fatigue syndrome, it is becoming increasingly important to address how we can harness the brain's ability to adapt to new means of communication and develop strategies to battle fatigue through artistic creativity and communication. In this session, we want to enquire how we can create important new openings to further advance health science through neuroscience. For this, leading experts will update us on the latest neuroscientific knowledge, focusing on communication, art and anti-fatigue and discuss the current state and future developments in the new disciplines of neuroesthetics and neurowellbeing

Art and Brain

Semir Zeki (Professor, University College London, Neurobiology, UK)



1964: BSc in Anatomy, UCL, 1967: PhD in Anatomy, UCL, 1980-1985 Henry Head Research Fellow of the Royal Society, 1981-present Professor of Neurobiology at UCL, and Visiting scientist at various institutions worldwide., Fellow of the Royal Society 1990, of the Academia Europea (1993), of the European Academy of Sciences and Arts (1995). Foreign member of the American Philosophical Society Awards: King Faisal International Prize in Science 2004 (King Faisal Foundation), Erasmus Medal (Academia Europea (2008)), and many others

Professor Semir of the University of London, one of the leading scientists in the field of vision, will chart recent progress in the field of neuroesthetics and explain how the brain is organized to allow us to experience beauty derived from different sources, such as music and visual art. He will show that aesthetic experiences correlate with activity in the reward centres of the brain and that aesthetic judgment can be quantified by relating the declared intensity of the aesthetic experience to the intensity of activity in the brain's reward centres.

Communication and Brain

Norihiro Sadato (Professor, Division of Cerebral Integration, Department of Cerebral Research, National Institute for Physiological Sciences, National Institute of Natural Sciences)



MD, PhD Division of Cerebral Integration, Department of Cerebral Research
National Institute for Physiological Sciences National Institute of Natural Sciences
1983 Graduated from Kyoto University School of Medicine. 1994 Completed the doctoral course in Medical Sciences, Kyoto University.
1993-95 Visiting Research Fellow, NINDS, NIH. 1995 Lecturer, Fukui Medical University. 1998 Associate Professor, Fukui Medical University. 1999 Professor, NIPS. Specialty: Functional neuroimaging, Neuroscience
1998 Award from The Japanese Society of Nuclear Medicine

Our contemporary society is characterized by the fast- and ever- changing social interaction, which highlights the importance of the research on the social cognition and communication in terms of its developmental trajectory and neural substrates. Professor Sadato, a leading expert in functional brain imaging and social neuroscience, will introduce "social brain" research that incorporates fast-developing functional MRI techniques.

Fatigue Science for Human Health

Yasuyoshi Watanabe (Professor, Osaka City University Graduate School of Science)



1976 Graduated from Kyoto University Faculty of Medicine, 1980 Defended his doctoral thesis (MD, PhD) from Kyoto Univ. Graduate School of Medicine, 1981-1984 Instructor, Kyoto Univ. Radioisotope Research Center, 1984-1987 Assistant Prof., Osaka Medical College, 1987-2001 Dept. Head, Osaka Bioscience Institute, 1993-2001 Adjuncted Prof., Department of Medical Pharmacology, University of Uppsala, Sweden, 1999-present Professor, Osaka City Univ. (OCU) Grad. Sch. Med., 2006-2008 Program Director, RIKEN Molecular Imaging Research Program, 2008-2013 Director, RIKEN Center for Molecular Imaging Science, 2013-present Director, RIKEN Center for Life Science Technologies, 2013-present Director, OCU Center for Health Science Innovation, 2012-present President, Japanese Society of Fatigue Science Awards: Erwin von Bälz 1st Preis 2007 for Molecular Imaging Research, Research Category, Prizes for Science and Technology, The Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology 2010

Professor Watanabe of Osaka City University and RIKEN is a leading expert in fatigue science and molecular imaging. He will address the pervasive problem of fatigue and introduce new products and commercial developments based on studies of the molecular and neural mechanisms underlying fatigue and especially chronic fatigue. He will discuss how, based on neuroscientific research, a new and quantitative field of anti-fatigue science is developing, which promises to combat severe chronic fatigue.