

The 20th Sapporo Symposium on Biological Rhythm in 2022

(The 10th Anniversary Meeting of the newly established foundation)

Aug 12 (Fri) at Keio Plaza Hotel Sapporo

13:00 Opening Address: **Ken-ichi Honma**

13:05 Awarding Lecture (online)

Amita Sehgal (University of Pennsylvania, Philadelphia, USA)

From clock genes to circadian physiology and disease

14:00 Laudatory Address: **Johanna Meijer**

14:15 Memorial Symposium: Circadian Rhythm and Sleep

Chairpersons: **R. Silver, Y. Shigeyoshi**

Kazuhiko Kume (Nagoya City University, Nagoya, JPN)

Distinct dopaminergic pathways converge and regulate arousal in the central complex of *Drosophila*

Arisa Hirano (University of Tsukuba, Tsukuba, JPN)

Molecular and neuronal mechanism underlying the orexinergic signaling in regulation of sleep-wake behavior

Hiroki Ueda (University of Tokyo, Tokyo, JPN)

Systems biology of mammalian sleep/wake cycles: phosphorylation hypothesis of sleep

Johanna Meijer (Leiden University Medical School, Leiden, The Netherlands)

Principles of photic entrainment in nocturnal and diurnal rodents

17:00 Memorial Lecture

Chairperson : **Takashi Yoshimura**

Carl Johnson (Vanderbilt University, Nashville, USA)

Scintilla of Circadian Evolution

Aug 13 (Sat) at International Conference of Hokkaido University

09:00 – 12:00 Symposium (1): Circadian Clock and External Periodicities

Chairpersons: **S. Yasuo, H. Oster**

Ralph Mistlberger (Simon Fraser University, Burnaby, Canada)

The organization of a circadian timekeeping system for prediction mealtimes

Megumi Hatori (Nagoya University, Nagoya, JPN)

Effects of time-restricted eating on the energy metabolism in mice and non-human primates

Yujiro Yamanaka (Hokkaido University, Sapporo, JPN)

Restricted meal schedule prevents free-running of sleep-wake cycle but not circadian pacemaker in humans

Wataru Nakamura (Nagasaki University, Nagasaki, JPN)

A functional analysis of circadian pacemakers in *Per*-less mice

12:00-13:30: Luncheon Poster

13:30 – 14:30: Plenary lecture (1)

Chairperson: **S. Honma**

Martha Merrow (LMU, Munich, Germany)

Reflections on principle and properties of circadian clocks

14:30 – 17:30 Symposium (2): Circadian Clock and Functions

Chairpersons: **A. Hirano, R. Mistlberger**

Henrik Oster (University of Lubeck, Lubeck, Germany)

Circadian clocks and food intake – there and back again

Naohiro Kon (Nagoya University, Nagoya, JPN)

Roles of Ca²⁺ signaling in molecular clocks

Tsuyoshi Hirota (Nagoya University, Nagoya, JPN)

Regulation of mammalian Cryptochrome with small molecule compounds from *in vitro* to *in vivo*

Kazuhiro Yagita (Kyoto Prefectural University of Medicine, Kyoto, JPN)

Rhythm switching and emergence of the circadian time order in mammals

18:30 – 21:00: Get-together Party at Keio-Plaza Hotel Sapporo

Aug. 14 (Sun) at International Conference of Hokkaido University

09:00 – 12:00 Symposium (3): Mechanisms of Circadian Clock

Chairpersons: **M. Hatori, K. Kume**

Michael Hastings (Medical Research Council Laboratory of Molecular Biology, Cambridge, UK)

Molecular genetics of the role of Cryptochromes in the circadian clock of the suprachiasmatic nucleus (Online)

Hikari Yoshitane (Tokyo Metropolitan Institute of Medical Science, Tokyo, JPN)

Circadian quartz: Implication for protein oscillator in mammalian circadian clockwork

Sinobu Yasuo (Kyushu University, Fukuoka, JPN)

Internal desynchrony in mice under social jetlag-like condition

Masao Doi (Kyoto University, Kyoto)

Circadian intracrine activity governs age-associated meibomian gland dysfunction

and evaporative dry eye disease

12:00 – 13:30: Lunchon Poster

13:30 – 14:30: Plenary lecture (2)

Chairperson: **Kondo Takao**

Ken-ichi Honma (Hokkaido University, Sapporo, JPN)

A decade of the Aschoff and Honma Memorial Foundation

14:30 – 17:30: Symposium (4): SCN Structure and Functions

Chairperson: **J. Meijer, Y. Fukada**

Rae Silver (Barnard College of Columbia University, New York, USA)

Vascular and neuroendocrine aspects of SCN structure and function

Yasufumi Shigeyoshi (Kindai University, Osaka, JPN)

Small regional oscillators in the suprachiasmatic nucleus, the machinery to obtain adaptation to the environmental light changes

Michihiro Mieda (Kanazawa University, Kanazawa, JPN)

Critical roles of AVP neurons in the control circadian clock of the SCN network

Sato Honma (Sapporo Hanazono Hospital, Sapporo, JPN)

Multi-oscillator system in the suprachiasmatic nucleus: Democracy vs. autocracy for the stability and adaptability of the circadian pacemaker

17:45 Closing Remark: **Ken-ichi Honma**