International Symposium
by Japanese Society for Chonobiology (JSC) in 2014

The advances and future trends of chronobiology in the world:
Collaboration between different fields of chronobiology

Date
November 7 (Fri)

Venue
Centennial Hall Kyushu University School of Medicine

President
Shigehiro Ohdo
Dean, Professor
Graduate School of Pharmaceutical Sciences
Kyushu University

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Greeting Message

Dear Colleagues,

Recently, progress in the biological clock-related studies has revealed body rhythms in relation to life, and the findings have been applied to industry as well as medical care. We will hold the 21st Annual Meeting of the Japanese Society for Chronobiology (JSC) and International Symposium by JSC in 2014 in the Centennial Hall of Kyushu University School of Medicine from November 7 to 9th, 2014.

Chronobiological development has been supported by activities of international societies. Since the Cold Spring Harbor symposium of 1960, a society for chronobiology has been established in each country, and the number of researchers has increased rapidly. In 1973, the International Society for Chronobiology was established by European and American researchers. In 1987, the Society for Research on Biological Rhythms was established by an American researchers, and a bulletin was published. In Japan, chronobiological meetings were established in 1984 and clinical chronobiological meetings were established in 1986, the two merged in 1995, and the Japanese Society for Chronobiology (JSC) was established. In addition, in 2002, the World Federation of Societies for Chronobiology (WFSC) was established to unify the societies of all countries in the world in the field of chronobiology, and the first and second World Congress of Chronobiology (WCC) were held in Japan in 2003 and 2007. Biological clock-related studies began in this way in Europe, and markedly developed in the United States.

This society is rapidly growing through the application of molecular and cell biology, and it is now an interdisciplinary organization consisting of researchers in fields such as science, engineering, agriculture, science of fisheries, medicine, dental medicine, nursing science, dietetics, sports, pedagogy, and psychology. Because of the reorganization of basic science and clinical medicine, clinical doctors and scientists work together. Therefore, this society has the characteristic of an interdisciplinary body. Thus, the society has been able to contribute to the improvement of health care and social welfare through medical care.

Applications to a wide variety of industries such as food, cosmetics, agriculture, marine products, sports, public sanitation, education, and psychology in addition to medical care have been developed. Furthermore, it is vital to pursue cooperation between different fields in order to advance chronobiological development. Therefore, we advocated the theme "The advances and future trends of chronobiology in the world: Collaboration between different fields of chronobiology　(from plants to humans)". This theme is aimed at chronobiological progress and new developments for the deepening of chronobiological studies, the birth of a new academic domain. We advocate cooperation between different fields and the promotion of participation by young, next-generation researchers. The symposium is planned from the viewpoint of chronobiological progress and new developments, and for the promotion of cooperation between different fields from plants to humans. From the viewpoint of the unification of many hierarchical characteristics of the biological clock, we planned the system biology of the biological clock, linkage at each level of the biological clock, and environmental responses and the biological clock. In addition, we planned the molecular clock and medical applications, chronobiological techniques, and industrial application from the viewpoint of chronobiological progress. Furthermore, from the viewpoint of globalization, we planned an international symposium. At this academic meeting, please discuss the latest results and treatments based on the biological clock.

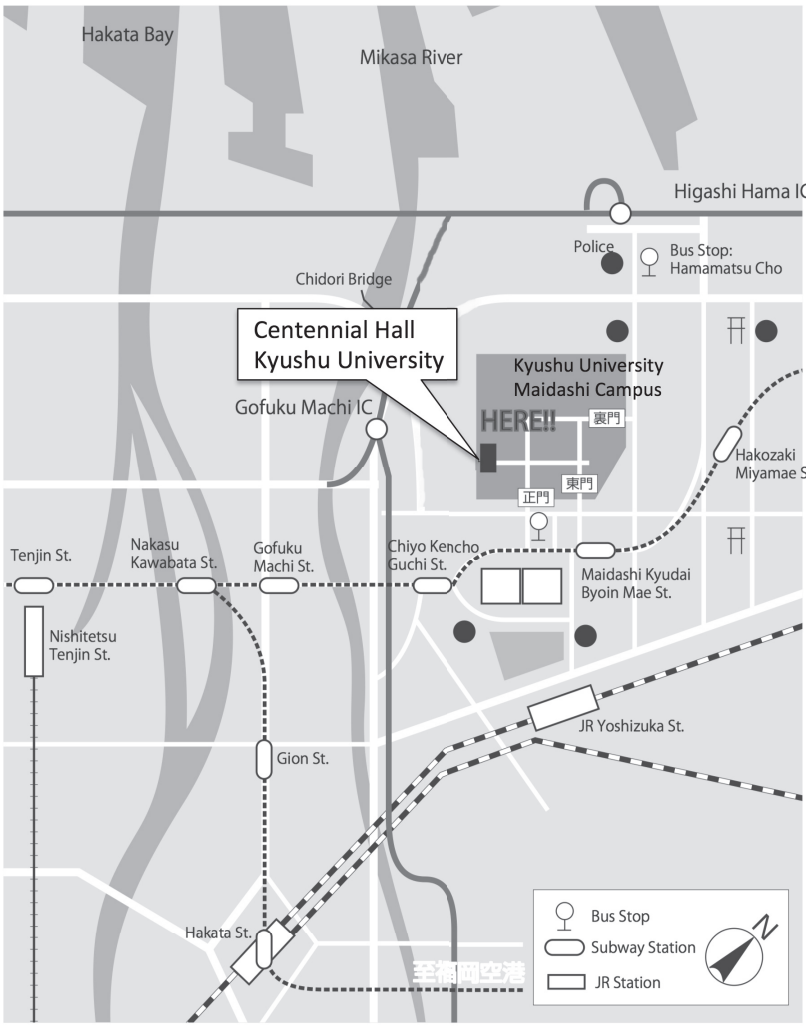
In closing, I would like to express my sincere gratitude for participation and cooperation in the symposium, and to the chairperson and organizers. I am grateful for the kind support of the Japanese Society for Chronobiology (JSC) and various companies.

The 21st Annual Meeting of the Japanese Society for Chronobiology (JSC)
International Symposium by JSC in 2014
President: Shigehiro Ohdo
Dean, Professor
Graduate School of Pharmaceutical Sceinces
Kyushu University

Access

Venue

Centennial Hall Kyushu University 3-1-1 Maidashi, Higashi-ku, Fukuoka Japan 812-8582



From Fukuoka Airport

4th station from Fukuoka Airport station to Nakasu–Kawabata station by Subway Kuko(Airport) Line
Change trains at Nakasu-Kawabata station to Subway Hakozaki Line
3rd station from Nakasu-Kawabata station to Maidashi-Kyudaibyoinmae station by Subway Hakozaki Line
8 minutes on foot from "Maidashi-Kyudaibyoinmae" station (Subway Hakozaki Line)

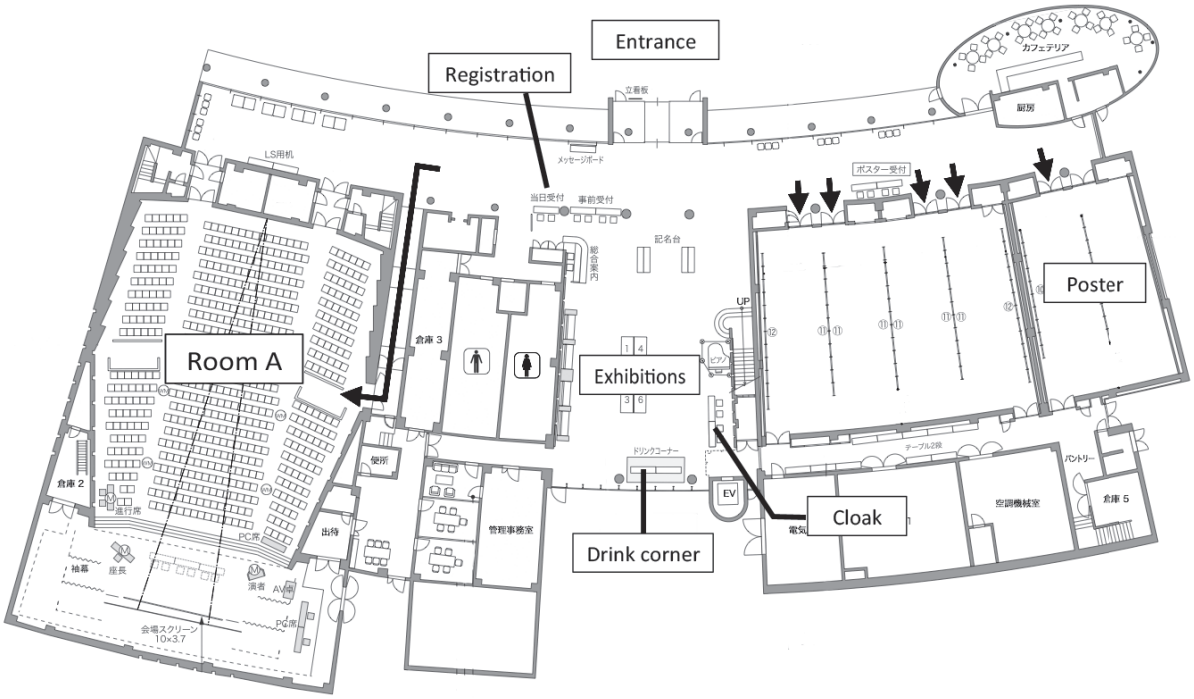
From JR Hakata Station

2nd station from JR Hakata station to Nakasu–Kawabata station by Subway Kuko(Airport) Line
Change trains at Nakasu-Kawabata station to Subway Hakozaki Line
3rd station from Nakasu-Kawabata station to Maidashi-Kyudaibyoinmae station by Subway Hakozaki Line
8 minutes on foot from "Maidashi-Kyudaibyoinmae" station (Subway Hakozaki Line)

From Tenjin

4th station from Tenjin station to Maidashi-Kyudaibyoinmae station by Subway Hakozaki Line
8 minutes on foot from "Maidashi-Kyudaibyoinmae" station (Subway Hakozaki Line)

Floor plan



International Symposium by JSC in 2014 ····· Room A

Poster Session ····· Middle Hall

Notification and Request

1. To all participants

■ **Location of Registration Desk**

Centennial Hall Kyushu University School of Medicine, 1st Floor Entrance Hall

■ **Registration time**

November 7 (Fri)　8:00～16:00

- Pre-registered participants go to the pre-registration desk receive your ID card.
- For the on-site registration, or if you are a pre-registered participants, but lost your ID card, please go to the registration desk for assistance.
- Please pick-up a holder for your ID card at the Entrance Hall and wear the ID card around your neck as it must be visible at all times.

■ **On-site registration fee** (November 7th to 9th)

- Member and non-member : ¥ 7,000
- Students : ¥5,000

＊On-site registered participants are also able to participate in the 21st annual meeting of JSC.

■ **Cloakroom**

A cloakroom service is available at 1st Floor Entrance Hall. Please note that we cannot accept any valuables, fragile, and umbrellas to keep at the cloakroom.

■ **Use of Cameras and Recording devices**

Taking pictures, recording videos, and using mobile phone picture function are not allowed during any part of the sessions.

■ **Internet**

Wireless LAN is available in Centennial Hall. We provide a temporary ID and password for wireless network at registration desk.

2. To speakers

■ Request to Speakers for Symposium

- Please complete your presentation data in English.
- English is accepted for oral presentation.
- All presentations must be digitals and presented with PC. Please bring your own laptops. Note that slides and OHP cannot be used for presentation.
- If you need to check your presentation data, bring your PC to before your sessions.
- The PC cable connector that will be made available at the venue is Mini D-sub 15 pin type. Please make sure your PC is compatible with this connector. Please bring with you, any connectors you may require to connect your PC to this cable connector. Please do not forget to bring the AC adapter for your PC.

mini D-sub 15 pins.

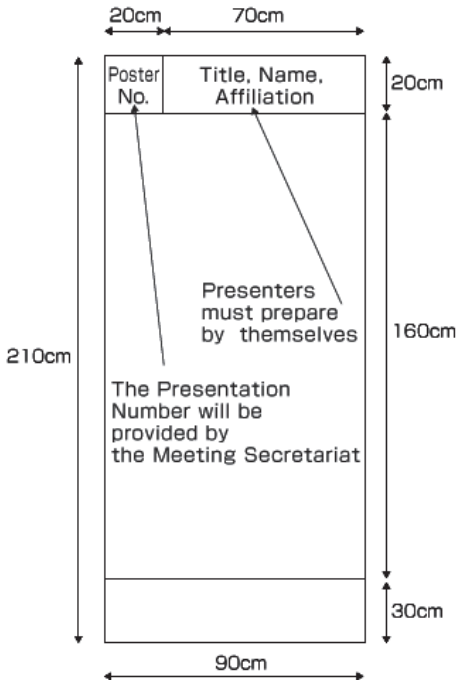
- The screen size will be XGA (1024 X 768). Please switch the resolution of your own PC before the presentation.
- We recommend to bring backup media (CD-R, USB memory stick, etc.) even when you are bringing your own PC.

■ Request to Poster Presentation Speakers

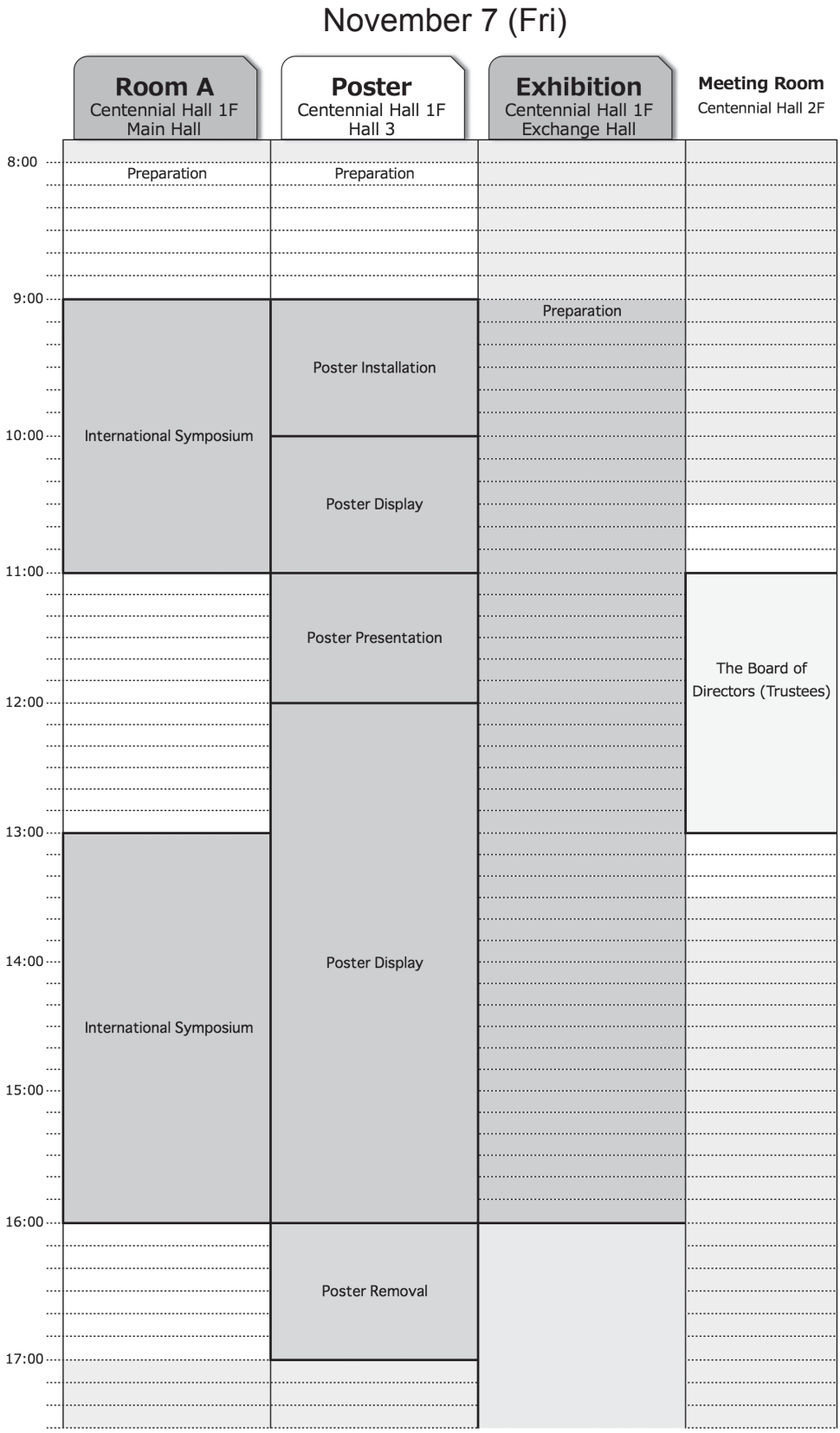
- Poster shall be prepared in English.
- English is accepted for presentation and discussion.
- There is a poster registration desk in the poster venue (Centennial Hall, 1st Floor). Please make registration upon your arrival. We provide poster pins & a ribbon for each presenter at the poster board. Please ware a ribbon at your free discussion time.
- You need to put a COI (Conflict of Interest) notification sheet at your poster board, or need to include the notification message into your posters.
- Installation, Presentation & Removal time schedule

Installation	Presentation	Removal
8:30-9:30	11:00 -12:00	16:00 - 17:00

- Please make your poster to fit into the poster panel. For the size of the panel, please refer to the figures on the right.
- Please note that the place of poster presentation will be changed for the presentation in the 21st annual meeting of Japanese Society of Chonobiology.



Program at a Glance



Program

International Symposium by JSC in 2014

Room A　Centennial Hall Kyushu University (Main Hall)

November 7 (Fri)　9:00 ～16:00

Chair person：Shizufumi Ebihara (Nagoya University)
Sato Honma (Hokkaido University)
Takao Kondo (Nagoya University)

9:00 ～ 11:00

IS-1 **History of chronobiology in Japan: how we learned chronobiology**
Ken-ich Honma
Hokkaido University Graduate School of Medicine

IS-2 **Design of circadian timing mechanisms in cyanobacteria and robust biological rhythms in various organisms**
Takao Kondo
Graduate School of Science, Nagoya University

IS-3 **Insect circadian clocks**
Charalambos P. Kyriacou
Behavioural Genetics, Department of Genetics, University of Leicester

13:00 ～ 16:00

IS-4 **Development and adaptability of the master circadian clock in the suprachiasmatic nucleus**
Sato Honma
Department of Chronomedicine, Hokkaido University Graduate School of Medicine

IS-5 **The suprachiasmatic nucleus: a model in the study of brain functional connectivity**
Rae Silver
Departments of Psychology, Barnard College; Departments of Psychology, Columbia University
Department of Pathology and Cell Biology, Columbia University Medical School

IS-6 **Chronomics and community screening by 7-day/24-hour ambulatory blood pressure monitoring**
Kuniaki Otsuka[1], Germaine Cornelissen[2]
1) Chronomics & Gerontology, Tokyo Women's Medical University
2) Halberg Chronobiology Center, University of Minnesota

IS-7 **Sleep research in the real world - first steps towards a human sleep project**
Till Roenneberg
Institute for Medical Psychology, Ludwig-Maximilians-Universität München

Poster Session

Centennial Hall Kyushu University　Middle Hall

November 7 (Fri) 11:00 ～ 12:00

ISP-1 **The role of *ELF3* in the light-induced resetting of cellular circadian clocks**

Masaaki Okada, Tomoaki Muranaka, Tokitaka Oyama
Department of Botany, Graduate School of Science, Kyoto University

ISP-2 **Synchronization mechanisms of circadian rhythm of KaiC phosphorylation in cyanobacteria**

Yoko Kitayama, Takao Kondo
Graduate School of Science, Nagoya University

ISP-3 **The effect of the pars intercerebralis removal on the circatidal rhythm in the mangrove cricket**

Hiroki Takekata[1,2], Eiji Numata[3], Sakiko Shiga[1]
1) Graduate School of Science, Osaka City University
2) Research Fellowship of Japanese Society of the Promotion of Science
3) Graduate School of Science, Kyoto University

ISP-4 **Diversity of circadian rhythms of five duckweed species across four genera**

Tomoaki Muranaka, Tokitaka Oyama
Faculty of Botany, Graduate School of Science, Kyoto University

ISP-5 **Neuronal amino acid transporter regulates sleep in Drosophila**

Jun Tomita[1], Taro Ueno[2], Shohei Yamamoto[1], Shin Nakane[1], Shoen Kume[3], Kazuhiko Kume[1]
1) Graduate School of Pharmaceutical Sciences, Nagoya City University
2) Sensory and Motor Systems, Tokyo Metropolitan Institute of Medical Science
3) Institute of Molecular Embryology and Genetics, Kumamoto University

ISP-6 **Melatonin pathway transmits information to terminate pupal diapause and functions as a photoperiodic counter in the oak silkmoth, *Antheraea pernyi***

Yuichi Egi, Wang Qiushi, Katsuhiko Sakamoto
Graduate School of Agricultural Science, Kobe University

ISP-7 **The effect of the nocturnal rhythm in paternal egg brooding behavior on the time of egg-mass hatching in the giant water bug, *Kirkaldyia deyrolli***

Maiko Moji[1], Nobuya Oba[2], Hideharu Numata[1]
1) Department of Zoology Kyoto University; 2) Faculty of Education, Nagasaki University

ISP-8 **Absence of rhythmic calbindin trafficking in suprachiasmatic nucleus of cells of cholecystokinin-a receptors knockout mice**

Yusuke Yamakawa[1], Daisuke Kobayashi[1], Toshio Kubota[1], Takako Tokunaga[1], Yuki Tsuchimocchi[1], Silver Rae[2,3,4], Takao Shimazoe[1]
1) Graduate School of Pharmaceutical Sciences, Kyushu University;
2) Department of Psychology, Barnard College; 3) Department of Psychology, Columbia University;
4) Department of Pathology and Cell Biology, Columbia University Medical School

ISP-9 **Aging affects circadian PER2 oscillation of individual cell in the suprachiasmatic clock**

Takahiro Nakamura[1,2,3], Isao Nakamura[4], Wataru Nakamura[5], Takahiro Ishikawa[6], Takashi Kudo[3], Gene D.Block[3]
1) Life Sciences, School of Agriculture, Meiji University; 2) Faculty of Pharmaceutical Sciences, Teikyo Heisei University; 3) Psychiatry and Biobehavioral Sciences, University of California Los Angeles; 4) Mechanical Engineering, Ritsumeikan; 5) Oral Chronobiology, Graduate School of Dentistry, Osaka University

ISP-10 **Functional analysis of tissue-specific post-translational modification of springtime hormone TSH**

Keisuke Ikegami[1,2], Xiao-Hui Liao[3], Yuta Hoshino[1], Hiroko Ono[1], Wataru Ota[1], Yuka Ito[1,4], Taeko Nishiwaki-Ohkawa[1,4], Chihiro Sato [1], Ken Kitajima [1], Masayuki Iigo [5], Yasufumi Shigeyoshi[6], Masanobu Yamada [7], Yoshiharu Murata[8], Samuel Refetoff[3], Takashi Yoshimura[1,4,9]

1) Graduate School of Bioagricultural Sciences, Nagoya University; 2) Present affiliation: Kinki University Faculty of Medicine; 3) The University of Chicago; 4) WPI-ITbM, Nagoya University; 5) Faculty of Agriculture, C-Bio, and CORE, Utsunomiya University; 6) Kinki University Faculty of Medicine; 7) Gunma University Graduate School of Medicine; 8) RIEM, Nagoya University; 9) ABRC, Graduate School of Bioagricultural Sciences, Nagoya University

ISP-11 **A molecular mechanism changing circadian expression of mouse liver metabolisms in chronic kidney disease mice**

Kengo Hamamura[1,2], Naoya Matsunaga[1], Eriko Ikeda[3], Yoko Furuichi[1], Yuya Yoshida[1], Masaki Matsuda[1], Satoru Koyanagi[1], Shigehiro Ohdo[1]

1) Graduate School of Pharmaceutical Sciences, Kyushu University
2) Research Fellow of Japan Society for the Promotion of Science
3) Molecular Biology, Daiichi University of Pharmacy

ISP-12 **Functional analysis of PPARα in the development of hyperuricemia**

Takumi Kanemitsu, Satoru Koyanagi, Yuya Tsurudome, Masayuki Oda, Naoya Matsunaga, Shigehiro Ohdo

Department of Pharmaceutics, Graduate School of Pharmaceutical Sciences, Kyushu University

ISP-13 **Circadian scaffolding function of NHERF1 for plasmalemmal expression of fatty acid transporter Fatp5 in mouse liver**

Yuuya Tsurudome, Satoru Koyanagi, Masayuki Oda, Naoya Matsunaga, Shigehiro Ohdo

Department of Pharmaceutics, Graduate School of Pharmaceutical Sciences, Kyushu University

ISP-14 **Food-entrained circadian rhythm in wild-type and mutant CRY1 transgenic mice in constant light condition**

Satoshi Okano[1], Kiyoshi Hayasaka[2], Osamu Nakashima[1]

1) Institute for Promotion of Medical Science Research, Yamagata University Faculty of Medicine
2) Miyuki Hospital

ISP-15 **Distinct role of *Per2* and *Bmal1* in oncogenic malignant transformation**

Chiharu Katamune[1], Satoru Koyanagi[1], Shoya Shiromizu[1], Ken-ichi Hashikawa[1], Naoya Matsunaga[1], Sigeki Shimba[2], Shigenobu Shibata[3], Shigehiro Ohdo[1]

1) Kyushu University; 2) Nihon University; 3) Waseda University

ISP-16 **Chronopharmacological study of pregabalin for diabetic peripheral neuropathic pain**

Takahiro Akamine, Naoki Kusunose, Naoya Matsunaga, Satoru Koyanagi, Shigehiro Ohdo

Department of Pharmaceutics, Graduate School of Pharmaceutical Sciences, Kyushu University

ISP-17 **Controlling the appropriate dosing time for the attenuation of cisplatin-induced nephrotoxicity by the manipulation of feeding schedule in mice**

Masayuki Oda[1], Satoru Koyanagi[2], Yuuya Tsurudome[2], Takumi Kanemitsu[2], Naoya Matsunaga[2], Shigehiro Ohdo[2]

1) Department of Pharmacogenomics, St. Marianna University Graduate School of Medicine
2) Graduate School of Pharmaceutical Sciences, Kyushu University

ISP-18 **Association between melatonin suppression and circadian phase delay by light exposure during night shift work with and without nap**

Takeshi Nishi[1], Kohei Matsumori[1], Sang-Il Lee[2], Tomoteru Kosaki[2], Nobuhiko Miura[3], Masaya Takahashi[3], Shigekazu Higuchi[1,2]

1) Department of Kansei Science, Graduate School of Integrated Frontier Sciences, Kyushu University
2) Department of Human Science, Faculty of Design, Kyushu University
3) National Institute of Occupational Safety and Health,

ISP-19 **Influence of dosing time on cisplatin-induced peripheral neuropathy in rats**

Yoshihiro Seto[1], Kotaro Shimamura[2], Miyuki Takase[1], Hitoshi Sasaki[2], Yasuhiro Tuji[1], Hideto Tou[1]

1) Medical Pharmaceutics, Graduate School of Medicine and Pharmaceutical Sciences for Research, University of Toyama; 2) Hospital Pharmacy, Nagasaki University Hospital of Medicine and Dentistry

ISP-20 **The molecular clock in colon 26 tumor-bearing mice post-transcriptionally regulates the circadian rhythm of iron**

Naoya Matsunaga[1], Fumiyasu Okazaki[2], Hiroki Azuma[1], Hideto Tou[2], Satoru Koyanagi[1], Ohdo Shigehiro[1]

1) Graduate School of Pharmaceutical Sciences, Kyushu University
2) Graduate School of Medicine and Pharmaceutical Sciences for Research, University of Toyama

ISP-21 **Effects of L-serine intake on light-induced circadian phase advance in human**

Shotaro Ochiai[1], Kohei Matsumori[1], Sang-Il Lee[2], Chie Tarumi[3], Nobuo Uozu[3], Shinobu Yasuo[4], Shigekazu Higuchi[2]

1) Graduate School of Integrated Frontier Sciences, Kyushu University; 2) Department of Human Science, Faculty of Design, Kyushu University; 3) FANCL Research Institute; 4) Laboratory of Regulation in Metabolism and Behavior, Faculty of Agriculture, Kyushu University

ISP-22 **Seasonal change in the integrated relationship of milk intake and sun light exposure in the morning to circadian typology of Japanese infants aged 2-6**

Tetsuo Harada[1], Miyo Nakade[2], Takuya Uesato[1], Fujiko Tsuji[1], Nozomi Taniwaki[3], Naohiro Kawata[4], Teruki Noji[5], Mirada Kureichi[6], Hitomi Takeuchi[1]

1) Environmental Physiology, Graduate School of Integrated Arts and Sciences; 2) Health and Nutrition, Tokai-Gakuen University; 3) Affiliated Kindergarten, Faculty of Education, Kochi University; 4) Aoyama-Gakuin University; 5) Health and Physical Education, Faculty of Education, Kochi University; 6) University of Physical Education and Sport PALESTRA, Prague

ISP-23 **Effects of bright light exposure on diurnal rhythms of diet-induced thermogenesis**

Yumi Fukuda, Chihiro Masutomi, Takeshi Morita

Fukuoka Women's University

ISP-24 **Association between I394T single nucleotide polymorphism of human melanopsin gene and spectral sensitivity of melanopsin**

Sang-Il Lee, Shigekazu Higuchi

Department of Human Science, Faculty of Design, Kyushu University