

# Symposia

Friday, 27 March 9:15~11:30 / 13:00~17:50 Room Q Octa Hall at Hyogo University of Health Sciences

International Symposium for Medicinal Sciences IMS

Organizer: Yuusaku YOKOYAMA (The Pharmaceutical Society of Japan)

9:15 ~ 9:20

Opening Remark

President of The Pharmaceutical Society of Japan Masakatsu SHIBASAKI

9:20 ~ 11:30

## Plenary Lectures

Perspectives for New Biological Methods for Drug Development

9:20 ~ 10:20

IMS-PL-1

Chairman: Toshi-Hiko KOBAYASHI (The University of Tokyo)  
Addressing Healthcare Challenges Posed by an Aging Global Population through Innovative Regenerative  
Medicine Technologies and Advances in Regulatory Strategies

Chairman & CEO – Athersys, Inc./Chairman – National Center for Regenerative Medicine (U.S.A.)  
Gil VAN BOKKELEN

10:20 ~ 10:30

Break

10:30 ~ 11:30

IMS-PL-2

Chairman: Yasuo YOSHIOKA (Osaka University)  
Antibody-Cytokine Fusion Proteins: From the Bench to the Clinic

Swiss Federal Institute of Technology (ETH Zürich), Switzerland Dario NERI

13:00 ~ 15:10

## Invited Lectures

Invited Lectures New Trends for Medium and Small Size Medicines

13:00 ~ 13:30

IMS-IL-1

Chairman: Mikiko SODEOKA (RIKEN)  
Paradigm Shift in Drug Discovery & Development Model

Chief Operating Officer of PeptiDream Inc. Keiichi MASUYA

13:30 ~ 14:00

IMS-IL-2

Chairman: Mikiko SODEOKA (RIKEN)  
Development of Novel Antiangiogenic Agents for the Treatment of Retinal Neovascularization

College of Pharmacy, Seoul National University Young-Ger SUH

14:00 ~ 14:10

Break

14:10 ~ 14:40

IMS-IL-3

Chairman: Kentaro YOSHIMATSU (Eisai Co., Ltd.)  
India's Role in the Global Innovation—Past and Future

TCG Lifesciences Limited Swapan BHATTACHARYA

14:40 ~ 15:10

IMS-IL-4

Chairman: Kentaro YOSHIMATSU (Eisai Co., Ltd.)  
Progress toward Identification and Development of Therapeutics in Protein Homeostasis

Takeda Pharmaceutical International Inc., Boston Christopher CLAIBORNE

15:10 ~ 15:20

Break

15:20 ~ 17:50

**Invited Poster Presentation**

15:20 ~ 16:10

Chairman: Yuusaku YOKOYAMA (The Pharmaceutical Society of Japan)

Short Presentation for Invited Poster Presentation

IMS-P1 ~ IMS-P25 (2 minutes each)

16:10 ~ 16:20

Break

16:20 ~ 17:50

IMS-P1 ~ IMS-P25

Poster Presentation

- IMS-P1      Chemical Library of Daiichi-Sankyo and Open Innovation with the Chemical Library  
              ○Tsunehiko SOGA<sup>1</sup> (<sup>1</sup>Research Oversight Function, R&D Division, Daiichi Sankyo Co., LTD)
- IMS-P2      Establishment of Rapid and Practical Reaction Condition Screening System: Advanced Technology Using a  
              Combination of High Throughput Synthesis and Automated Analysis System  
              ○Naohiro TAYA<sup>1</sup>, Ryosuke ARAI<sup>1</sup>, Chie KUSHIBE<sup>1</sup>, Kei MASUDA<sup>1</sup>, Shinobu SASAKI<sup>1</sup>, Katsuhiko MIWA<sup>1</sup>,  
              Izumi NOMURA<sup>1</sup> (<sup>1</sup>Takeda Pharmaceutical Company Limited, Pharmaceutical Research Division)
- IMS-P3      Synthetic and Cheminformatic Exploration of Macrocyclic and Peptidomimetic Medicinal Chemistry Space  
              Gerhard MÜLLER<sup>1</sup>, Jorg BENNINGSHOF<sup>1</sup>, Pauline VAN MEURS<sup>1</sup>, Anita WEGERT<sup>1</sup>,  
              Joyce VAN DEN HEUVEL<sup>1</sup>, Sander VAN ASSEMA<sup>1</sup>, ○Norimasa MORITA<sup>1</sup>, Dagmar STUMPFE<sup>2</sup>,  
              Antonio DE LA VEGA DE LEÓN<sup>2</sup>, Norbert FURTMANN<sup>2</sup>, Dilyana DIMOVA<sup>2</sup>, Jürgen BAJORATH<sup>2</sup>  
              (<sup>1</sup>Mercachem bv., <sup>2</sup>Department of Life Science Informatics, B-IT, LIMES Program Unit Chemical Biology and  
              Medicinal Chemistry, Rheinische Freidrich-Wilhelms-Universität)
- IMS-P4      Unexpected Dissemination Patterns in Lymphoma Progression Revealed by Serial Lymph Node Imaging in  
              Mouse  
              ○Ken ITO<sup>1,2,3</sup>, Bryan SMITH<sup>1,2</sup>, Natesh PARASHURAMA<sup>1,2</sup>, Sanjiv Sam GAMBHIR<sup>1,2</sup> (<sup>1</sup>Molecular Imaging  
              Program at Stanford, <sup>2</sup>Radiology, Stanford University, <sup>3</sup>Eisai. Co., Ltd.)
- IMS-P5      NAMPT Is the Cellular Target of STF-31-Like Small-Molecule Probes  
              ○Daisuke ITO<sup>1,5</sup>, Drew J. ADAMS<sup>2</sup>, Matthew G. REES<sup>2</sup>, Brinton SEASHORE-LUDLOW<sup>2</sup>,  
              Xiaoling PUYANG<sup>1</sup>, Alex H. RAMOS<sup>1</sup>, Jaime H. CHEAH<sup>2</sup>, Paul A. CLEMONS<sup>2</sup>, Markus WARMUTH<sup>1</sup>,  
              Ping ZHU<sup>1</sup>, Alykhan F. SHAMJI<sup>2</sup>, Stuart L. SCHREIBER<sup>2,3,4</sup> (<sup>1</sup>H3 Biomedicine, Inc., <sup>2</sup>Center for the Science  
              of Therapeutics, <sup>3</sup>Howard Hughes Medical Institute, Broad Institute, <sup>4</sup>Department of Chemistry and Chemical  
              Biology, Harvard University, <sup>5</sup>Eisai Co., Ltd.)
- IMS-P6      Identification, Synthesis of Novel and Potent Series of Pyrazolo[3,4-d]pyrimidine as GPR119 Agonist  
              ○Goutam SAHA<sup>1</sup>, Paul GILLESPIE<sup>2</sup>, Robert A. GOODNOW Jr.<sup>2</sup>, Gopal BOSE<sup>1</sup>, Kakali MOULIK<sup>1</sup>,  
              Catherine ZWINGELSTEIN<sup>3</sup>, Michael MYERS<sup>3</sup>, Karin CONDE-KNAPE<sup>3</sup>, Sherrie PIETRANICAO-COLE<sup>2</sup>,  
              Sung-Sau SO<sup>2</sup> (<sup>1</sup>TCG Lifesciences Ltd, <sup>2</sup>Department of Discovery Chemistry, Hoffmann-La Roche Inc.,  
              <sup>3</sup>Metabolic and Vascular Diseases, Hoffmann-La Roche Inc.)
- IMS-P7      Identification of Pharmacophore of the Natural Isoflavone Lead as Interleukin-5 Antagonist for Novel  
              Anti-Allergic Drug  
              Dong-Hyun KIM<sup>1</sup>, PullaReddy BOGGU<sup>1</sup>, Manoj MANICKAM<sup>1</sup>, Eeda Venkateswara RAO<sup>1</sup>, Youngsoo KIM<sup>2</sup>,  
              ○Sang-Hun JUNG<sup>1</sup> (<sup>1</sup>College of Pharmacy, Chungnam National University, <sup>2</sup>College of Pharmacy, Chungbuk  
              National University)
- IMS-P8      CPZEN-45, as a Promising Drug Candidate for Treating Extremely Drug-Resistant Tuberculosis (XDR-TB):  
              Synthesis, Activity and Mode of Action  
              ○Kazushige SASAKI<sup>1</sup>, Yoshimasa ISHIZAKI<sup>2</sup>, Yoshiaki TAKAHASHI<sup>1</sup>, Masayuki IGARASHI<sup>2</sup>,  
              Toshiaki MIYAKE<sup>1</sup>, Masaji OKADA<sup>3</sup>, Norio DOI<sup>4</sup>, Patrick J. BRENNAN<sup>5</sup>, Yuzuru AKAMATSU<sup>2</sup>,  
              Akio NOMOTO<sup>2</sup> (<sup>1</sup>Institute of Microbial Chemistry (BIKAKEN), Hiyoshi, <sup>2</sup>Institute of Microbial Chemistry  
              (BIKAKEN), Tokyo, <sup>3</sup>NHO Kinki-chuo Chest Medical Center, <sup>4</sup>Research Institute of Tuberculosis,  
              <sup>5</sup>Mycobacteria Research Laboratories, Department of Microbiology, Immunology and Pathology, Colorado State  
              University)

- IMS-P9 Structure–Activity Relationship Studies and Synthesis of a Potent Transient Receptor Potential Vanilloid (TRPV1) Antagonist 4-[3-Chloro-5-[(1S)-1,2-dihydroxyethyl]-2-pyridyl]-N-[5-(trifluoromethyl)-2-pyridyl]-3,6-dihydro-2H-pyridine-1-carboxamide (V116517) as a Clinical Candidate for Pain Management  
 ○Noriyuki KUROSE<sup>1</sup>, Laykea TAFESSE<sup>2</sup>, Toshiyuki KANEMASA<sup>1</sup>, Jianming YU<sup>2</sup>, Toshiyuki ASAKI<sup>1</sup>, Gang WU<sup>2</sup>, Yuka IWAMOTO<sup>1</sup>, Yoshitaka YAMAGUCHI<sup>1</sup>, Chiyou NI<sup>2</sup>, John ENGEL<sup>2</sup>, Naoki TSUNO<sup>1</sup>, Tohru Horiguchi<sup>1</sup>, Aniket PATEL<sup>2</sup>, Xiaoming ZHOU<sup>2</sup>, Takuya SHINTANI<sup>1</sup>, Kevin BROWN<sup>2</sup>, Tsuyoshi HASEGAWA<sup>1</sup>, Manjunath SHET<sup>2</sup>, Yasuyoshi ISO<sup>1</sup>, Akira KATO<sup>1</sup>, Donald J. KYLE<sup>2</sup> (<sup>1</sup>Discovery Research Laboratory for Core Therapeutic Areas, Shionogi & Co., Ltd., <sup>2</sup>Discovery Research, Purdue Pharma L. P.)
- IMS-P10 Design, Synthesis and Structure–Activity Relationships of 5-alkylaminoquinolines: Potent, Orally Active Corticotropin-Releasing Factor-1 Receptor Antagonists  
 ○Kunitoshi TAKEDA<sup>1</sup>, Taro TERAUCHI<sup>1</sup>, Minako HASHIZUME<sup>1</sup>, Kohdoh SHIKATA<sup>1</sup>, Ryota TAGUCHI<sup>1</sup>, Kaoru MURATA-TAI<sup>1</sup>, Masae FUJISAWA<sup>1</sup>, Yoshinori TAKAHASHI<sup>1</sup>, Kogyoku SHIN<sup>1</sup>, Mitsuhiro INO<sup>1</sup>, Hisashi SHIBATA<sup>1</sup>, Masahiro YONAGA<sup>1</sup> (<sup>1</sup>Eisai Product Creation Systems, Eisai Co., Ltd.)
- IMS-P11 Benzo[*b*]tellurophene and Benzo[*b*]selenophene Compounds as Potential Histone H3 Lysine 9 Demethylase (KDM4) Inhibitors  
 Yoon-Jung KIM<sup>1</sup>, Dong Hoon LEE<sup>1,2</sup>, Yong-Sung CHOI<sup>1</sup>, So Hee KWON<sup>1</sup>, ○Jin-Hyun JEONG<sup>1</sup> (<sup>1</sup>College of Pharmacy, Yonsei Institute of Pharmaceutical Sciences, Yonsei University, <sup>2</sup>Department of Integrated OMICS for Biomedical Science, Yonsei University)
- IMS-P12 Amphipathic Double-Strapped Helices as Antimicrobial Peptides  
 Thuy T. T. DINH<sup>1</sup>, Do-Hee KIM<sup>2</sup>, Bong-Jin LEE<sup>2</sup>, ○Young-Woo KIM<sup>1</sup> (<sup>1</sup>College of Pharmacy, Dongguk University, <sup>2</sup>College of Pharmacy, Seoul National University)
- IMS-P13 Mapping the Protein Interaction Landscape for Fully Functionalized Small-Molecule Probes in Human Cells  
 ○Tohru KAMBE<sup>1,2</sup>, Bruno E. CORREIA<sup>1</sup>, Micah J. NIPHAKIS<sup>1</sup>, Benjamin F. CRAVATT<sup>1</sup> (<sup>1</sup>The Skaggs Institute for Chemical Biology and Department of Chemical Physiology, The Scripps Research Institute, <sup>2</sup>Medicinal Chemistry Research Laboratories, Ono Pharmaceutical Co., Ltd.)
- IMS-P14 Optimization of Therapeutic Phosphorothioate Oligonucleotides by *P*-Chirality Control  
 ○Naoki IWAMOTO<sup>1</sup> (<sup>1</sup>WaVe Life Sciences, Ltd.)
- IMS-P15 Discovery of a Novel and Potent  $\gamma$ -Secretase Modulator, E2012, for the Treatment of Alzheimer's Disease  
 ○Teiji KIMURA<sup>1</sup>, Eriko DOI<sup>1</sup>, Koki KAWANO<sup>1</sup>, Koichi ITO<sup>1</sup>, Noritaka KITAZAWA<sup>1</sup>, Toshihiko KANEKO<sup>1</sup>, Mamoru TAKAISHI<sup>1</sup>, Kougyoku SHIN<sup>1</sup>, Takeo SASAKI<sup>1</sup>, Shin ARAKI<sup>1</sup>, Akira ISHIBASHI<sup>1</sup>, Hideki WATANABE<sup>1</sup>, Yoshiyuki MURATA<sup>1</sup>, Hirofumi AOYAGI<sup>1</sup>, Hiroaki HAGIWARA<sup>1</sup>, Aichi OGASAWARA<sup>1</sup>, François BERNIER<sup>1</sup>, Toshihide HASHIMOTO<sup>1</sup>, Hiroyuki AMINO<sup>1</sup>, Susumu TAKAKUWA<sup>1</sup>, Kyoko YOSHIZAWA<sup>1</sup>, Takehiko MIYAGAWA<sup>1</sup> (<sup>1</sup>Eisai Product Creation Systems, Eisai Co., Ltd.)
- IMS-P16 Intervenin, a New Antitumor Compound with Anti-*Helicobacter pylori* Activity, from *Nocardia* sp. ML96-86F2  
 ○Manabu KAWADA<sup>1</sup>, Hiroyuki INOUE<sup>1</sup>, Shun-ichi OHBA<sup>1</sup>, Hikaru ABE<sup>3</sup>, Masaki HATANO<sup>2</sup>, Masahide AMEMIYA<sup>1</sup>, Chigusa HAYASHI<sup>2</sup>, Ihomei USAMI<sup>1</sup>, Junjiro YOSHIDA<sup>1</sup>, Takumi WATANABE<sup>3</sup>, Masayuki IGARASHI<sup>2</sup>, Tohru MASUDA<sup>1</sup>, Masakatsu SHIBASAKI<sup>3</sup>, Akio NOMOTO<sup>1,2</sup> (<sup>1</sup>Institute of Microbial Chemistry (BIKAKEN), Numazu, Microbial Chemistry Research Foundation, <sup>2</sup>Laboratory of Disease Biology, Institute of Microbial Chemistry (BIKAKEN), Microbial Chemistry Research Foundation, <sup>3</sup>Laboratory of Synthetic Organic Chemistry, Institute of Microbial Chemistry (BIKAKEN), Microbial Chemistry Research Foundation)
- IMS-P17 ASP2215, a Novel FLT3/AXL Inhibitor: Preclinical Evaluation in Acute Myeloid Leukemia  
 ○Yoko UENO<sup>1</sup>, Naoki KANEKO<sup>1</sup>, Masamichi MORI<sup>1</sup>, Ruriko TANAKA<sup>1</sup>, Rika SAITO<sup>1</sup>, Itsuro SHIMADA<sup>1</sup>, Sadao KUROMITSU<sup>1</sup> (<sup>1</sup>Drug Discovery Research, Astellas Pharma Inc.)
- IMS-P18 Pharmacological Evaluation of ASP8273, a Mutant-Selective Irreversible EGFR Inhibitor for EGFR Activating Mutations and T790M Resistance Mutation  
 ○Satoshi KONAGAI<sup>1</sup>, Hideki SAKAGAMI<sup>1</sup>, Hiroko YAMAMOTO<sup>1</sup>, Hiroaki TANAKA<sup>1</sup>, Takahiro MATSUYA<sup>1</sup>, Masamichi MORI<sup>1</sup>, Hiroyuki KOSHIO<sup>1</sup>, Masatoshi YURI<sup>1</sup>, Masaaki HIRANO<sup>1</sup>, Sadao KUROMITSU<sup>1</sup> (<sup>1</sup>Drug Discovery Research, Astellas Pharma Inc.)

- IMS-P19 Discovery of a Novel and Potent Dual Orexin 1/Orexin 2 Receptor Antagonist, E2006, for the Treatment of Sleep Disorders  
 ○Yu YOSHIDA<sup>1</sup>, Taro TERAUCHI<sup>1</sup>, Yoshimitsu NAOE<sup>1</sup>, Yuji KAZUTA<sup>1</sup>, Fumihiro OZAKI<sup>1</sup>, Ayumi TAKEMURA<sup>1</sup>, Takashi DOKO<sup>1</sup>, Toshiaki TANAKA<sup>1</sup>, Keiichi SORIMACHI<sup>1</sup>, Carsten T. BEUCKMANN<sup>1</sup>, Makoto NAKAGAWA<sup>1</sup>, Michiyuki SUZUKI<sup>1</sup>, Shigeru AKASOFU<sup>1</sup>, Ikuo KUSHIDA<sup>1</sup>, Shunsuke OZAKI<sup>1</sup>, Osamu TAKENAKA<sup>1</sup>, Takashi UENO<sup>1</sup> (<sup>1</sup>Eisai Product Creation Systems, Eisai Co., Ltd.)
- IMS-P20 Discovery of TAK-063, a Highly Potent, Selective, and Orally Active Phosphodiesterase 10A (PDE10A) Inhibitor  
 ○Masato YOSHIKAWA<sup>1</sup>, Jun KUNITOMO<sup>1</sup>, Makoto FUSHIMI<sup>1</sup>, Akira KAWADA<sup>1</sup>, John F. QUINN<sup>2</sup>, Hideyuki OKI<sup>1</sup>, Hironori KOKUBO<sup>1</sup>, Mitsuyo KONDO<sup>1</sup>, Kosuke NAKASHIMA<sup>1</sup>, Naomi KAMIGUCHI<sup>1</sup>, Kazunori SUZUKI<sup>1</sup>, Haruhide KIMURA<sup>1</sup>, Takahiko TANIGUCHI<sup>1</sup> (<sup>1</sup>Takeda Pharmaceutical Company Limited, Pharmaceutical Research Division, <sup>2</sup>Albany Molecular Research Inc.)
- IMS-P21 Discovery of ASP5736, a Novel 5-HT<sub>5A</sub> Receptor Antagonist as an Antipsychotic Drug  
 ○Isao KINOYAMA<sup>1</sup>, Wataru HAMAGUCHI<sup>1</sup>, Takehiro MIYAZAKI<sup>2</sup>, Yohei KOGANEMARU<sup>1</sup>, Takuya WASHIO<sup>1</sup>, Osamu KANEKO<sup>1</sup>, Yuichiro KAWAMOTO<sup>1</sup>, Mayako YAMAZAKI<sup>1</sup>, Masahiro FUJII<sup>1</sup>, Toshihiro WATANABE<sup>1</sup> (<sup>1</sup>Drug Discovery Research, Astellas Pharma Inc., <sup>2</sup>Development, Astellas Pharma Inc.)
- IMS-P22 Discovery of Amenamevir (ASP2151), a Helicase-Primase Inhibitor as an Antiviral Drug against Varicella-Zoster Virus and Herpes Simplex Virus Types 1 and 2  
 ○Wataru HAMAGUCHI<sup>1</sup>, Toru KONTANI<sup>2</sup>, Junji MIYATA<sup>1</sup>, Shugo HONDA<sup>3</sup>, Hiroshi SUZUKI<sup>1</sup>, Makoto TAKEUCHI<sup>1</sup> (<sup>1</sup>Drug Discovery Research, Astellas Pharma Inc., <sup>2</sup>General Affairs, Astellas Pharma Inc., <sup>3</sup>Astellas Business Service Company Limited)
- IMS-P23 S-649266, a Novel Siderophore Cephalosporin Antibiotic: Its Potent Activity against Multidrug-Resistant Gram-Negative Bacteria  
 ○Akinobu ITO<sup>1</sup>, Toru NISHIKAWA<sup>1</sup>, Shuhei MATSUMOTO<sup>1</sup>, Tsukasa HORIYAMA<sup>1</sup>, Naoki KOHIRA<sup>1</sup>, Hidenori YOSHIKAWA<sup>1</sup>, Rio NAKAMURA<sup>1</sup>, Masakatsu TSUJI<sup>1</sup>, Yoshinori YAMANO<sup>1</sup> (<sup>1</sup>Discovery Research Laboratory for Core Therapeutic Areas, Shionogi & Co., Ltd.)
- IMS-P24 Identification of 5-HT<sub>6</sub> Antagonists without a Basic Amine Moiety  
 Peter R. GUZZO<sup>1</sup>, Douglas B. KITCHEN<sup>1</sup>, Animesh GHOSH<sup>2</sup>, ○Matthew L. ISHERWOOD<sup>2</sup>, Jagjit KAUR<sup>2</sup>, Yuri KHMELNITSKY<sup>1</sup>, Jia Man KOO<sup>2</sup>, Chong Yew LEE<sup>2</sup>, Michele LUCHE<sup>1</sup>, Venkateswara Reddy NARREDDULA<sup>2</sup>, Andrew MHYRE<sup>1</sup>, Nicholas MOORE<sup>1</sup>, Shailaja PANDUGA<sup>2</sup>, Kristen RYAN<sup>1</sup>, He (River) ZHAO<sup>1</sup>, Srividya SWAMINATHAN<sup>2</sup>, Valentina TAN<sup>2</sup>, Jonathan WIERSCHKE<sup>1</sup>, Kai XIANG<sup>2</sup>, Qiang ZHU<sup>2</sup>, Alan J. HENDERSON<sup>1</sup> (<sup>1</sup>AMRI, Albany, <sup>2</sup>AMRI Singapore Research Centre)
- IMS-P25 Research and Development of Novel Anti-Cancer Drug Mogamulizumab, Humanized Anti-CCR4 Antibody Using High ADCC POTELLIGENT<sup>®</sup> Technology, for Adult T-Cell Leukemia-Lymphoma  
 ○Kazuyasu NAKAMURA<sup>1</sup>, Kenya SHITARA<sup>2</sup>, Kouji MATSUSHIMA<sup>3</sup>, Shiro AKINAGA<sup>1</sup>, Ryuzo UEDA<sup>4</sup> (<sup>1</sup>Research and Development Division, Kyowa Hakko Kirin Co., Ltd., <sup>2</sup>Legal and Intellectual Property Department, Kyowa Hakko Kirin Co., Ltd., <sup>3</sup>Department of Molecular Preventive Medicine, Faculty of Medicine, University of Tokyo, <sup>4</sup>Department of Tumor Immunology, School of Medicine, Aichi Medical University)