



# AIMECS2021

Lectures and Oral Presentations Program

# Program (UTC+9)

11/29 (Mon.)

## Oral Presentation I

Chair: Shinya Oishi (Kyoto Pharmaceutical University)

**OR-01**  
**13:00 - 13:30**      **Discovery of S-217622, a Non-peptidic, Non-covalent Inhibitor of SARS-CoV-2 3C-Like Protease, As a Potential Oral Therapeutic Agent for COVID-19**

**Yuki Tachibana**<sup>(a)</sup>, Yuto Unoh<sup>(a)</sup>, Shota Uehara<sup>(a)</sup>, Kenji Nakahara<sup>(a)</sup>, Haruaki Nobori<sup>(a)</sup>, Yukiko Yamatsu<sup>(a)</sup>, Shiho Yamamoto<sup>(a)</sup>, Yoshiyuki Taoda<sup>(a)</sup>, Sho Kawashima<sup>(a)</sup>, Yuki Maruyama<sup>(a, b)</sup>, Koji Kasamatsu<sup>(a)</sup>, Takahiro Suto<sup>(a)</sup>, Kensuke Kouki<sup>(a)</sup>, Atsufumi Nakahashi<sup>(a)</sup>, Takao Sanaki<sup>(a)</sup>, Shinsuke Toba<sup>(a, b)</sup>, Kentaro Uemura<sup>(a, b)</sup>, Tohru Mizutare<sup>(a)</sup>, Michihito Sasaki<sup>(b)</sup>, Yasuko Orba<sup>(b)</sup>, Hirofumi Sawa<sup>(b)</sup>, Akihiko Sato<sup>(a, b)</sup>, Takafumi Sato<sup>(a)</sup>, Teruhisa Kato<sup>(a)</sup>

<sup>(a)</sup> Shionogi & Co., Ltd.

<sup>(b)</sup> Hokkaido University

**OR-02**  
**13:30 - 13:50**      **Access to Inactive States of Lysolipid Receptor GPR34 through Generation of Inverse Agonists, Switching from Antagonists**

**Junjun Huang**, Luying Chen, Yuko Otani, Misa Sayama, Tomohiko Ohwada

Department of Organic and Medicinal Chemistry, Graduate School of Pharmaceutical Sciences, The University of Tokyo

**OR-03**  
**13:50 - 14:10**      **Transition metal-catalyzed selective cell tagging (SeCT) therapy for cancer treatment**

**Kyohei Muguruma**<sup>(a)</sup>, Peni Ahmadi<sup>(b)</sup>, Tsung-Che Chang<sup>(b)</sup>, Katsunori Tanaka<sup>(a, b, c)</sup>

<sup>(a)</sup> Department of Chemical Science and Engineering, School of Materials and Chemical Technology, Tokyo Institute of Technology, Meguro, Tokyo 152-8552, Japan

<sup>(b)</sup> Biofunctional Synthetic Chemistry, RIKEN Cluster for pioneering research, Wako, Saitama 351-0198, Japan.

<sup>(c)</sup> Biofunctional Chemistry Laboratory, A. Butlerov Institute of Chemistry, Kazan Federal University

**OR-04**  
**14:10 - 14:30**      **Investigation of Hydrophobic Requirement for P2Y<sub>10</sub>/LPS<sub>2</sub> Selective Agonist Development and In-silico Construction of P2Y<sub>10</sub>-Agonist Binding Model**

**Luying Chen**, Misa Sayama, Yuko Otani, Tomohiko Ohwada

Graduate School of Pharmaceutical Sciences, Laboratory of Organic and Medicinal Chemistry, The University of Tokyo

**14:30 - 14:50**      **Break**

## Oral Presentation II

Chair: Shusuke Tomoshige (Tohoku University)

**OR-05**  
**14:50 - 15:10**

### **Late-Stage Functionalization of Primary Sulfonamides via Sulfonyl Pyrroles**

Tomoya Ozaki, Hideki Yorimitsu, Gregory J. P. Perry

Department of Chemistry, Graduate School of Science, Kyoto University

**OR-06**  
**15:10 - 15:30**

### **Structure-activity relationship of Lithocholic Acid as Novel Nonsecosteroidal Vitamin D Derivatives**

Saori Yoshihara<sup>(a)</sup>, Harue Sasaki<sup>(a)</sup>, Haru Kawasaki<sup>(a)</sup>, Ayana Yoshihara<sup>(a)</sup>, Hiroyuki Masuno<sup>(b)</sup>, Yasunari Kanda<sup>(c)</sup>, Hiroyuki Kagechika<sup>(b)</sup>, Aya Tanatani<sup>(a)</sup>

<sup>(a)</sup> Department of Chemistry, Faculty of Science, Ochanomizu University

<sup>(b)</sup> Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University

<sup>(c)</sup> Division of Pharmacology, National Institute of Health Sciences

**OR-07**  
**15:30 - 15:50**

### **Development of glucose-conjugated novel platinum complex having an antitumor activity**

Marina Omokawa, Hiroyuki Kimura, Kenji Arimitsu, Hiroyuki Yasui

Department of Analytical and Bioinorganic Chemistry, Division of Analytical and Physical Sciences, Kyoto Pharmaceutical University

**OR-08**  
**15:50 - 16:10**

### **Design, Synthesis and Biological Evaluation of 2-Pyrrolone-type Radioprotectors Regulating p53**

Hidetoshi Satoh<sup>(a)</sup>, Shintaro Ochi<sup>(b)</sup>, Yuichi Nishiyama<sup>(b)</sup>, Yosuke Matsushita<sup>(b, c)</sup>, Yuichi Deguchi<sup>(c)</sup>, Keiji Suzuki<sup>(c)</sup>, Yoshimasa Tanaka<sup>(c)</sup>, Hiroshi Ueda<sup>(c)</sup>, Toshiya Inaba<sup>(d)</sup>, Yoshio Hosoi<sup>(e)</sup>, Akinori Morita<sup>(b)</sup>, Shin Aoki<sup>(a, f)</sup>

<sup>(a)</sup> Faculty of Pharmaceutical Sciences, Tokyo University of Science

<sup>(b)</sup> Graduate School of Biomedical Sciences, Tokushima University

<sup>(c)</sup> Department of Pharmacology and Therapeutic Innovation, Nagasaki University Graduate School of Biomedical Sciences

<sup>(d)</sup> Department of Molecular Oncology, Research Institute for Radiation Biology and Medicine, Hiroshima University

<sup>(e)</sup> Department of Radiation Biology, Graduate School of Medicine, Tohoku University

<sup>(f)</sup> Research Institute for Science and Technology, Tokyo University of Science

**OR-09**  
**16:10 - 16:30**

### **Transcriptome-based Structure Generation of Compounds with Desired Phenotypes by Machine Learning**

Kazuma Kaitoh, Yoshihiro Yamanishi

Kyushu Institute of Technology

16:30 - 16:50 Break

### Oral Presentation III

Chair: Kei Muto (Waseda University)

**OR-10**  
**16:50 - 17:10** **Mild Pd/C-mediated Dearomatic Hydrogenation of Heteroarenes: Synthesis of Anti-Alzheimer's Drug Donepezil**

Nao Tanaka, Toyonobu Ususki

Sophia University

**OR-11**  
**17:10 - 17:30** **Chromium-salen Complex/Nitroxyl radical Cooperative Catalytic System for Aerobic Intramolecular Dearomative Phenol Coupling**

Shota Nagasawa, Shogo Fujiki, Yusuke Sasano, Yoshiharu Iwabuchi

Graduate School of Pharmaceutical Sciences, Tohoku University

**OR-12**  
**17:30 - 17:50** **A Radiosynthesis of  $^{125}\text{I}/^{77}\text{Br}$ -PSMA Imaging Probes Using Copper-Mediated Radiohalogenation via Boronic Precursors**

Yuto Kondo<sup>(a)</sup>, Hiroyuki Kimura<sup>(a)</sup>, Ichiro Sasaki<sup>(b)</sup>, Shigeki Watanabe<sup>(b)</sup>, Yasuhiro Ohshima<sup>(b)</sup>, Manami Koda<sup>(a)</sup>, Yusuke Yagi<sup>(a, c)</sup>, Hiroyuki Yasui<sup>(a)</sup>, Noriko S. Ishioka<sup>(b)</sup>

<sup>(a)</sup> Department of Analytical and Bioinorganic Chemistry, Division of Analytical and Physical Sciences, Kyoto Pharmaceutical University

<sup>(b)</sup> Department of Radiation-Applied Biology Research, Takasaki Advanced Radiation Research Institute, National Institutes for Quantum and Radiological Science and Technology

<sup>(c)</sup> Department of Radiological Technology, Faculty of medicinal science, Kyoto College of Medical Science

**OR-13**  
**17:50 - 18:10** **Third-Generation Total Synthesis of Resiniferatoxin**

Yuto Hikone, Takehiro Kato, Masanori Nagatomo, Masayuki Inoue

Graduate School of Pharmaceutical Sciences, The University of Tokyo

**OR-14**  
**18:10 - 18:30**  **$^{18}\text{O}/^{16}\text{O}$ -Encoding Strategy for Microscale Stereochemical Determination of Peptidic Natural Products**

Aoi Takeuchi, Hiroaki Itoh, Masayuki Inoue

Graduate School of Pharmaceutical Sciences, The University of Tokyo

## 11/30 (Tue.)

- 9:20 - 9:30**      **Opening Remarks**  
Norio Matsuki (The University of Tokyo)
- 9:30 - 10:25**      **Plenary Lecture 1**  
**Catalytic Asymmetric Synthesis of Biologically Significant Compounds through Cooperation Asymmetric Catalysis**  
Masakatsu Shibasaki (Institute of Microbial Chemistry)  
Chair: Takashi Ohshima (Kyushu University)
- 10:30 - 11:15**      **Invited Lecture 1**      JSPS Bilateral Program 1  
**Base Editing and Prime Editing: Precision Chemistry on the Genome Without Double-Strand DNA Breaks**  
David R. Liu (Broad Institute of Harvard and MIT)  
Chair: Kenzo Yamatsugu (The University of Tokyo)
- 11:20 - 12:05**      **Invited Lecture 2**      JSPS Bilateral Program 2  
**Chemogenetic and Optogenetic Technologies for Probing Molecular and Cellular Networks**  
Alice Ting (Stanford University)  
Chair: Tomonori Tamura (Kyoto University)
- 12:10 - 13:30**      **Sponsor Session (Lunch Break)**
- Oral Presentation IV**  
Chair: Takeshi Shida (Daiichi Sankyo Co., Ltd.)
- OR-15**      **Mix-and-Match Strategy to Generate Lyso Phospholipid Agonists toward**  
**13:30 - 13:50**      **Membrane Receptors**  
Tomohiko Ohwada, Masaya Ikubo, Sejin Jung, Sho Nakamura, Misa Sayama, Luying Chen, Yuko Otani  
Graduate School of Pharmaceutical Sciences, Laboratory of Organic and Medicinal Chemistry, The University of Tokyo

- OR-16**  
**13:50 - 14:10**      **Structural-based discovery of a potential small molecule with an inhibitor effect on PDE10A**
- Mayasah Al-Nema<sup>(a)</sup>, **Anand Gaurav**<sup>(a)</sup>, Vannajan Sanghiran Lee<sup>(b)</sup>, Baskaran Gunasekaran<sup>(c)</sup>, Ming Tatt Lee<sup>(a, d)</sup>, Patrick Okechukwu<sup>(c)</sup>
- <sup>(a)</sup> Faculty of Pharmaceutical Sciences, UCSI University  
<sup>(b)</sup> Department of Chemistry, Faculty of Science, University of Malaya  
<sup>(c)</sup> Faculty of Applied Sciences, UCSI University  
<sup>(d)</sup> Graduate Institute of Pharmacology, College of Medicine, National Taiwan University
- OR-17**  
**14:10 - 14:30**      **Artificial intelligence and big data approaches in modelling and predicting ADMET properties**
- Jai Woo Lee**, Raudah Lazim, Hyerim Chang, Thi Ngoc Lan Vu, Sanghee Yoon, Sun Choi
- Global AI Drug Discovery Center, College of Pharmacy and Graduate School of Pharmaceutical Sciences, Ewha Womans University
- OR-18**  
**14:30 - 14:50**      **Potential SARS-CoV-2 Protease Inhibitor: *In Silico* Study**
- Fransiska Kurniawan**, Aderian Novito Setiawan, Tasia Amelia, Daryono Hadi Tjahjono
- School of Pharmacy, Bandung Institute of Technology
- 14:50 - 15:10**      **Break**
- Oral Presentation V**  
Chair: Naoya Shindo (Kyushu University)
- OR-19**  
**15:10 - 15:30**      **Development of Protein N-terminus Selective Modification Reagent Using Triazolecarbaldehyde Derivative**
- Akira Onoda**<sup>(a)</sup>, Nozomu Inoue<sup>(b)</sup>, Eigo Sumiyoshi<sup>(b)</sup>, Takashi Hayashi<sup>(b)</sup>
- <sup>(a)</sup> Faculty of Environmental Earth Science, and Graduate School of Environmental Science, Hokkaido University  
<sup>(b)</sup> Department of Applied Chemistry, Graduate School of Engineering, Osaka University
- OR-20**  
**15:30 - 15:50**      **Fluorogenic Substrates for Detection of Carbapemase Producing Carbapenem-resistant Enterobacteriaceae (CP-CRE)**
- Sun-Joon Min**
- Department of Chemical & Molecular Engineering/Applied Chemistry, Hanyang University (ERICA)

**OR-21**  
**15:50 - 16:10**      **A novel chemi-genetic calcium signal integrator for the long-term and permanent recording of neuron activity**

**Kelvin K. Tsao**<sup>(a)</sup>, Robert E. Campbell<sup>(a, b)</sup>

<sup>(a)</sup> The University of Tokyo

<sup>(b)</sup> University of Alberta

**OR-22**  
**16:10 - 16:30**      **The choline metabolite-interacting proteome of mammalian cells: discovery and significance**

**Aditi Dixit**<sup>(a, b)</sup>, Gregor P. Jose<sup>(b)</sup>, Chitra Shanbhag<sup>(b)</sup>, Nitin Tagad<sup>(b)</sup>, Jeet Kalia<sup>(a, b, c, d)</sup>

<sup>(a)</sup> Department of Biological Sciences, Indian Institute of Science Education and Research, Bhopal

<sup>(b)</sup> Department of Chemistry, Indian Institute of Science Education and Research, Pune

<sup>(c)</sup> Department of Biology, Indian Institute of Science Education and Research, Pune

<sup>(d)</sup> Department of Chemistry, Indian Institute of Science Education and Research, Bhopal

**16:30 - 16:50**      **Break**

### **Oral Presentation VI**

Chair: Kenji Mishiro (Kanazawa University)

**OR-23**  
**16:50 - 17:10**      **Silver-Catalyzed Asymmetric Dearomatization**

**Tetsuhiro Nemoto**

Graduate School of Pharmaceutical Sciences, Chiba University

**OR-24**  
**17:10 - 17:30**      **Iridium-Catalyzed  $\alpha$ -Deuteration of Alcohols En Route to the Synthesis of Losartan- $d_2$  Potassium Salt**

Moeko Itoga, Masako Yamanishi, Yoshiji Takemoto, **Hiroshi Naka**

Graduate School of Pharmaceutical Sciences, Kyoto University

**OR-25**  
**17:30 - 17:50**      **In Silico Reaction Screening with Difluorocarbene for Diverse *N*-Difluoroalkylative Dearomatization of Pyridine**

**Hiroki Hayashi**<sup>(a, b)</sup>, Hitomi Katsuyama<sup>(a, b)</sup>, Yu Harabuchi<sup>(a, b, c)</sup>, Satoshi Maeda<sup>(a, b, c)</sup>, Tsuyoshi Mita<sup>(a, b)</sup>

<sup>(a)</sup> Institute for Chemical Reaction Design and Discovery (WPI-ICReDD) Hokkaido University

<sup>(b)</sup> JST, ERATO Maeda Artificial Intelligence in Chemical Reaction Design and Discovery Project

<sup>(c)</sup> Faculty of Science, Hokkaido University Faculty of Science, Hokkaido University

**OR-26**  
**17:50 - 18:10**

**Catalytic Regioselective Intramolecular Aminolysis of 3,4-Epoxy Amines**

**Yusuke Sasano**, Yuse Kuriyama, Tomohiro Shiroishi, Yoshihiko Hoshino,  
Shun-ichiro Uesugi, Yoshiharu Iwabuchi

Graduate School of Pharmaceutical Sciences, Tohoku University

**12/1 (Wed.)**

**9:30 - 10:25**

**Plenary Lecture 2** JSPS Bilateral Program 3

**Small Molecule Partitioning into Biomolecular Condensates**

**Richard Young** (Whitehead Institute/MIT)

Chair: Shigehiro Kawashima (The University of Tokyo)

**10:30 - 11:15**

**Invited Lecture 3** JSPS Bilateral Program 4

**PROTAC-mediated Protein Degradation: A New Therapeutic Modality**

**Craig Crews** (Yale University)

Chair: Minoru Tanaka (Mitsubishi Tanabe Pharma Corporation)

**11:20 - 12:05**

**Invited Lecture 4** JSPS Bilateral Program 5

**Nucleic Acids as Household Medicine: Living in the World of RNA Therapeutics**

**Muthiah (Mano) Manoharan** (Alnylam Pharmaceuticals)

Chair: Tsuyoshi Yamamoto (Nagasaki University)

**12:10 - 13:30**

**Sponsor Session (Lunch Break)**

**13:30 - 14:15**

**Invited Lecture 5** JSPS Bilateral Program 6

**Reinventing Oligonucleotide Synthesis**

**Phil S. Baran** (The Scripps Research Institute)

Chair: Kyungsoo Oh (Chung-Ang University)



## Oral Presentation VII

Chair: Yuuki Hirata (Kyowa Kirin Co., Ltd.)

- OR-27**  
**14:20 - 14:40**
- Systematic Diversification of Macrocyclic Scaffold of Ecteinasidin: Generation of Antitumor Agents**
- Hiroki Oguri**, Ryo Tanifuji  
Department of Chemistry, Graduate School of Science, The University of Tokyo
- OR-28**  
**14:40 - 15:00**
- Engineered biosynthesis of pharmaceutically important compounds**
- Takayoshi Awakawa**  
Graduate School of Pharmaceutical Sciences, The University of Tokyo
- OR-29**  
**15:00 - 15:20**
- Enzymatic synthesis of teleocidin derivatives using cytochrome P450 monooxygenase TleB**
- Takahiro Mori**<sup>(a, b)</sup>, Iori Morita<sup>(a)</sup>, Ikuro Abe<sup>(a, b)</sup>  
<sup>(a)</sup> Graduate School of Pharmaceutical Sciences, The University of Tokyo  
<sup>(b)</sup> Collaborative Research Institute for Innovative Microbiology, The University of Tokyo
- OR-30**  
**15:20 - 15:40**
- Catalytic Dearomative Functionalization of Bromoarenes via Benzyl Palladium Complex**
- Kei Muto**<sup>(a)</sup>, Hiroki Kato<sup>(b)</sup>, Aika Yanagimoto<sup>(b)</sup>, Yota Uwabe<sup>(b)</sup>, Qikun Wu<sup>(b)</sup>, Itsuki Musha<sup>(b)</sup>, Masaaki Komatsuda<sup>(b)</sup>, Junichiro Yamaguchi<sup>(b)</sup>  
<sup>(a)</sup> Institute for Advanced Study, Waseda University  
<sup>(b)</sup> Department of Applied Chemistry, Waseda University
- 15:40 - 16:00**      **Break**
- 16:00 - 16:45**
- Invited Lecture 6**      EFMC joint session 1
- Navigating the Chemical Space of Brain Penetrant BACE1 Inhibitors: from Optimal CNS Properties to Enhanced Selectivity**
- Harrie J.M. Gijzen** (Janssen Research & Development)  
Chair: Luc Van Hijfte (Symeres)
- 16:45 - 17:30**
- Invited Lecture 7**      EFMC joint session 2
- Rethinking Drug Discovery in Neurodegenerative Disease  
The Case for Combination Therapies**
- Hilal A. Lashuel** (École Polytechnique Fédérale de Lausanne)  
Chair: Luc Van Hijfte (Symeres)

17:30 - 17:50

Break

### Oral Presentation VIII

Chair: Takayoshi Awakawa (The University of Tokyo)

OR-31

17:50 - 18:10

#### Liquid Droplet Formation and Facile Cytosolic Translocation of IgG in the Presence of Attenuated Cationic Amphiphilic Lytic Peptides

Takahiro Iwata, Hisaaki Hirose, Kentarou Sakamoto, Yusuke Hirai, **Shiroh Futaki**

Institute for Chemical Research, Kyoto University

OR-32

18:10 - 18:30

#### Discovery of Submicromolar Inhibitors of the Virulence Factor LasB from *Pseudomonas aeruginosa* using Rational Design

**Christian Schütz**<sup>(a)</sup>, Jelena Konstantinović<sup>(a)</sup>, Andreas M. Kany<sup>(a)</sup>, Ahmed S. Abdelsamie<sup>(a)</sup>, Alaa Alhayek<sup>(a)</sup>, Asfandyar Sikandar<sup>(a)</sup>, Alexander F. Kiefer<sup>(a)</sup>, Ravindra P. Jumde<sup>(a)</sup>, Anastasia Andreas<sup>(b)</sup>, Cansu Kaya<sup>(a)</sup>, Andreas Klein<sup>(a)</sup>, Samir Yahiaoui<sup>(a)</sup>, Katrin Voos<sup>(d)</sup>, Isabell Walter<sup>(a)</sup>, Sebastian Adam<sup>(a, e)</sup>, Samira Speicher<sup>(a)</sup>, Katharina Rox<sup>(c)</sup>, Jörg Haupenthal<sup>(a)</sup>, Jesko Köhnke<sup>(c)</sup>, R. Müller<sup>(a)</sup>, Christian Ducho<sup>(c)</sup>, Rolf W. Hartmann<sup>(a, c)</sup>, Jean-Michel Sallenave<sup>(f)</sup>, Anna K. H. Hirsch<sup>(a, c)</sup>

<sup>(a)</sup> Helmholtz Institute for Pharmaceutical Research Saarland (HIPS) – Helmholtz Center for Infection Research (HZI), Department of Drug Design and Optimization

<sup>(b)</sup> Helmholtz Institute for Pharmaceutical Research Saarland (HIPS) – Helmholtz Center for Infection Research (HZI), Department of Microbial Natural Products

<sup>(c)</sup> Department of Pharmacy, Saarland University

<sup>(d)</sup> Helmholtz Center for Infection Research (HZI), Department of Chemical Biology

<sup>(e)</sup> Helmholtz Institute for Pharmaceutical Research Saarland (HIPS) – Helmholtz Center for Infection Research (HZI), Structural Biology of Biosynthetic Enzymes

<sup>(f)</sup> French Institute of Health and Medical Research, UMR

OR-33

18:30 - 18:50

#### Heterotrimeric G protein inhibition on the basis of heterocyclized dipeptide derivatives

**Patrick J. Küppers**<sup>(a)</sup>, Tobias Benkel<sup>(b)</sup>, Suvi Annala<sup>(b)</sup>, Kenichi Kimura<sup>(c)</sup>, Lisa Reinelt<sup>(a)</sup>, Gregor Schnakenburg<sup>(d)</sup>, Bernd K. Fleischmann<sup>(c)</sup>, Evi Kostenis<sup>(b)</sup>, Michael Gütschow<sup>(a)</sup>

<sup>(a)</sup> Pharmaceutical Institute, Department of Pharmaceutical & Medicinal Chemistry, University of Bonn

<sup>(b)</sup> Institute of Pharmaceutical Biology, University of Bonn

<sup>(c)</sup> Institute of Physiology I, Life and Brain Center, Medical Faculty, University of Bonn

<sup>(d)</sup> Institute of Inorganic Chemistry, University of Bonn

OR-34

18:50 - 19:10

#### Development of a NanoBRET assay to validate dual inhibitors of Sirt2 mediated lysine deacetylation and defatty-acylation with anticancer effects on metastatic prostate cancer cells

Anja Vogelmann, **Manfred Jung**

Institute of Pharmaceutical Sciences, University of Freiburg



**OR-37**  
**14:10 - 14:30**      **Conversion of A PROTAC Mutant Huntingtin Degradator into Small-molecule Hydrophobic Tags Focusing on Druglike Properties**  
Keigo Hirai<sup>(a)</sup>, Hiroko Yamashita<sup>(b)</sup>, Shusuke Tomoshige<sup>(a)</sup>, Yugo Mishima<sup>(a)</sup>, Kenji Ohgane<sup>(b)</sup>, Shinichi Sato<sup>(a, c)</sup>, Yuichi Hashimoto<sup>(b)</sup>, Minoru Ishikawa<sup>(a)</sup>  
<sup>(a)</sup> Graduate School of Life Sciences, Tohoku University  
<sup>(b)</sup> Institute for Quantitative Biosciences, The University of Tokyo  
<sup>(c)</sup> Frontier Research Institute for Interdisciplinary Sciences, Tohoku University

**OR-38**  
**14:30 - 14:50**      **Enhanced Suppression of a Protein-Protein Interaction in Cells Using Small-Molecule Covalent Inhibitors Based on an *N*-Acyl-*N*-alkyl Sulfonamide Warhead**  
Tomonori Tamura<sup>(a)</sup>, Tsuyoshi Ueda<sup>(a)</sup>, Masaharu Kawano<sup>(a)</sup>, Keiya Shiono<sup>(a)</sup>, Fruzsina Hobor<sup>(b)</sup>, Andrew J. Wilson<sup>(b)</sup>, Itaru Hamachi<sup>(a)</sup>  
<sup>(a)</sup> Kyoto University  
<sup>(b)</sup> University of Leeds

**14:50 - 15:10**      **Break**

### Oral Presentation X

Chair: Fumika Yakushiji (Hokkaido University)

**OR-39**  
**15:10 - 15:30**      **Switching from Biaryl Formation to Amidation by Convuluted Polymeric Nickel Catalyst**  
Yoichi M. A. Yamada, Abhijit Sen, Raghu N. Dhital, Aya Ohno, Takuma Sato  
RIKEN Center for Sustainable Resource Science

**OR-40**  
**15:30 - 15:50**      **Development of single-molecule enzyme activity-based protein profiling (SEAP) strategy for the detection of disease-related enzyme activities in blood samples**  
Toru Komatsu<sup>(a)</sup>, Shingo Sakamoto<sup>(a)</sup>, Yu Kagami<sup>(a)</sup>, Tadahaya Mizuno<sup>(a)</sup>, Rikiya Watanabe<sup>(b)</sup>, Kazufumi Honda<sup>(c)</sup>, Yasuteru Urano<sup>(a, d)</sup>  
<sup>(a)</sup> Graduate School of Pharmaceutical Sciences, The University of Tokyo  
<sup>(b)</sup> Molecular Physiology Laboratory, RIKEN  
<sup>(c)</sup> Graduate School of Medicine, Nippon Medical school  
<sup>(d)</sup> Graduate School of Medicine, The University of Tokyo

**OR-41**  
**15:50 - 16:10**      **Covalent Targeting of SARS-CoV-2 Main Protease with Chlorofluoroacetamides**  
Naoya Shindo<sup>(a)</sup>, Daiki Yamane<sup>(a)</sup>, Satsuki Onitsuka<sup>(a)</sup>, Suyong Re<sup>(b)</sup>, Kenji Mizuguchi<sup>(b)</sup>, Eiji Kawanishi<sup>(a)</sup>, Akio Ojida<sup>(a)</sup>  
<sup>(a)</sup> Graduate School of Pharmaceutical Sciences, Kyushu University  
<sup>(b)</sup> Artificial Intelligence Center for Health and Biomedical Research, NIBIOHN

**16:10 - 16:30**      **Break**

**Oral Presentation XI**

Chair: Hiroshi Naka (Kyoto University)

**OR-42**                      **Total Synthesis of Sesquiterpene Lactone Cynaropicrin**  
**16:30 - 16:50**

**Toyonobu Usuki**

Sophia University

**OR-43**                      **Rapid photouncaging-induced amide formation by red light irradiation**  
**16:50 - 17:10**                      **to indolizines**

**Kenji Watanabe**<sup>(a)</sup>, Asuka Kuratsu<sup>(a)</sup>, Takashi Niwa<sup>(a)</sup>, Takamitsu Hosoya<sup>(a, b)</sup>

<sup>(a)</sup> RIKEN BDR

<sup>(b)</sup> TMDU IBB

**OR-44**                      **Synthesis of Biologically-Relevant Organoboron Compounds through**  
**17:10 - 17:30**                      **Asymmetric C–H Borylation**

**Ronald L. Reyes**<sup>(a, b)</sup>, Miyu Sato<sup>(a)</sup>, Su-Gi Chong<sup>(a)</sup>, Kosuke Higashida<sup>(a, b)</sup>,  
Tomohiro Iwai<sup>(b)</sup>, Kimichi Suzuki<sup>(a, b)</sup>, Satoshi Maeda<sup>(a, b)</sup>, Masaya  
Sawamura<sup>(a, b)</sup>

<sup>(a)</sup> Institute for Chemical Reaction Design and Discovery (WPI-ICReDD), Hokkaido  
University

<sup>(b)</sup> Department of Chemistry, Faculty of Science, Hokkaido University

**OR-45**                      **Synthetic Studies on Batzelladines via Gold Catalyzed Cascade**  
**17:30 - 17:50**                      **Cyclization**

**Hirofumi Ueda**, Daichi Itagaki, Kazuya Marumo, Yudai Abe, Hidetoshi  
Tokuyama

Graduate School of Pharmaceutical Sciences, Tohoku University

**17:50 -**                      **Closing Remarks**