

Opening Lecture

Cancer Immunotherapy (tentative)
Tasuku Honjo, M.D., Ph.D. Kyoto University, Japan

Plenary Lecture

1. Recent Progress in iPS Cell Research and Application
Shinya Yamanaka, M.D., Ph.D. Kyoto University, Japan

2. Optogenetics (tentative)
Karl Deisseroth, M.D., Ph.D. Stanford University, USA

3. The Cardiovascular Effects of Peptidase Inhibition
Nancy J. Brown, M.D. Vanderbilt University Medical Center, USA

4. Drug Development as an Outcome of Integration of Basic and Clinical Pharmacology
Adam Cohen, M.D., Ph.D. Center for Human Drug Research, The Netherlands

Tang Prize Lecture

Genome Engineering: Technologies and Applications
Feng Zhang, Ph.D. McGovern Institute for Brain Research, USA

Analytical Pharmacology Lecture

Towards a Molecular Understanding of Drug Action at GPCRs
Bryan L. Roth M.D., Ph.D. University of North Carolina at Chapel Hill, USA

Opening Symposium

Pharmacology, Translational Medicine and Drug Discovery

シンポジウム (85セッション)

Neuroscience

- Alzheimer's Disease; Toward Very Early Diagnosis and Treatment
- Drug Design Based on 3D Microstructure of Receptors
- Glia-targeted Therapies: New Technical Advances for Seeing and Manipulating Glial Functions in the Brain Diseases
- Transformative Technologies at the Forefront of Brain Research
- ADHD and Substance Use Disorders: Epidemiology, Neurobiology and Treatment
- Ca²⁺ Signaling in Health and Disease
- Recent Advances in the Development of Subtype-selective and Signaling-biased Drugs for
- D2-like Dopamine Receptors: Towards Improved Therapeutics for Neuropsychiatric Disorders
- Novel Approaches Towards Understanding Psychiatric Disorders: Inflammation in the Brain and Periphery
- Emerging Therapeutic Targets Against Autism Spectrum Disorder
- Shortened Life Span in Patients with Schizophrenia:
Life Style Related Problems and Clinical Pharmacology of Antipsychotics
- Alpha-synuclein in Parkinson's Disease
- Mechanisms of Maladaptive Plasticity in Animal Models of Neuropsychiatric Disorders
- Brain-Gut Axis
- Novel Regulations and Functions of Dopaminergic Systems Towards Understanding Psychiatric Disorders
- New Perspective on the Function and Pharmacology of the Renin-angiotensin System

Pain

- Pain Sensor
- Central Pain and Translation

Cardiovascular System

- Recent Advances in the Molecular and Cellular Understanding of Heart Failure
—Toward Novel Therapeutic Strategies
- Hypertension: New Developments in Understanding and Management
- New Therapeutic Approach for Cardiorenal Syndrome-integration of Basic and Clinical Pharmacological Evidence
- Pharmacology and Clinical Pharmacology about Inflammation and the Development of Atherosclerosis
- Therapeutic Strategy to Enhance Intrinsic Resistance in Cardiovascular System
- Endothelial Mechanosensing in Vascular Physiology and Disease
- Cutting Edge of Calcium Permeable Ion Channels in Diseases as Potential Targets of Drug Discovery

Nephrology and Urology

- New Pharmacological Approaches for Renal Diseases

- Lower Urinary Tract Dysfunction Update: New Insight into Pharmacological Mechanisms¹

Immunology, Inflammation and Bone Metabolism

- Molecular Targets and Imaging Studies in Bone Diseases
- Expanding Histamine Research
- Roles of Bioactive Lipids in Inflammatory Diseases
- Advances in Molecular Targeting Therapy for Rheumatoid Arthritis
- Immunology and Inflammation
- New Controllers of Inflammation: What Are the Hottest Targets?

Gastrointestinal System

- Translational Research in GI Pharmacology - Novel Therapeutic Strategy in GI Diseases -
- Present Status and Future Perspective of Gastric Acid Inhibitor

Stem Cell Medicine

- iPS Cells and Disease
- Humanized Mouse Models and iPSC as Tools to Study Drug Toxicity

Metabolism and Diabetes

- Novel Strategies for Treatment of Obesity-induced Diabetes
- Role of Mitochondria and Oxidative Stress in Metabolic Syndrome

Respiratory System

Novel Therapeutic Strategies for Respiratory Diseases

Systems Biology

- Photobiology: Understanding of Biological Systems by Illuminating and Controlling Biological Functions by Light
- Targeting Antioxidant Defence System in Redox Diseases
- Understanding Living Systems by Extensive Analyses of All Cells
- Systems Biology and Drug Targeting

Education and Training

- European & Asian Training Initiatives to Improve Safe and Effective Use of Medicines in Modern Healthcare
- Introducing the IUPHAR Pharmacology Education Project - www.pharmacologyeducation.org
- Experiences and Models for Strengthening Pharmacological Research, Teaching and Services in Resource Strained Countries
- IPE: Educating a New Generation of Healthcare Professionals to Prescribe Medications Safely and Effectively

Sensory System

- Frontiers in Approaching Retinal Research - The Current Status and Future in Development of Therapeutic Strategies Based on Genetic and iPS Methods-

Cancer

- Cancer Drug Resistance
- Novel Targets and Biomarkers for Anticancer Therapeutics

Rare Diseases

- Therapeutic Manipulation of RNA/DNA for Genetic Diseases

Molecular Bioimaging

- Multidisciplinary Approach on Molecular Bio-imaging from Basic to Clinical Pharmacological Studies

Infection/Global Infectious Diseases

- Optimising Drug Selection and Dosage in Treating Infectious Diseases in Children and Pregnant Women in Africa
- New Drugs for Emerging Infectious Disease
- Vaccine Drug Diagnostic Development for the Control of Emerging Infectious Diseases
- All for Global Health, Global Health for All

Natural Medicine and Traditional East Asian Medicines

- Ameliorating Effects of Traditional Chinese Medicine on Ischemia/Reperfusion-induced Cerebral Microcirculatory Disturbances and Neuron Damage

- Globalization of Traditional Asian Medicine
- Pharmacological Investigation in New Drug Discovery
- Network Pharmacology

Regulatory Science

- Global Clinical Trials and Ethnic Factors

Pharmacovigilance

- Role of Database Study in Pharmacovigilance

Health Economics

- Health Technology Assessment (HTA) for Smaller Countries:
The Central Role of Clinical Pharmacology

Toxicology

- Novel Biomarkers, Predictors and Models for Drug-induced Liver Injury
- Toxicogenomics for Accelerated and Refined Hazard Identification of Chemicals
(Joint Symposium between IUTOX and IUPHAR)

Genomics/Pharmacogenomics / Personalized Medicine

- Pharmacogenomics in Special Populations
- Pharmacogenomics in Drug Therapy; Future Perspective, Next Generation of Pharmacogenomics
- Nuclear Receptors as Therapeutic Targets

Pharmacometrics

- Horizon of PMx

Pharmacokinetics

- Recent Progress of Immunosuppressant TDM
- Pharmacokinetic/-dynamic Modelling
 - Population PK/PD-models
 - Physiology-based PK (PBPK) Models
 - PK/PD models: Application in Paediatrics
 - PB/PK-modelling: Regulatory Aspects
- The Prediction of Renal Drug Transport: A Story with Many Tales
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Pediatric Clinical Pharmacology

- Innovative Approach to Pediatric Drug Development and Clinical Practice
Topics Include Pharmacogenomics, Pharmacometrics and New Formulations.
- Perinatal Pharmacology

Industry-Academia Collaboration

- Open Innovation for Drug Discovery

Cross-Sectoral

- The BPS Focus on Pharmacology Project:
- Securing the Future of Pharmacology & Clinical Pharmacology
- Nutrient and Metabolite Sensing by GPCRs
- Molecular Pharmacology Focused Studies of Calcium Permeable Ion Channels:
Identifying New Pharmacological Targets and Therapies
- 3D Microtissues in Drug Discovery: Mechanopharmacology
- Cutting Edge Assay Technologies for Studying Molecular and Cellular Pharmacology (Joint Symposium between BPS and ASCPT)
- Computational Pharmacology, Databases and Drug Discovery
- System Pharmacology of the AMPK-activated Protein Kinase
- New Insight into Aquaporin Function as Drug Targets

Miscellaneous

- GPCR and RhoA Signaling in Physiology and Disease
- Biased Agonism at G Protein-coupled Receptors: The Promise and the Challenges

Pharmacology for Africa

- African Indigenous Biodiversity: Gateway for Discovery

一般演題カテゴリー

1. Neuroscience
2. Pain
3. Cardiovascular System
4. Nephrology and Urology
5. Immunology, Inflammation and Bone Metabolism
6. Gastrointestinal System
7. Stem Cell Medicine
8. Metabolism and Diabetes
9. Respiratory System
10. Systems Biology
11. Education and Training
12. Sensory System
13. Cancer
14. Rare Diseases
15. Molecular Bioimaging
16. Infection/Global Infectious Diseases
17. Natural Medicine and Traditional East Asian Medicines
18. Regulatory Science
19. Pharmacovigilance
20. Health Economics
21. Toxicology
22. Genomics/Pharmacogenomics/Personalized Medicine
23. Pharmacometrics
24. Pharmacokinetics
25. Pediatric Clinical Pharmacology
26. Industry-Academia Collaboration
27. Miscellaneous