

Conference Program

Sunday, August 29, 2021

■Registration Open 12:00

■Opening 13:30-13:45

■Oral Presentation

Session 1 13:45-16:05

Chair: Zhengjin JIANG, Koji OTSUKA

KN-1 13:45-14:10

Rapid screening neuraminidase inhibitors from natural products based on magnetic beads ligand fishing or/and at-line nanofractionation

Tingting ZHANG, Jincal WANG, Rentao TANG, Jingyi JIAN, Sifan LUO, Yumei ZHAO, Zhengjin JIANG

Institute of Pharmaceutical Analysis, School of Pharmacy, Jinan University, China

L-1 14:10-14:30

Development of diamond nanoparticle based sensor for electrochemical evaluation and determination of COVID-19 drug favipiravir

Çiğdem Kanbeş DINDAR, Burcin BOZAL-PALABIYIK, Bengi USLU

Ankara University, Faculty of Pharmacy, Department of Analytical Chemistry, Turkey

KN-2 14:30-14:55

Searching for prognostic biomarkers of parkinson's disease for early treatment through a multiplatform metabolomics approach

Coral BARBAS¹, Carolina GONZALEZ-RIANO¹, Jorge SAIZ¹, Alberto BERGARECHE^{2,3,4}, José M^a HUERTA^{5,6}, Eva ARDANAZ^{6,7}, Marcela KONJEVOD⁸, Elisabet MONDRAGON², M.E. ERRO⁹, M. Dolores CHIRLAQUE^{5,6}, Eunete ABILLEIRA¹⁰, Fernando GOÑI-IRIGOYEN^{6,10}, Pilar AMIANO^{6,10}

¹Centro de Metabolómica y Bioanálisis (CEMBIO), Facultad de Farmacia, Universidad San Pablo-CEU, CEU Universities, Urbanización Montepríncipe, Boadilla del Monte, 28660 Madrid, Spain; ²Neurodegenerative Disorders Area, Biodonostia Health Research Institute, San Sebastián, Spain; ³Disorders Unit, Department of Neurology, University Hospital Donostia, San Sebastián, Spain; ⁴Biomedical Research Networking Centre Consortium for the area of Neurodegenerative Diseases (CIBERNED), Madrid, Spain; ⁵Instituto Murciano de Investigación Biosanitaria (IMIB); ⁶CIBER de Epidemiología y Salud Pública (CIBERESP), Madrid, Spain; ⁷Instituto de Salud Pública de Navarra, Pamplona, Spain; ⁸Rudjer Boskovic Institute, Division of Molecular Medicine, Bijenicka cesta 54, 10000 Zagreb, Croatia; ⁹Department of Neurology.

Complejo Hospitalario de Navarra, IdiSNA (Navarra Institute for Health Research), Pamplona, Spain; ¹⁰Public Health Laboratory in Gipuzkoa, Biodonostia Health Research Institute, San Sebastián, Spain

KN-3 14:55-15:20

Improvement in endogenous metabolomic coverage with separation techniques
Serge RUDAZ, Víctor GONZALEZ-RUIZ, Davy GUILLARME, Julien BOCCARD
School of Pharmaceutical Sciences, Geneva University, Switzerland

KN-4 15:20-15:45

Analytical challenges and strategies for plant-derived monoclonal antibodies
Caterina TEMPORINI
Department of Drug Sciences, University of Pavia, Pavia, Italy

L-2 15:45-16:05

Quantification of allantoin and other metabolites of the purine degradation pathway in human plasma samples using a newly developed HILIC-LC-MS/MS method
Asmin ANDRIES¹, Alan FEYAERTS¹, Djalila MEKAHLI^{2,3}, Ann Van SCHEPDAEL¹
¹KU Leuven – University of Leuven, Department of Pharmaceutical and Pharmacological Sciences, Pharmaceutical Analysis, Leuven, Belgium; ²KU Leuven – University of Leuven, Department of Development and Regeneration, Laboratory of Pediatrics, PKD group, Leuven, Belgium; ³University Hospitals Leuven, Department of Pediatric Nephrology, Leuven, Belgium

Session 2 16:20-17:30 Opening Plenary

Chair: Jacques CROMMEN, Kenji HAMASE

PL-1 16:20-16:55

Preparation of monodisperse molecularly-imprinted polymers and their application to pharmaceutical and biomedical analysis
Jun HAGINAKA
Institute for Biosciences, Mukogawa Women's University, Japan

PL-2 16:55-17:30

Potential of lipidomics in clinical research
Michael LÄMMERHOFER, Kristina DITTRICH, Peng LI, Xiaoqing FU, Malgorzata CEBO, Bernhard DROTLEFF, Jörg SCHLOTTERBECK
Institute of Pharmaceutical Sciences, University of Tübingen, Germany

Monday, August 30, 2021

■ Oral Presentation

Session 3 9:00-11:05

Chair: Quezia B. CASS, Makoto TSUNODA

KN-5 9:00-9:25

A workflow for profiling enzyme ligands from natural product extracts

Quezia B. CASS¹, Juliana Maria de LIMA¹, Larissa Ramos Guimarães da SILVA^{1,2},
Alessandra Leda VALVERDE², Matheus Henrique Brito SILVA³, Marcelo Zaldini
HERNANDES³

¹Chemistry Department, Federal University of São Carlos, São Carlos, Brazil; ²Laboratory of
Natural Products, Institute of Chemistry, Fluminense Federal University, Niterói, Brazil;

³Laboratory of Medicinal Theoretical Chemistry (LQTM), Department of Pharmaceutical
Sciences, Federal University of Pernambuco, Recife, Brazil

L-3 9:25-9:45

Promoting crystallization of intrinsic membrane proteins with conjugated micelles

Thien Van TRUONG, Mihir GHOSH, Ellen WACHTEL, Noga FRIEDMAN, Kwang-
Hwan JUNG, Mordechai Sheves & Guy PATCHORNIK

Department of Chemical Sciences, Ariel University, 40700, Ariel, Israel

L-4 9:45-10:05

Screening and structure determination of protective substances against senile dementia:
from analytical chemistry to neurochemistry

Masahiro KAWAHARA

Department of Bio-Analytical Chemistry, Faculty of Pharmacy, Research Institute of
Pharmaceutical Sciences, Musashino University, Japan

L-5 10:05-10:25

HPLC column for 100-nm nanoparticles analysis

Masaru KATO

School of Pharmacy, Showa University, Japan

L-6 10:25-10:45

Analysis of biological compounds using pillar array columns

Makoto TSUNODA

Graduate School of Pharmaceutical Sciences, University of Tokyo, Japan

L-7 10:45-11:05

Chemiluminescence assay for quinones based on their redox reaction and its application
to biomedical analysis

Naoya KISHIKAWA¹, Mahmoud EL-MAGHRABEY^{1,2}, Naotaka KURODA¹

¹Graduate School of Biomedical Sciences, Nagasaki University, Japan; ²Department of

■ **Lunch Time Seminar 11:45-12:45**

■ **Poster Presentation 1 (Odd Number) 13:00-14:00**

■ **Oral Presentation**

Session 4 14:15-16:30

Chair: Maria Elizabeth TIRITAN, Shigeo SUZUKI

KN-6 14:15-14:40

SPR optical biosensor studies for monitoring biorecognition phenomena

Carlo BERTUCCI

University of Bologna, Bologna, Italy

KN-7 14:40-15:05

What is the real potential of modern supercritical fluid chromatography for pharmaceutical applications?

Davy GUILLARME^{1,2}, Gioacchino L. LOSACCO^{1,2}, Jean-luc VEUTHEY^{1,2}

¹Institute of Pharmaceutical Sciences of Western Switzerland (ISPSO), University of Geneva, CMU-Rue Michel Servet 1, 1211 Geneva 4, Switzerland; ²School of Pharmaceutical Sciences, University of Geneva, CMU-Rue Michel Servet 1, 1211 Geneva 4, Switzerland

KN-8 15:05-15:30

Analysis of chiral drugs in environmental matrices

Maria Elizabeth TIRITAN^{1,2,3}, Maria Miguel COELHO^{1,3}, Ivan LANGA², Ricardo GONÇALVES², Ana Rita RIBEIRO⁴, Cláudia RIBEIRO²

¹Laboratório de Química Orgânica e Farmacêutica, Departamento de Ciências Químicas, Faculdade de Farmácia, Universidade do Porto, Portugal; ²CESPU, Instituto de Investigação e Formação Avançada em Ciências e Tecnologias da Saúde, Gandra, Portugal; ³Centro Interdisciplinar de Investigação Marinha e Ambiental (CIIMAR), Universidade do Porto, Portugal; ⁴Laboratory of Separation and Reaction Engineering - Laboratory of Catalysis and Materials (LSRE-LCM), Faculdade de Engenharia, Universidade do Porto, Portugal

L-8 15:30-15:50

Enantioselective liquid chromatography in a translational (chemistry) perspective

Roccaldo SARDELLA, Ina VARFAJ, Andrea CAROTTI

Department of Pharmaceutical Sciences, University of Perugia, Perugia, Italy

L-9 15:50-16:10

Investigation of interaction between milrinone and DNA by electrochemical, spectroscopic and molecular docking study

Bengi USLU¹, Didem Nur UNAL¹, Cem ERKMEN¹, Ozge SELCUK¹, Gökçen EREN²,

Sevinc KURBANOGU¹

¹Ankara University, Faculty of Pharmacy, Department of Analytical Chemistry, Turkey; ²Gazi University, Faculty of Pharmacy, Department of Pharmaceutical Chemistry, Turkey

L-10 16:10-16:30

A molecularly imprinted electrochemical sensor based on poly(pyrrole-2-carboxyl-histidine) (PPCHis) for the detection of Teriflunomide

M. Emin ÇORMAN^{1,2}, Ahmet ÇETİNKAYA, Canan ARMUTCU³, Esen B. ATİCİ⁴, Lokman UZUN³, Sibel A. ÖZKAN¹

¹Faculty of Pharmacy, Department of Analytical Chemistry, Ankara University, Turkey; ²Faculty of Science and Arts, Department of Chemistry, Sinop University, Turkey; ³Faculty of Science, Department of Chemistry, Hacettepe University, Turkey; ⁴Research and Development Center, DEVA Holding A.S., Turkey

Session 5 16:45-19:15 Memorial Session for Professor Sergio Pinzauti

Chair: Bezhan CHANKVETADZE, Jun HAGINAKA

M-0 16:45-16:55

Introductory remarks

Jun HAGINAKA

Institute for Biosciences, Mukogawa Women's University, Japan

M-1 16:55-17:35

Peptide-based affinity monoliths for the purification and analysis of antibodies in biological matrices

Xiao LIU¹, Yutian LEI¹, Rongrong XU¹, Li LU¹, Hanyin JIN¹, Alice DEMELENNE², Marianne FILLET², Jacques CROMMEN^{1,2}, Qiqin WANG¹, Zhengjin JIANG¹

¹Institute of Pharmaceutical Analysis, College of Pharmacy, Jinan University, Guangzhou, China; ²Laboratory for the Analysis of Medicines, Center for Interdisciplinary Research on Medicines (CIRM), University of Liege, Liege, Belgium

M-2 17:35-18:00

Innovative supports for the development of chromatographic immobilized enzyme reactors

Gabriella MASSOLINI, Francesca RINALDI, Sara TENGATTINI, Enrica CALLERI, Caterina TEMPORINI

Department of Drug Sciences University of Pavia, Italy

M-3 18:00-18:25

Recent advances in carbon-based nanosensors and biosensors and their applications in drug assay and life sciences

Sibel A. OZKAN

Ankara University, Faculty of Pharmacy, Department of Analytical Chemistry, Ankara, Turkey

M-4 18:25-18:50

Bioequivalence and dissolution profile: the importance of discriminative dissolution methods

Vladimir IOFFE

Global R&D, Teva Pharmaceutical Industries, Ltd., Kfar Saba, Israel

M-5 18:50-19:15

Advantages and limitations of capillary electrophoresis in chiral drug analysis

Bezhan CHANKVETADZE

Institute of Physical and Analytical Chemistry, School of Exact and Natural Sciences, Tbilisi State University, Tbilisi 0179, Georgia

Tuesday, August 31, 2021

■ Oral Presentation

Session 6 9:00-11:30

Chair: Gustavo RIVAS, Yasushi ISHIHAMA

KN-9 9:00-9:25

Functionalized carbon nanomaterials as building blocks for the development of biosensors

Michael López MUJICA, Alejandro TAMBORELLI, Pablo DALMASSO, Marcela RODRÍGUEZ, María RUBIANES, Pablo GALLAY, Virginia VASCHETTI, Fabrizio PERRACHIONE, Daiana REARTES, Gustavo RIVAS

INFIQC-CONICET, Departamento de Fisicoquímica, Facultad de Ciencias Químicas, Universidad Nacional de Córdoba, Ciudad Universitaria, 5000 Córdoba, Argentina

L-11 9:25-9:45

Development of HPLC/MS methods for RNA analysis

Bingchuan WEI¹, Jenny WANG¹, Bifan CHEN¹, Lance CADANG², Kelly ZHANG¹

¹Early Research and Development, Genentech Inc. USA; ²Protein Analytical Chemistry, Genentech Inc., USA

KN-10 9:45-10:10

Protein terminomics to uncover human proteoform atlas

Yasushi ISHIHAMA

Graduate School of Pharmaceutical Sciences, Kyoto University, Japan

L-12 10:10-10:30

Partial filling technique in capillary electrophoresis for the automated analysis of glycoprotein glycans and related compounds

Shigeo SUZUKI

Department of Pharmaceutical Sciences, Faculty of Pharmacy, Kindai University, Japan

L-13 10:30-10:50

Analytical method development for innovative new drugs

Kumiko SAKAI-KATO

School of Pharmacy, Kitasato University, Japan

L-14 10:50-11:10

Evaluation of drugs using liquid chromatography for prediction of side effects

Yukihiro KURODA, Yoshie IWAKUMA

School of Pharmacy and Pharmaceutical Sciences, Mukogawa Women's University, Japan

L-15 11:10-11:30

Development of biomarkers for various diseases using chromatography and mass spectrometry

Masamitsu MAEKAWA, Nariyasu MANO

Department of Pharmaceutical Sciences, Tohoku University Hospital, Japan

■ **Lunch Time Seminar (BMAS) 11:45-12:45**

■ **Poster Presentation 2 (Even Number) 13:00-14:00**

■ **Oral Presentation**

Session 7 14:15-16:10

Chair: Marianne FILLET, Kenichiro TODOROKI

KN-11 14:15-14:40

Contribution of proteomics to the development of new therapeutics

Cindy NIX, Marie GOU, Gwenaël NYS, Gaël COBRAIVILLE, Marianne FILLET

Laboratory for the Analysis of Medicines, Center for Interdisciplinary Research on Medicines (CIRM), University of Liège, Belgium

KN-12 14:40-15:05

Integrated analytical methods in neurodegeneration drug discovery

L. DAVANI¹, X. FU², A. De SIMONE³, P. LI², M. NALDI⁴, A. MILELLI¹, S. MONTANARI¹, M. LÄMMERHOFFER², V. ANDRISANO¹

¹Department for Life Quality Studies, University of Bologna, Corso D'Augusto 237, 47921 Rimini, Italy; ²Institute of Pharmaceutical Sciences, University of Tuebingen, Auf der Morgenstelle 8, 72076 Tuebingen, Germany; ³Department of Drug Science and Technology, University of Torino, via P.Giuria 9, 10125 Torino, Italy; ⁴Department of Pharmacy and Biotechnology, University of Bologna, Via Belmeloro 6, 40126 Bologna, Italy

KN-13 15:05-15:30

Native separation, mass spectrometry and ion mobility spectrometry of proteins

Govert SOMSEN¹, Robert VOETEN^{1,2}, Iro VENTOURI^{2,3}, Hany MAJEED¹, Rob HASELBERG¹

¹Division of Bioanalytical Chemistry, Vrije Universiteit Amsterdam, Netherlands; ²TI-COAST, Amsterdam, Netherlands; ³Analytical Chemistry group, University of Amsterdam, Netherlands

L-16 15:30-15:50

Assessment of albumin structure and function in diabetic kidney disease

Marina NALDI^{1,2}, Marta NUGNES¹, Maurizio BALDASSARRE^{2,3}, Alessia CAVALIERE¹, Dorina MITA⁴, Francesca MARCHIGNOLI⁴, Maria Letizia PETRONI⁴, Giulio MARCHESINI REGGIANI⁴, Manuela BARTOLINI¹

¹Department of Pharmacy and Biotechnology, University of Bologna, Italy; ²Centre for Applied Biomedical Research-CRBA, Alma Mater Studiorum Università di Bologna, St. Orsola Hospital, Italy; ³IRCSS Azienda Ospedaliera Universitaria di Bologna, Italy; ⁴Unit of Metabolic Diseases

& Clinical Dietetics, S. Orsola Hospital, Bologna, Italy

L-17 15:50-16:10

Optimization of HPLC method for the determination of piroxicam from polymeric based nanocarriers and biological samples

Mehmet GUMUSTAS¹, Kenan Can TOK¹, Bilge BAYRAM², Gulin AMASYA³, Ebru ARIOGLU INAN⁴, Ceyda Tuba SENDEL-TURK³

¹Ankara University, Institute of Forensic Sciences, Department of Forensic Toxicology, Ankara, Turkey; ²Tokat State Hospital, Tokat, Turkey; ³Ankara University, Faculty of Pharmacy, Department of Pharmacology, Ankara, Turkey; ⁴Ankara University, Faculty of Pharmacy, Department of Pharmaceutical Technology, Ankara, Turkey

Session 8 16:25-19:25 Young Scientist Session

Chair: Vladimir IOFFE, Naoyuki SUGIYAMA

Y-1 16:25-16:40

The key role of chromatography and mass spectrometry for the development of a novel glycoconjugate vaccine against tuberculosis

Sara TENGATTINI¹, Francesca RINALDI¹, Zhihao LI², Lisa TANZI^{1,2}, Massimo SERRA¹, Teodora BAVARO¹, Luciano PIUBELLI³, Yongmin ZHANG², Loredano POLLEGIONI³, Gabriella MASSOLINI¹, Marco TERRENI^{1,2}, Caterina TEMPORINI¹

¹Department of Drug Sciences, University of Pavia, Pavia, Italy; ²Institut Parisien de Chimie Moléculaire, Sorbonne Université, Paris, France; ³Department of Biotechnology and Life Sciences, University of Insubria, Varese, Italy

Y-2 16:40-16:55

Analytical characterization of commercial microalgae

Serena MONTANARI¹, Angela DE SIMONE², Lara DAVANI¹, Cristina TERENCE¹, Vincenzo TUMIATTI¹, Vincenza ANDRISANO¹

¹Department for Life Quality Studies, University of Bologna, Rimini, Italy; ²Department of Drug Science and Technology University of Torino, Torino, Italy

Y-3 16:55-17:10

One- and two-dimensional methods for the rapid and comprehensive enantioselective analysis of AQC derivatized amino acids from natural and synthetic peptides

Ryan KARONGO¹, Jeannie HORAK², Michael LÄMMERHOFER¹

¹Pharmaceutical (Bio-)Analysis, Eberhard-Karls-University Tuebingen, Germany; ²Ludwig-Maximilians-University, Munich Medical Center, Munich, Germany

Y-4 17:10-17:25

Binding of palbociclib to human serum albumin: fluorescence quenching and molecular docking study

Ahmet CETINKAYA¹, Mehmet Gokhan CAGLAYAN¹, Mehmet Altay UNAL², Pinar

BEYAZKILIC³, Caglar ELBUKEN³, Esen Bellur ATICI⁴, Sibel A. OZKAN¹

¹Ankara University, Faculty of Pharmacy, Department of Analytical Chemistry, Tandogan, Ankara, Turkey; ²Stem Cell Institute, Ankara University, Balgat, Ankara, Turkey; ³UNAM-National Nanotechnology Research Center, Institute of Materials Science and Nanotechnology, Bilkent University, Ankara, Turkey; ⁴DEVA Holding A.S., R&D Center, Karaagaç Mh. Fatih Blv. No: 26, 59510 Kapaklı, Tekirdag, Turkey

Y-5 17:25-17:40

Rapid and sensitive electrochemical immunosensing of GFAP: a key biomarker in neuronal injury and brain tumors

Goksu OZCELIKAY¹, Maria GAMELLA², M. Altay UNAL³, Kivılcım GUCUYENER⁴, Rodrigo BARDERAS⁵, José M. PINGARRÓN², Susana CAMPUZANO², Sibel A. OZKAN¹

¹Department of Analytical Chemistry, Faculty of Pharmacy, Ankara University, Ankara, Turkey; ²Faculty of Chemical Sciences, Universidad Complutense de Madrid, Madrid, Spain; ³Stem Cell Institute, Ankara University, Ankara, Turkey; ⁴Gazi University, Faculty of Medicine, Department of Paediatric Neurology, Ankara, Turkey; ⁵Chronic Disease Programme, UFIEC, Carlos III Health Institute, Madrid, Spain

Y-6 17:40-17:55

A molecularly imprinted poly(aniline) based electrochemical sensor for the determination of bisphenol A in biological and plastic bottled water samples

S. Irem KAYA^{1,2}, Goksu OZCELIKAY¹, Sibel A. OZKAN¹

¹Ankara University, Faculty of Pharmacy, Department of Analytical Chemistry, Ankara, Turkey; ²University of Health Sciences, Gulhane Faculty of Pharmacy, Department of Analytical Chemistry, Ankara, Turkey

Chair: Sibel A. OZKAN, Mitsuhiro KINOSHITA

Y-7 18:10-18:25

An electrochemical chiral sensing platform based on molecularly imprinted polymer

Leyla KARADURMUS^{1,2}, M. Emin CORMAN^{1,3}, Lokman UZUN⁴, Sibel A. OZKAN¹

¹Faculty of Pharmacy, Department of Analytical Chemistry, Ankara University, Turkey; ²Faculty of Pharmacy, Department of Analytical Chemistry, Adiyaman University, Turkey; ³Faculty of Science and Arts, Department of Chemistry, Sinop University, Turkey; ⁴Faculty of Science, Department of Chemistry, Hacettepe University, Turkey

Y-8 18:25-18:40

A turn-on hydrazide oxidative decomposition-based fluorescence probe for highly selective detection of copper (II) with application to cell imaging

Mahmoud EL-MAGHRABEY^{1,2}, Yusuke OKAMOTO³, Naoya KISHIKAWA¹, Masayori HAGIMORI⁴, Shigeru KAWAKAMI⁵, Naotaka KURODA¹

¹Analytical Chemistry, Graduate School of Biomedical Sciences, Nagasaki University, Japan;
²Faculty of Pharmacy, Mansoura University, 35116 Mansoura, Egypt; ³School of
Pharmaceutical Sciences, Nagasaki University, Japan; ⁴School of Pharmacy and
Pharmaceutical Sciences, Mukogawa Women's University, Japan; ⁵Pharmaceutics, Graduate
School of Biomedical Sciences, Nagasaki University, Japan

Y-9 18:40-18:55

Photoacoustic imaging of cancer cells using pH-activatable imaging agents

Koki TSUCHIYA¹, Hideo TAKAKURA¹, Yusuke NOTSUKA², Yoshihisa
YAMAOKA², Mikako OGAWA¹

¹Graduate School of Pharmaceutical Sciences, Hokkaido University, Japan; ²Graduate School
of Engineering, Saga University, Japan

Y-10 18:55-19:10

Proteome-wide profiling of the position specific amino acid contributions to the peptide
collision cross-sections

Kosuke OGATA¹, Chih-Hsiang CHANG¹, Darien YEUNG^{2,3,4}, Victor SPICER³, Oleg
KROKHIN^{2,3,4,5}, Yasushi ISHIHAMA^{1,6}

¹Graduate School of Pharmaceutical Sciences, Kyoto University, Japan; ²Department of
Biochemistry and Medical Genetics, University of Manitoba, Canada; ³Manitoba Centre for
Proteomics and Systems Biology, University of Manitoba, Canada; ⁴Department of Internal
Medicine, University of Manitoba, Canada; ⁵Department of Chemistry, University of Manitoba,
Canada; ⁶Laboratory of Clinical and Analytical Chemistry, National Institute of Biomedical
Innovation, Health and Nutrition, Japan

Y-11 19:10-19:25

Liquid chromatographic strategies for separation of deuterated isotopologues

Eisuke KANAO^{1,2}, Takuya KUBO³, Nobuo TANAKA⁴, Koji OTSUKA³, Jun
ADACHI^{1,2}, Yasushi ISHIHAMA^{1,2}

¹Graduate School of Pharmaceutical Sciences, Kyoto University, Japan; ²National Institute of
Biomedical Innovation, Health and Nutrition, Japan; ³Graduate School of Engineering, Kyoto
University, Japan; ⁴Graduate School of Engineering, Osaka University, Japan

Wednesday, September 1, 2021

■ Oral Presentation

Session 9 9:00-10:30 Closing Plenary

Chair: Jun HAGINAKA, Kenji HAMASE

PL-3 9:00-10:00

A multi-omics study of treatment-related metabolic deprogramming in pancreatic cancer
Artur WNOROWSKI¹, Danuta DUDZIK^{2,3}, Michel BERNIER⁴, Jakub WOJCIK¹,
Alberto DIAZ-RUIZ^{4,5}, Karolina MAZUR¹, Haiyong HAN⁶, Krzysztof JOZWIAK¹,
Coral BARBAS², Irving W. WAINER^{7,8}

¹Department of Biopharmacy, Medical University of Lublin, Lublin, Poland; ²Centre for Metabolomics and Bioanalysis (CEMBIO), Universidad San Pablo-CEU, Madrid, Spain; ³Department of Biopharmaceutics and Pharmacodynamics, Medical University of Gdańsk, Gdańsk, Poland; ⁴Translational Gerontology Branch, National Institute on Aging/NIH, Baltimore, MD, USA; ⁵Nutritional Interventions Group, Precision Nutrition and Aging, Institute IMDEA Food, Madrid, Spain; ⁶Molecular Medicine Division, Translational Genomics Research Institute, Phoenix, AZ, USA; ⁷Laboratory of Clinical Investigation, National Institute on Aging/NIH, Baltimore, MD, USA; ⁸PAZ Pharma, Washington, DC, USA

PL-4 10:00-10:30

Effective separation system for new drug modalities utilizing temperature-responsive chromatography

Hideko KANAZAWA

Faculty of Pharmacy, Keio University, Japan

Session 10 10:45-11:50

Chair: Hideko KANAZAWA, Takuya KUBO

L-18 10:45-11:05

Enhancing sensitivity, specificity and analysis throughput for LC/ESI-MS/MS assessment of vitamin D status by derivatization with DAPTAD

Tatsuya HIGASHI

Faculty of Pharmaceutical Sciences, Tokyo University of Science, Japan

L-19 11:05-11:25

Bioanalysis of therapeutic monoclonal antibodies using DNA aptamers as new affinity ligands

Kenichiro TODOROKI

Department of Analytical and Bio-Analytical Chemistry, School of Pharmaceutical Sciences, University of Shizuoka, Japan

KN-14 11:25-11:50

Selective microscale separation of exosomes

Takuya KUBO, Koji OTSUKA

Graduate School of Engineering, Kyoto University, Japan

■ Closing 11:50-12:00

Odd Number (13:00-14:00, Monday, August 30)

Even Number (13:00-14:00, Tuesday, August 31)

- P-1 A separate determination of released and liposomal encapsulated eribulin in dog plasma by LC-MS/MS for its application to a pharmacokinetic study
Yuji MANO
Global Drug Metabolism and Pharmacokinetics, Eisai Co., Ltd., Japan
- P-2 Presence of a variety of long-chain base (LCB) in mammalian blood uncovered by LCB-targeted lipidomics assay
Ryuichi MASHIMA, Mari OHIRA, Torayuki OKUYAMA
Department of Clinical Laboratory Medicine, National Center for Child Health and Development, Tokyo, Japan
- P-3 Temperature responsive cell separation chromatography for purification of mesenchymal stem cell
Kenichi NAGASE, Goro EDATSUNE, Sota YAMADA, Hideko KANAZAWA
Faculty of Pharmacy, Keio University, Japan
- P-4 Temperature-modulated sample preparation using thermoresponsive spin column
Masakazu INOUE, Yuta ISHIZAWA, Hideko KANAZAWA, Kenichi NAGASE
Faculty of Pharmacy, Keio University, Japan
- P-5 Development of temperature-responsive anion-exchange chromatography for effective purification of oligonucleotides
Kaichi YAMAZAKI, Yutaro MAEKAWA, Hideko KANAZAWA, Kenichi NAGASE
Graduate School of Pharmaceutical Sciences, Keio University, Japan
- P-6 Control of *N*-nitrosodimethylamine (NDMA) in drug substances
Eiichi YAMAMOTO¹, Hidetomo YOKOO², Hitomi KAN-NO¹, Naomi TOMITA¹, Sayaka MASADA¹, Nahoko UCHIYAMA¹, Genichiro TSUJI¹, Takashi HAKAMATSUKA¹, Yosuke DEMIZU¹, Ken-ichi IZUTSU¹, Yukihiro GODA¹
¹National Institute of Health Sciences, Japan; ²Graduate School of Medical Science, Kyoto Prefectural University of Medicine, Japan
- P-7 Absolute determination of auranofin using quantitative ³¹P NMR analysis
Nahoko UCHIYAMA¹, Junko HOSOE¹, Naoki SUGIMOTO¹, Kyoko ISHIZUKI¹, Tatsuo KOIDE¹, Mika MURABAYASHI², Kengo KOBAYASHI³, Yoshinori FUJIMINE⁴, Toshiyuki YOKOSE⁴, Tatsuya OFUJI⁵, Hitoshi SHIMIZU⁵, Takashi HASEBE⁶, Yumi ASAI⁶, Eri ENA⁶, Junko KIKUCHI⁷, Kohei KIYOTA⁷, Kazuhiro FUJITA⁷, Yoshinobu MAKINO⁸, Toru MIURA⁹, Yoshiaki IWAMOTO⁹, Katsuo ASAKURA¹⁰, Takako SUEMATSU¹¹, Hitomi MUTO¹¹, Ai KOHAMA¹², Takashi

GOTO¹³, Masu YASUDA¹³, Tomohiko UEDA¹⁴, Yukihiro GODA¹

¹National Institute of Health Sciences, Japan; ²Takeda Pharmaceutical Co., Ltd., Japan; ³Daiichi Sankyo Co., Ltd., Japan; ⁴Otsuka Pharmaceutical Co., Japan; ⁵Chugai Pharma Manufacturing Co., Ltd., Japan; ⁶Eisai Co., Ltd., Japan; ⁷SHIONOGI & Co., Ltd., Japan; ⁸Juzen Chemical Corp., Japan; ⁹FUJIFILM Wako Pure Chemical Corporation, Japan; ¹⁰JEOL Ltd., Japan; ¹¹JEOL RESONANCE Inc., Japan; ¹²Pharmaceutical and Medical Device Regulatory Science Society of Japan, Japan; ¹³Nippon Shinyaku Co., Ltd., Japan; ¹⁴Sumitomo Dainippon Pharma Co., Ltd., Japan

- P-8 Degradation pathway of a taxane-derivative DS80100717 drug substance and drug product

Kousuke TAMURA¹, Takefumi KAWABE¹, Toshi KAJIRO¹, Etsuo YONEMOCHI²

¹Analytical and Quality Evaluation Research Laboratories, Daiichi Sankyo Co., Ltd., Japan;

²Graduate School of Pharmaceutical Sciences, Hoshi University, Japan

- P-9 Effective temperature-modulated cell separation using polymer brush with cell affinity peptides

Ruka SHIMANE, Masaki SHIMURA, Sota YAMADA, Hideko KANAZAWA, Kenichi NAGASE

Faculty of Pharmacy, Keio University, Japan

- P-10 Efficient screening of high-affinity DNA aptamers for nivolumab and binding evaluation of the acquired aptamers

Taisei HOJO, Atsuko GOTO, Eiji SUGIYAMA, Hajime MIZUNO, Kenichiro TODOROKI

Department of Analytical and Bio-Analytical Chemistry, School of Pharmaceutical Sciences, University of Shizuoka, Japan

- P-11 *In vivo* imaging of acute physiological responses after treatment with photoimmunotherapy

Kohei NAKAJIMA¹, Akiyo SUGIKAWA¹, Hironobu YASUI², Kei HIGASHIKAWA², Hideo TAKAKURA¹, Chie SUZUKI³, Yasuhiro MAGATA³, Yuji KUGE², Mikako OGAWA¹

¹Graduate School of Pharmaceutical Sciences, Hokkaido University, Japan; ²Central Institute of Isotope Science, Hokkaido University, Japan; ³Preeminent Medical Photonics Education and Research Center, Hamamatsu University School of Medicine, Japan

- P-12 Effect of theanine on neurotransmitters in mice after oral administration

Mami OKUMURA, Yuki MATSUMOTO, Hayato TAKAYAMA, Yoshinori KATO, Yusuke IWASAKI

School of Pharmacy and Pharmaceutical Sciences, Hoshi University, Japan

- P-13 Determination of neurotransmitter and related metabolites in mouse brain by liquid chromatography with tandem mass spectrometry using QuEChERS tablet

- Hitomi MATSUMOTO, Yuka IWAMOTO, Kanako YABUKI, Saki YAMADA,
Yoshinori KATO, Yusuke IWASAKI
School of Pharmacy and Pharmaceutical Sciences, Hoshi University, Japan
- P-14 Determination of enantiomeric amino acids using FDLA as a chiral derivative reagent
Ibuki YASUDA, Rino KODAMA, Narumi MASE, Mako MIYAZAWA, Yoshinori
KATO, Yusuke IWASAKI
School of Pharmacy and Pharmaceutical Sciences, Hoshi University, Japan
- P-15 Interaction of hydroxycinnamic acids with metal ions as food ingredients in artificial
biological fluid conditions
Shuhei YAMAGATA, Rie MANABE, Haruna ABE, Hinano INO, Kanae FUNATO,
Yoshinori KATO, Yusuke IWASAKI
School of Pharmacy and Pharmaceutical Sciences, Hoshi University, Japan
- P-16 Phosphatidylinositol as a biomarker of drug-induced phospholipidosis in model rats
Ryohei HAMAGUCHI, Tsukasa TATSUMI-TANAKA, Fuka HAYASAKI, Yukihiro
KURODA
School of Pharmacy and Pharmaceutical Sciences, Mukogawa Women's University, Japan
- P-17 Discriminant analysis of senna and related species using UHPLC-MS metabolomics
Takashi TSUJIMOTO^{1,2}, Takuro MARUYAMA¹, Hiroko TOKUMOTO¹, Naoko
ANJIKI³, Shigeki HAYASHI³, Katsunori MIYAKE⁴, Nobuo KAWAHARA^{3,5},
Yoshihiro OZEKI², Takashi HAKAMATSUKA¹, Nahoko UCHIYAMA¹
*¹National Institute of Health Sciences, Japan; ²Tokyo University of Agriculture and Technology,
Japan; ³National Institutes of Biomedical Innovation, Health and Nutrition, Japan; ⁴Tokyo
University of Pharmacy and Life Sciences, Japan; ⁵The Kochi Prefectural Makino Botanical
Garden, Japan*
- P-18 Nasal application of the 9-mer hydrolase-peptide, JAL-TA9 improved dementia of
Alzheimer's model mouse induced by A β 25-35
Rina NAKAMURA^{1,2}, Motomi KONISHI³, Motoaki SAITO², Toshifumi AKIZAWA^{1,2}
*¹O-force Co. Ltd., Japan; ²Laboratory of Pharmacology, School of Medicine, Kochi University,
Japan; ³Department of Integrative Pharmaceutical Sciences, Faculty of Pharmaceutical
Sciences, Setsunan University, Japan*
- P-19 Simulation of binding structure of GSGNR inhibiting A β 25-35 aggregation
Motomi KONISHI¹, Rina NAKAMURA^{2,3}, Nana CHATANI¹, Nobuki NAKAMURA¹,
Mao NAKAHIRA¹, Toshifumi AKIZAWA^{2,3}
*¹Department of Integrative Pharmaceutical Sciences, Faculty of Pharmaceutical Sciences,
Setsunan University, Japan; ²O-force Co. Ltd., Japan; ³Laboratory of Pharmacology, School of
Medicine, Kochi University, Japan*
- P-20 Development of a novel proteome analysis method using nanoLC/ion mobility
spectrometry/MS

Ayana NAKAI, Ryota TOMIOKA, Naoyuki SUGIYAMA, Kosuke OGATA, Yasushi ISHIHAMA

Graduate School of Pharmaceutical Sciences, Kyoto University, Japan

- P-21 Quantification of abiraterone and its metabolites in human serum using LC/Q-TOF MS
Shizuyo HORIYAMA¹, Hiromi KANJI¹, Tetsutaro KIMACHI¹, Noboru HAYAMA², Jun HAGINAKA³

¹*School of Pharmacy and Pharmaceutical Sciences, Mukogawa Women's University, Japan;*

²*Osaka Medical and Pharmaceutical University, Japan;* ³*Institute for Biosciences, Mukogawa Women's University, Japan*

- P-22 Peptide probes containing a non-hydrolyzable phosphotyrosine-mimetic residue for tyrosine phosphatome analysis

Tomoya NIINAE¹, Kazuya TSUMAGARI^{1,2}, Koshi IMAMI¹, Naoyuki SUGIYAMA¹, Shinya OISHI^{3,4}, Hiroaki OHNO³, Akira OTAKA⁵, Yasushi ISHIHAMA¹

¹*Department of Molecular and Cellular BioAnalysis, Graduate School of Pharmaceutical Sciences, Kyoto University, Japan;* ²*Eisai-Keio Innovation Laboratory for Dementia, Center for Integrated Medical Research, Keio University School of Medicine, Japan;* ³*Laboratory of Bioorganic Medical Chemistry & Chemogenomics, Graduate School of Pharmaceutical Sciences, Kyoto University, Japan;* ⁴*Kyoto Pharmaceutical University, Japan;* ⁵*Institute of Biomedical Sciences and Graduate School of Pharmaceutical Sciences, Tokushima University, Japan*

- P-23 Novel one-step isolation method for protein C-terminal peptides with ligand exchange chromatography

Hiroshi NISHIDA, Yasushi ISHIHAMA

Graduate School of Pharmaceutical Sciences, Kyoto University, Japan

- P-24 Study of *copoly*(poly(ethylene glycol) diacrylate/poly(ethylene glycol) acrylate) hydrogel as a molecularly imprinted polymer for cytochrome c recognition

Chenchen LIU, Takuya KUBO, Koji OTSUKA

Graduate School of Engineering, Kyoto University, Kyoto, Japan

- P-25 Separation of immunoglobulin family with newly developed separation media

Yasuo MOCHIZUKI, Takuya KUBO, Tetsuya TANIGAWA, Koji OTSUKA

Department of Material Chemistry, Graduate School of Engineering, Kyoto University, Japan

- P-26 Selective separation of nucleotides using ZnO nanowire decorated microtubes

Katsuya NAKANO¹, Eisuke KANAO^{2,3}, Takuro HOSOMI⁴, Takeshi YANAGIDA⁴, Jun ADACHI^{2,3}, Yasushi ISHIHAMA^{2,3}, Takuya KUBO¹, Koji OTSUKA¹

¹*Graduate School of Engineering, Kyoto University, Japan;* ²*Graduate School of Pharmaceutical Sciences, Kyoto University, Japan;* ³*Center for Drug Design Research, National Institutes of Biomedical Innovation, Health and Nutrition, Japan;* ⁴*Graduate School of Engineering, Tokyo University, Japan*

- P-27 Development of a two-dimensional LC-MS/MS system for the selective determination of intrinsic chiral amino acids and application to mammalian plasma
Chiharu ISHII¹, Yukiko SHIMIZU², Takeyuki AKITA¹, Masashi MITA³, Tomomi IDE⁴, Tadashi OKAMURA², Kenji HAMASE¹
¹Graduate School of Pharmaceutical Sciences, Kyushu University, Fukuoka, Japan; ²National Center for Global Health and Medicine (NCGM), Tokyo, Japan; ³KAGAMI Inc., Osaka, Japan; ⁴Graduate School of Medical Sciences, Kyushu University, Fukuoka, Japan
- P-28 Development of a highly sensitive and selective three-dimensional HPLC system for the determination of chiral amino acids in carbonaceous meteorites
Aogu FURUSHO¹, Chiharu ISHII¹, Takeyuki AKITA¹, Masashi MITA², Hiroshi NARAOKA³, Kenji HAMASE¹
¹Graduate School of Pharmaceutical Sciences, Kyushu University, Fukuoka, Japan; ²KAGAMI, Inc., Osaka, Japan; ³Department of Earth and Planetary Sciences, Kyushu University, Fukuoka, Japan
- P-29 Enantioselective determination of lactate in various food samples including Japanese traditional amber rice vinegar and the developmental changes during fermentation processes
Chin-Ling HSIEH¹, Chiharu ISHII¹, Takeyuki AKITA¹, Akira FUJII², Masanobu NAGANO², Masashi MITA³, Jen-Ai LEE⁴, Kenji HAMASE¹
¹Graduate School of Pharmaceutical Sciences, Kyushu University, Fukuoka, Japan; ²Sakamoto Kurozu, Inc., Kagoshima, Japan; ³KAGAMI, Inc., Osaka, Japan; ⁴School of Pharmacy, Taipei Medical University, Taipei, Taiwan
- P-30 Development of a high-performance three-dimensional HPLC system for the determination of Ser and Asp enantiomers in human physiological fluids
Masataka KAJIWARA¹, Takeyuki AKITA¹, Chiharu ISHII¹, Masashi MITA², Tomomi IDE³, Kenji HAMASE¹
¹Graduate School of Pharmaceutical Sciences, Kyushu University, Fukuoka, Japan; ²KAGAMI, Inc., Osaka, Japan; ³Graduate School of Medical Sciences, Kyushu University, Fukuoka, Japan
- P-31 Enantioselective determination of lactate, hydroxybutyrates and malate in mammalian plasma using a two-dimensional chiral HPLC system
Hsin-Miao TSAI¹, Chin-Ling HSIEH¹, Chiharu ISHII¹, Takeyuki AKITA¹, Masashi MITA², Jen-Ai LEE³, Kenji HAMASE¹
¹Graduate School of Pharmaceutical Sciences, Kyushu University, Fukuoka, Japan; ²KAGAMI, Inc., Osaka, Japan; ³School of Pharmacy, Taipei Medical University, Taipei, Taiwan