

# Conference Program

Wednesday, August 21, 2024

■ Registration Open 11:00

■ Opening 12:30-12:45

■ Oral Presentation

Session 1 12:45-14:20

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Chair: Jean-Pierre MOTHET, Jumpei SASABE

L01 12:45-13:10

ROLE OF D-SERINE IN THE GASTROINTESTINAL TRACT IN HEALTH AND DISEASE

Jean-Pierre MOTHET

*'Biophotonics and Synapse Physiopathology' (BioPsy) Team, Laboratoire LuMin, Université Paris-Saclay, CNRS, ENS Paris Saclay, FRANCE*

L02 13:10-13:35

MICROBIAL CHIRAL CONVERSION OF AMINO ACIDS MODULATES HOST STRESS RESPONSES TO SYMBIOTIC MICROBES

Akina OSAKI<sup>1</sup>, Kenichiro KINOCHI<sup>1</sup>, Shintaro YAMAGUCHI<sup>1</sup>, Takanori KANAI<sup>1</sup>, Masato YASUI<sup>1</sup>, Jumpei SASABE<sup>1,2</sup>

*<sup>1</sup>Keio University School of Medicine, JAPAN, <sup>2</sup>WPI-Bio2Q, Keio University, JAPAN*

L03 13:35-14:00

D-ALANINE, A METABOLITE OF GUT MICROBIOTA, INHIBITS INTESTINAL INFLAMMATION BY SUPPRESSING THE ACTIVATION OF MACROPHAGES

Yuji NAITO<sup>1</sup>, Hikaru HASHIMOTO<sup>2</sup>, Tomohisa TAKAGI<sup>2,3</sup>

*<sup>1</sup>Department of Human Immunology and Nutrition Science, <sup>2</sup>Department of Molecular Gastroenterology and Hepatology, <sup>3</sup>Department for Medical Innovation and Translational Medical Science, Kyoto Prefectural University of Medicine, JAPAN*

L04 14:00-14:20

BIOLOGICAL EFFECTS OF THE LOSS OF HOMOCHIRALITY IN A MULTICELLULAR ORGANISM

Agnes BANRETI<sup>1</sup>, Shayon BHATTACHARYA<sup>2</sup>, Frank WIEN<sup>3</sup>, Damien THOMPSON<sup>2</sup>, Stéphane NOSELLI

*<sup>1</sup>Université Côte d'Azur, CNRS, Inserm, Institut de Biologie Valrose, FRANCE, <sup>2</sup>Department of Physics, Bernal Institute, University of Limerick, IRELAND, <sup>3</sup>DISCO Beamline, Synchrotron SOLEIL, FRANCE*

Session 2 14:35-16:10

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Chair: Marco NARDINI, Yasuhisa ASANO

L05 14:35-15:00

BIOCHEMICAL MODULATION OF D-ASPARTATE CATABOLISM BY TARGETING HUMAN D-ASPARTATE OXIDASE

Marco NARDINI<sup>1</sup>, Andrea CITARELLA<sup>2</sup>, Miriam CAVINATO<sup>1</sup>, Valentina RABATTONI<sup>3</sup>, Haidi SHEHI<sup>1</sup>, Daniele PASSARELLA<sup>1</sup>, Loredano POLLEGIONI<sup>3</sup>

<sup>1</sup>Dept. of Biosciences, University of Milan, ITALY, <sup>2</sup>Dept. of Chemistry, University of Milan, ITALY, <sup>3</sup>The Protein Factory 2.0 lab, DBSV, University of Insubria, ITALY

L06 15:00-15:25

PREPARATIVE IMINE SYNTHESIS BY VARIANTS OF D-AMINO ACID OXIDASE FROM PORCINE KIDNEY

Yasuhisa ASANO

*Toyama Prefectural University, JAPAN*

L07 15:25-15:50

NOVEL METABOLIC PATHWAYS OF D-AMINO ACID BY MULTIFUNCTIONAL ENZYMES

Tetsuya MIYAMOTO

*Graduate School of Pharmaceutical Sciences, Kitasato University, JAPAN*

L08 15:50-16:10

ISOLATION OF HIGH D-AMINO ACID-PRODUCING LACTIC ACID BACTERIA BY AN ENZYMATIC SCREENING METHOD

Vi Le PHAM, Shouji TAKAHASHI

*Materials Science and Bioengineering, Nagaoka University of Technology, JAPAN*

■ **Poster Presentation 1 (Odd Number) 16:30-18:00**

■ **Committee Meeting (Domestic) 18:10-19:10**

The D-Amino Acid Research Society (JAPAN)

Thursday, August 22, 2024

■ Oral Presentation

Session 3 9:00-10:05

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Chair: Shouji TAKAHASHI, Masumi KATANE

L09 9:00-9:25

EXPLORING *CAENORHABDITIS ELEGANS* GUT MICROBIAL COLONIZATION AND THE EFFECTS OF INTESTINAL D-AMINO ACID OXIDASE AND D-ASPARTATE OXIDASE

Yasuaki SAITOH<sup>1,2</sup>, Tian (Autumn) QIU<sup>1</sup>

<sup>1</sup>Department of Chemistry, Michigan State University, USA, <sup>2</sup>Department of Pharmaceutical Life Sciences, Kitasato University, JAPAN

L10 9:25-9:45

MODULATION OF D-ASPARTATE CATABOLISM IN THE HUMAN BRAIN

Valentina RABATTONI<sup>1</sup>, Silvia SACCHI<sup>1</sup>, Zoraide MOTTA<sup>1</sup>, Gianluca MOLLA<sup>1</sup>, Elisa MAFFIOLI<sup>2</sup>, Gabriella TEDESCHI<sup>2</sup>, Loredano POLLEGIONI<sup>1</sup>

<sup>1</sup>Department of Biotechnology and Life Sciences, University of Insubria, ITALY, <sup>2</sup>Department of Veterinary Medicine and Animal Science, University of Milan, ITALY

L11 9:45-10:05

EXPLORING THE METABOLISM OF SERINE ENANTIOMERS: MULTI-OMICS INSIGHTS INTO ALZHEIMER'S DISEASE PATHOGENESIS

Elisa MAFFIOLI<sup>1,2</sup>, Valentina RABATTONI<sup>3</sup>, Farida TRIPODI<sup>4</sup>, Simona NONNIS<sup>1,6</sup>, Zoraide MOTTA<sup>3</sup>, Silvia SACCHI<sup>3</sup>, Anna Maria RINALDI<sup>5</sup>, Paola COCCETTI<sup>4</sup>, Loredano POLLEGIONI<sup>3</sup>, Gabriella TEDESCHI<sup>1,2,6</sup>

<sup>1</sup>Department of Veterinary Medicine and Animal Sciences, University of Milano, ITALY, <sup>2</sup>CIMAINA, University of Milano, ITALY, <sup>3</sup>Department of Biotechnology and Life Sciences, University of Insubria, ITALY, <sup>4</sup>Department of Biotechnology and Biosciences, University of Milano-Bicocca, ITALY, <sup>5</sup>Department of System Medicine, University of Rome "Tor Vergata", ITALY, <sup>6</sup>CRC "Innovation for Well-Being and Environment" (I-WE), University of Milano, ITALY

Session 4 10:20-11:30

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Chair: Tomonori KIMURA, Yasunori IWATA

L12 10:20-10:45

EXPECTATIONS FOR D-SERINE IN PREDICTING PROGNOSIS OF DIABETIC KIDNEY DISEASE

Yosuke HIRAKAWA

Division of Nephrology and Endocrinology, the University of Tokyo Hospital, JAPAN

L13 10:45-11:10  
REGULATION OF KIDNEY AND VIRAL DISEASES USING D-AMINO ACIDS

Tomonori KIMURA

*Osaka University, Graduate School of Medicine, JAPAN*

L14 11:10-11:30  
GUT MICROBIOTA CONTRIBUTES TO THE PATHOGENESIS OF  
PROGRESSIVE KIDNEY INJURY

Yasunori IWATA<sup>1</sup>, Yusuke NAKADE<sup>2</sup>, Megumi OSHIMA<sup>1</sup>, Hoang T LINH<sup>1</sup>, Takashi  
WADA<sup>1</sup>

<sup>1</sup>*Nephrology and Rheumatology, Kanazawa University, JAPAN,* <sup>2</sup>*Laboratory Medicine,  
Kanazawa University Hospital, JAPAN*

■ **General Meeting of The D-Amino Acid Research Society (JAPAN) 11:30-11:50**

Chair: Tohru YOSHIMURA (in Japanese)

■ **Committee Meeting (International) 11:40-13:00**

■ **Poster Presentation 2 (Even Number) 13:00-14:30**

■ **Oral Presentation**

Session 5 14:45-15:55

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Chair: Francesco ERRICO, Kiyoshi FUKUI

L15 14:45-15:10  
INVOLVEMENT OF D-ASPARTATE METABOLISM IN  
NEURODEVELOPMENTAL DISORDERS

Francesco ERRICO<sup>1,2</sup>, Alessandro USIELLO<sup>2,3</sup>

<sup>1</sup>*Department of Agricultural Sciences, University of Naples "Federico II", ITALY,* <sup>2</sup>*CEINGE  
Biotecnologie Avanzate "Franco Salvatore", ITALY,* <sup>3</sup>*Department of Environmental, Biological  
and Pharmaceutical Sciences and Technologies, University of Campania "L. Vanvitelli", ITALY*

L16 15:10-15:35  
HUMAN HEALTH FRONTIER RESEARCH ON D-AMINO ACID OXIDASE:  
FROM BIOCHEMISTRY, PATHOPHYSIOLOGY TO THERAPEUTICS

Kiyoshi FUKUI

*Institute for Enzyme Research, Tokushima University, JAPAN*

L17 15:35-15:55  
D-SERINE/GLYCINE-BINDING RECEPTOR GLUDS DO NOT SERVE AS ION  
CHANNELS

Masayuki ITOH<sup>1</sup>, Laura PIOT<sup>2</sup>, Laetitia MONY<sup>2</sup>, Pierre PAOLETTI<sup>2</sup>, Wataru

KAKEGAWA<sup>1</sup>, Michisuke YUZAKI<sup>1</sup>

*<sup>1</sup>Department of Physiology, Keio University School of Medicine (KUSM), JAPAN, <sup>2</sup>Institut de Biologie de l'Ecole Normale Supérieure (IBENS), Ecole Normale Supérieure, Université PSL, CNRS, INSERM, FRANCE*

Session 6 16:05-17:10

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Chair: Toru NISHIKAWA, Hisashi MORI

L18 16:05-16:30

D-SERINE AND SCHIZOPHRENIA

Toru NISHIKAWA<sup>1,2</sup>, Masakazu UMINO<sup>1</sup>, Asami UMINO<sup>1</sup>, Yuji KIUCHI<sup>1</sup>

*<sup>1</sup>Graduate School of Medicine, Showa University, JAPAN, <sup>2</sup>Kyoto Prefectural University of Medicine, JAPAN*

L19 16:30-16:50

ROLE OF SERINE RACEMASE AND D-SERINE IN MOUSE NEUROLOGICAL DISORDER MODELS

Hisashi MORI, Ran INOUE

*Department of Molecular Neuroscience, Faculty of Medicine and Research Center for Idling Brain Science, University of Toyama, JAPAN*

L20 16:50-17:10

NEURAL DIFFERENTIATION DRIVES SERINE ISOMERIZATION AND RESTRAINS ONE-CARBON METABOLISM IN IMMATURE CELLS

Masataka SUZUKI<sup>1,2</sup>, Kenichiro ADACHI<sup>1</sup>, Pattama WIRIYASERMUKUL<sup>3,4</sup>, Mariko FUKUMURA<sup>1</sup>, Ryota TAMURA<sup>1</sup>, Yoshinori HIRANO<sup>1</sup>, Yumi AIZAWA<sup>5</sup>, Tetsuya MIYAMOTO<sup>6</sup>, Sakiko TANIGUCHI<sup>1</sup>, Hiroshi HOMMA<sup>6</sup>, Masahiro SUGIMOTO<sup>5</sup>, Shushi NAGAMORI<sup>3</sup>, Masato YASUI<sup>1</sup>, Jumpei SASABE<sup>1</sup>

*<sup>1</sup>Keio University, JAPAN, <sup>2</sup>Brigham and Women's Hospital, USA, <sup>3</sup>The Jikei University School of Medicine, JAPAN, <sup>4</sup>Iwate University, JAPAN, <sup>5</sup>Tokyo Medical University, JAPAN, <sup>6</sup>Kitasato University, JAPAN*

Session 7 17:20-18:35

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Chair: Tadashi TOYAMA, Tomohisa SUJINO

L21 17:20-17:45

METABOLIC CHANGES OF CEREBRAL D-AMINO ACIDS IN PRIMARY BRAIN TUMOR

Masashi KINOSHITA<sup>1</sup>, Yusuke NAKADE<sup>2,3</sup>, Masashi MITA<sup>4</sup>, Takashi WADA<sup>3</sup>, Mitsutoshi NAKADA<sup>1</sup>

*<sup>1</sup>Department of Neurosurgery, Kanazawa University, JAPAN, <sup>2</sup>Department of Clinical Laboratory, Kanazawa University, JAPAN, <sup>3</sup>Department of Nephrology and Rheumatology,*

*Kanazawa University, JAPAN, <sup>4</sup>KAGAMI, Inc., JAPAN*

L22 17:45-18:10

THE IMPACT OF D-AMINO ACIDS IN GASTRIC CANCER

Tomohisa SUJINO<sup>1</sup>, Kai TSUGARU<sup>2</sup>, Shohei SUZUKI<sup>2</sup>, Kentaro MIYAMOTO<sup>2,3</sup>,  
Jumpei SASABE<sup>2</sup>, Masashi MITA<sup>4</sup>, Takanori KANAI<sup>2</sup>

<sup>1</sup>*Department of Diagnostic and Therapeutic Endoscopy, Keio University School of Medicine, JAPAN,* <sup>2</sup>*Department of Gastroenterology, Keio University School of Medicine, JAPAN,* <sup>3</sup>*Miyarisan Pharm Co., Ltd., JAPAN,* <sup>4</sup>*KAGAMI, Inc., JAPAN*

L23 18:10-18:35

DEVELOPMENT OF A NOVEL BLOOD MARKER PANEL INCLUDING D-  
ASPARAGINE FOR UROTHELIAL CARCINOMA DIAGNOSIS

Atsunari KAWASHIMA<sup>1</sup>, Akinaru YAMAMOTO<sup>1</sup>, Tomonori KIMURA<sup>2</sup>, Masashi  
MITA<sup>3</sup>, Kentaro JINGUSHI<sup>4</sup>, Shunsuke INOBUCHI<sup>1</sup>, Yuki HORIBE<sup>1</sup>, Nesrine SASSI<sup>1</sup>,  
Toshihiro UEMURA<sup>1</sup>, Masaru TANI<sup>1</sup>, Akihiro YOSHIMURA<sup>1</sup>, Toshiki OKA<sup>1</sup>, Yohei  
OKUDA<sup>1</sup>, Gaku YAMAMICHI<sup>1</sup>, Takuji HAYASHI<sup>1</sup>, Yu ISHIZUYA<sup>1</sup>, Yoshiyuki  
YAMAMOTO<sup>1</sup>, Taigo KATO<sup>1</sup>, Koji HATANNO<sup>1</sup>, Norio NONOMURA<sup>1</sup>

<sup>1</sup>*Osaka University Graduate School of Medicine, Department of Urology, JAPAN,* <sup>2</sup>*Osaka University Graduate School of Medicine, Department of Nephrology, JAPAN,* <sup>3</sup>*KAGAMI, Inc., JAPAN,* <sup>4</sup>*Graduate School of Pharmaceutical Sciences Osaka University, Laboratory of Molecular and Cellular Physiology, JAPAN*

Friday, August 23, 2024

■ Oral Presentation

Session 8 9:00-10:40

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Chair: Herman WOLOSKER, Shushi NAGAMORI

L24 9:00-9:25

REGULATION OF BRAIN D-SERINE BY THE BLOOD-BRAIN BARRIER

Herman WOLOSKER

*Technion-Israel Institute of Technology, Rappaport Faculty of Medicine and Research Institute,  
Department of Biochemistry, the Laura and Isaac Perlmutter Metabolomics Center, ISRAEL*

L25 9:25-9:50

EXOGENOUS AND ENDOGENOUS REGULATION OF GLUCOSE  
METABOLISM BY D-SERINE

Siegfried USSAR

*Research Unit Adipocytes and Metabolism, Helmholtz Diabetes Center, Helmholtz Munich,  
GERMANY*

L26 9:50-10:15

A MULTI-HIERARCHICAL APPROACH REVEALS D-SERINE AS A HIDDEN  
SUBSTRATE OF WELL-KNOWN TRANSPORTERS

Shushi NAGAMORI

*Center for SI Medical Research, The Jikei University School of Medicine, JAPAN*

L27 10:15-10:40

EFFECTS OF D-ALANINE INTAKE ON AMINO ACID METABOLISM IN  
HEALTHY ADULTS

Megumi OSHIMA<sup>1</sup>, Yusuke NAKADE<sup>2</sup>, Masashi MITA<sup>3</sup>, Yasunori IWATA<sup>1</sup>, Takashi  
WADA<sup>1</sup>

*<sup>1</sup>Department of Nephrology and Rheumatology, Kanazawa University, JAPAN, <sup>2</sup>Department of  
Clinical Laboratory, Kanazawa University, JAPAN, <sup>3</sup>KAGAMI, Inc., JAPAN*

Session 9 10:55-12:10

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Chair: Loredano POLLEGIONI, Tohru YOSHIMURA

L28 10:55-11:20

ONE COIN, TWO SIDES: THE SERINOSOME

Loredano POLLEGIONI

*The Protein Factory 2.0, Department of Biotechnology and Life Sciences, University of Insubria,  
ITALY*

L29 11:20-11:45

VITAMIN B6 ENZYMES INVOLVED IN D-AMINO ACID METABOLISM

Tohru YOSHIMURA<sup>1,2</sup>, Tomokazu ITO<sup>2</sup>

*<sup>1</sup>Research Organization of Science and Technology, Ritsumeikan University, JAPAN, <sup>2</sup>Graduate School of Bioagricultural Sciences, Nagoya University, JAPAN*

L30 11:45-12:10

PEPTIDE EPIMERASES PARTICIPATING IN BIOSYNTHESIS OF MICROBIAL  
NATURAL PRODUCTS

Tohru DAIRI

*Graduate School of Engineering, Hokkaido University, JAPAN*

■ **City Tour (Kanazawa) 13:15-18:00**

■ **Symposium Dinner 18:00-20:00**

Saturday, August 24, 2024

■ Oral Presentation

Session 10 9:00-10:35

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Chair: Janine MAUZEROLL, Kenji HAMASE

L31 9:00-9:25

COUPLED COLUMNS, TWO-DIMENSIONAL LIQUID CHROMATOGRAPHY AND ION-MOBILITY MASS SPECTROMETRY AS A TOOLBOX FOR COMPREHENSIVE D-AMINO ACID ANALYSIS

Michael LÄMMERHOFER<sup>1</sup>, Ryan KARONGO<sup>1</sup>, Simon JAAG<sup>1</sup>, Feiyang LI<sup>1</sup>, Cornelius KNAPPE<sup>1</sup>, Jeannie HORAK<sup>2</sup>

<sup>1</sup>Institute of Pharmaceutical Sciences, University of Tübingen, GERMANY, <sup>2</sup>Dr. von Hauner Children's Hospital, Ludwig-Maximilians-University Munich, GERMANY

L32 9:25-9:50

D-AMINO ACID DETECTION USING ELECTROCHEMICAL SENSING

Janine MAUZEROLL

Chemistry Department, McGill University, CANADA

L33 9:50-10:15

AN ULTRAFAST SIMULTANEOUS ANALYTICAL METHOD FOR D- AND L-AMINO ACIDS USING DERIVATIZATION LC-MS/MS AND ITS APPLICATION TO FISH SAUCE SAMPLE ANALYSIS

Kenichiro TODOROKI<sup>1</sup>, Luu HONG QUY<sup>1</sup>, Ryota ISOBE<sup>1</sup>, Eiji SUGIYAMA<sup>1,2</sup>, Sachise KARAKAWA<sup>3</sup>, Masashi HARADA<sup>3</sup>, Daigo IWAHATA<sup>3</sup>, Aogu FURUSHO<sup>1</sup>, Hajime MIZUNO<sup>2</sup>, Akira NAKAYAMA<sup>3</sup>

<sup>1</sup>School of Pharmaceutical Sciences, University of Shizuoka, JAPAN, <sup>2</sup>Faculty of Pharmacy, Meijo University, JAPAN, <sup>3</sup>Research Institute for Bioscience Products & Fine Chemicals, Ajinomoto Co., Inc., JAPAN

L34 10:15-10:35

ANALYSIS OF D-AMINO ACIDS VIA CHIRAL SEPARATIONS FOR UNDERSTANDING ISLET BIOLOGY

Shuangshuang CHEN<sup>1</sup>, Cindy J. LEE<sup>1</sup>, Tian A. QIU<sup>2</sup>, Stanislav S. RUBAKHIN<sup>1</sup>, Jonathan V. SWEEDLER<sup>1</sup>

<sup>1</sup>Department of Chemistry and the Beckman Institute for Advanced Science and Technology, University of Illinois Urbana Champaign, USA, <sup>2</sup>Department of Chemistry, Michigan State University, USA

Chair: Jonathan V. SWEEDLER, Takumi TAKATA

L35 10:50-11:10

DEVELOPMENT OF AN ANALYTICAL METHOD DISCRIMINATING D-ASPARAGINE/GLUTAMINE AND D-ASPARTIC ACID/GLUTAMIC ACID RESIDUES IN PROTEINS

Chiharu ISHII<sup>1</sup>, Kanako TAKESHIMA<sup>1</sup>, Takeyuki AKITA<sup>1</sup>, Masashi MITA<sup>2</sup>, Yusuke MURAKAMI<sup>3</sup>, Tadashi UEDA<sup>1</sup>, Kenji HAMASE<sup>1</sup>

<sup>1</sup>Graduate School of Pharmaceutical Sciences, Kyushu University, JAPAN, <sup>2</sup>KAGAMI, Inc., JAPAN, <sup>3</sup>Graduate School of Medical Sciences, Kyushu University, JAPAN

L36 11:10-11:35

AGE ESTIMATION OF BALEEN WHALES BASED ON ASPARTIC ACID RACEMIZATION TECHNIQUE USING UPLC-MS/MS MEASUREMENT COMBINED WITH DEUTERIUM-CHLORIDE HYDROLYSIS

Genta YASUNAGA, Satoko INOUE, Takeharu BANDO, Takashi HAKAMADA, Yoshihiro FUJISE

*Institute of Cetacean Research, JAPAN*

L37 11:35-12:00

IDENTIFICATION OF RACEMIZATION IN ASPARAGINE AND ASPARTATE IN AGED HUMAN LENS gammaS-CRYSTALLIN

Kirsten LAMPI<sup>1</sup>, Kate HALVERSON-KOLKIND<sup>1</sup>, Victoria HALLS<sup>2</sup>, Larry DAVID<sup>2</sup>

<sup>1</sup>Biomaterials and Biomedical Sciences, Oregon Health & Sciences University, USA, <sup>2</sup>Chemical Physiology and Biochemistry, Oregon Health & Sciences University, USA

L38 12:00-12:25

CHARACTERIZING D-AMINO ACID AND ISOASPARTATE CONTAINING NEUROPEPTIDES

Jonathan V. SWEEDLER, Samuel OKYEM, Timothy J. TRINKLEIN, Stanslav S. RUBAKHIN

*Department of Chemistry and the Beckman Institute, University of Illinois at Urbana-Champaign, USA*

■ Closing 12:25-12:40

## ■ Poster Presentation

**Odd Number (16:30-18:00, Wednesday, August 21)**

**Even Number (13:00-14:30, Thursday, August 22)**

- P01 SCREENING FOR CAT RENAL DISEASES BY ENZYMATIC MEASUREMENT OF URINARY D-AMINO ACIDS  
Takeshi KURONO<sup>1</sup>, Yuta HIROSE<sup>2</sup>, Tomokazu ITO<sup>2</sup>, Yasuhiro HEISHIMA<sup>3</sup>, Sota IMAIIDA<sup>3</sup>, Mamoru WAKAYAMA<sup>4</sup>, Tohru YOSHIMURA<sup>1,2,4</sup>  
*<sup>1</sup>D-Amino Acid Laboratory Co., Ltd., JAPAN, <sup>2</sup>Graduate School of Bioagricultural Sciences, Nagoya University, JAPAN, <sup>3</sup>Heisei Veterinary Hospital, JAPAN, <sup>4</sup>Faculty of Life Sciences, Ritsumeikan University, JAPAN*
- P02 ELUCIDATION OF THE MECHANISM OF D-AMINO ACID OXIDASE (DAO) EXPRESSION  
Hiroki OHTANI<sup>1,2</sup>, Yusuke NAKADE<sup>1,2</sup>, Yasunori IWATA<sup>1</sup>, Yuta YAMAMURA<sup>1</sup>, Minoru TERASHIMA<sup>3</sup>, Akinori HARA<sup>1</sup>, Takeshi SUZUKI<sup>3</sup>, Takashi WADA<sup>1</sup>  
*<sup>1</sup>Department of Nephrology and Rheumatology, Kanazawa University, JAPAN, <sup>2</sup>Department of Clinical Laboratory, Kanazawa University, JAPAN, <sup>3</sup>Division of Functional Genomics, Cancer Research Institute, Kanazawa University, JAPAN*
- P03 THEORETICAL ANALYSIS OF D-SERINE AND D-ASPARAGINE AS BIOMARKERS FOR GLOMERULAR FILTRATION RATE  
Ryo TANAKA<sup>1</sup>, Tomonori KIMURA<sup>2,3</sup>, Yoko HIGA-MAEKAWA<sup>1</sup>, Shigeaki NAKAZAWA<sup>1</sup>, Shinsuke SAKAI<sup>2</sup>, Masayuki MIZUI<sup>2</sup>, Yoichi KAKUTA<sup>1</sup>, Shiro TAKAHARA<sup>3</sup>, Yoshitaka ISAKA<sup>2</sup>, Norio NONOMURA<sup>1</sup>  
*<sup>1</sup>Department of Urology, Osaka University Graduate School of Medicine, JAPAN, <sup>2</sup>Department of Nephrology, Osaka University Graduate School of Medicine, JAPAN, <sup>3</sup>Department of Renal Transplantation, Kansai Medical Hospital, JAPAN*
- P04 IMPACT OF D-AMINO ACID METABOLIC ENZYME DEFICIENCY ON CANCER DEVELOPMENT—DLBCL ONSET AND GENE EXPRESSION ANALYSIS IN DDO-KNOCKOUT MICE—  
Yusuke NAKADE<sup>1,2</sup>, Yasunori IWATA<sup>1</sup>, Kenichi HARADA<sup>3</sup>, Yasuharu SATO<sup>4</sup>, Masashi MITA<sup>5</sup>, Kenji HAMASE<sup>6</sup>, Ryuichi KONNO<sup>7</sup>, Mayo HAYASHI<sup>1,2</sup>, Taku KOBAYASHI<sup>1</sup>, Yuta YAMAMURA<sup>1</sup>, Tadashi TOYAMA<sup>1</sup>, Atsushi TAJIMA<sup>8</sup>, Takashi WADA<sup>1</sup>  
*<sup>1</sup>Department of Nephrology and Rheumatology, Kanazawa University, JAPAN, <sup>2</sup>Department of Clinical Laboratory, Kanazawa University, JAPAN, <sup>3</sup>Department of Human Pathology, Kanazawa University, JAPAN, <sup>4</sup>Department of Molecular Hematopathology, Okayama University, JAPAN, <sup>5</sup>KAGAMI, Inc., JAPAN, <sup>6</sup>Graduate School of Pharmaceutical Sciences,*

*Kyushu University, JAPAN, <sup>7</sup>Department of Pharmaceutical Sciences, International University of Health and Welfare, JAPAN, <sup>8</sup>Department of Bioinformatics and Genomics, Kanazawa University, JAPAN*

P05 CONTRIBUTIONS OF D-SERINE TO THE PATHOLOGIES OF ALZHEIMER'S DISEASE IN MOUSE MODELS

Xiance NI<sup>1,2</sup>, Ran INOUE<sup>1,3</sup>, Yi WU<sup>1,2</sup>, Tomoyuki YOSHIDA<sup>1,3</sup>, Keisuke YAKU<sup>4</sup>, Takashi NAKAGAWA<sup>4,5</sup>, Takashi SAITO<sup>6,7</sup>, Takaomi C SAIDO<sup>6</sup>, Keizo TAKAO<sup>3,8</sup>, Hisashi MORI<sup>1,3</sup>

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P06 EFFECT OF HUMAN PHOSPHOSERINE PHOSPHATASE ASN133SER VARIANT ON SERINE SYNTHESIS: A CASE STUDY

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P07 INHIBITORS AND PROTACS: TWO ALTERNATIVE STRATEGIES TO MODULATE ENDOGENOUS D-ASPARTATE TARGETING D-ASPARTATE OXIDASE

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P08 SUBCELLULAR LOCALIZATION OF D-AMINO ACID OXIDASE IN THE CHOROID PLEXUS EPITHELIAL CELLS

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- P09 MODIFICATION OF THE SUBSTRATE SPECIFICITY OF A YEAST D-ASPARTATE OXIDASE TO A D-HISTIDINE-SPECIFIC OXIDASE  
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Noah A. BENDER, Stanislav RUBAKHIN, Jonathan V. SWEEDLER  
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- P11 TWO FACTORS INVOLVED IN THE PRESSURE TOLERANCE OF ALANINE RACEMASE IN GENAS *SHEWANELLA*  
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Yutaka SADAKANE, Otoha HONDA, H. KINOSHITA, S. MORIMOTO  
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Ryo TANAKA<sup>1</sup>, Shigeaki NAKAZAWA<sup>1</sup>, Shinsuke SAKAI<sup>2</sup>, Shiro TAKAHARA<sup>3</sup>, Masashi MITA<sup>4</sup>, Kenji HAMASE<sup>5</sup>, Masayuki MIZUI<sup>2</sup>, Yoshitaka ISAKA<sup>2</sup>, Tomonori KIMURA<sup>2</sup>, Norio NONOMURA<sup>1</sup>

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- P16 RACEMIZATION OF SUCCINIMIDE INTERMEDIATES FORMED IN PEPTIDE CHAINS CATALYZED BY HYDROGEN PHOSPHATE ION: A COMPUTATIONAL STUDY

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- P17 MOLECULAR RECOGNITION MECHANISM OF BASIC D-AMINO ACIDS BY THE TRANSCRIPTION FACTOR DLCR FROM *PSEUDOMONAS PUTIDA*

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- P18 PROTECTIVE ROLE OF D-SERINE IN THE NMDA- AND CUPRIZONE-INDUCED AXONAL DAMAGE

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- P19 GLIAL D-SERINE UNDERLIES SYNAPTIC ELIMINATION FOLLOWING BRAIN TRAUMA

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- P20 D-AMINO ACIDS AMELIORATE EXPERIMENTAL COLITIS BY INHIBITING GROWTH OF PROTEOBACTERIA

Satoko UMEDA<sup>1,2</sup>, Tomohisa SUJINO<sup>3</sup>, Kentaro MIYAMOTO<sup>2</sup>, Yusuke YOSHIMATSU<sup>2</sup>, Masashi MITA<sup>4</sup>, Takanori KANAI<sup>2</sup>

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- P21 IDENTIFICATION AND CHARACTERIZATION OF A D-BRANCHED-CHAIN

- AMINO ACIDS IMPORTER FROM *LACTOBACILLUS FERMENTUM*  
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Masae SEKINE, Masumi KATANE, Midori TANAKA, Hinata SEKIGUCHI, Tetsuya MIYAMOTO, Hiroshi HOMMA, Kumiko SAKAI-KATO  
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Takuya TSUKAHARA<sup>1</sup>, Yuta MUTAGUCHI<sup>2</sup>, Toshiyuki YAMAGUCHI<sup>1</sup>, Yuka TOGASHI<sup>3</sup>, Yosuke YAMAUCHI<sup>3</sup>, Mari MIYAMOTO<sup>1</sup>, Fumihiko SAKAI<sup>1</sup>, Shinji FUKUDA<sup>3</sup>, Shigeki KADA<sup>1</sup>  
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Sakiko TANIGUCHI<sup>1</sup>, Masato YASUI<sup>1</sup>, Takanori KANAI<sup>2</sup>, Jumpei SASABE<sup>1,2</sup>  
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Aogu FURUSHO<sup>1,2</sup>, Chiharu ISHII<sup>1</sup>, Takeyuki AKITA<sup>1</sup>, Mai OYAIDE<sup>1</sup>, Masashi

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P28 MAMMALS SUSTAIN AMINO ACID HOMOCHIRALITY AGAINST CHIRAL  
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P29 PLASMA D-ASPARAGINE AND THE D-/L-SERINE RATIO REFLECT CHRONIC  
KIDNEY DISEASES REGARDLESS OF PHYSIQUE IN CHILDREN

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P30 DEVELOPMENT OF A NOVEL METHOD BASED ON A CHEMICAL PROBE FOR  
THE IDENTIFICATION OF ISOMERIC AMINO ACIDS IN PROTEINS

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P31 RELATIONSHIPS OF NATTO INTAKE AND CHANGES IN KIDNEY FUNCTION

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Hiroaki MASUOKA<sup>7</sup>, Wataru SUDA<sup>7</sup>, Masashi MITA<sup>8</sup>, Kenji HAMASE<sup>9</sup>, Keishi  
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P32 UNVEILING L- AND D-AMINO ACID TRANSPORT: A RETURN TO BASICS FOR FUTURE ADVANCE

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P33 COMPUTATIONAL STUDIES ON EFFECTS OF D-ASP RESIDUES ON THE THREE-DIMENSIONAL STRUCTURES OF AMYLOID BETA TETRAMERS

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P34 DEVELOPMENT OF NOVEL PIRKLE-TYPE STATIONARY PHASES HAVING DIFFERENT LENGTH OF SPACERS FOR SELECTIVE ANALYSIS OF D-AMINO ACIDS

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P35 STRUCTURAL INVESTIGATIONS OF AMYLOID BETA PEPTIDE MONOMER INCLUDING D-ASPARTIC ACID RESIDUES BY LONG-TIME MOLECULAR DYNAMICS SIMULATIONS WITH CONTINUOUS SOLVENT MODEL

Tomoki NAKAYOSHI<sup>1</sup>, Ayato MIZUNO<sup>1</sup>, Eiji KURIMOTO<sup>1</sup>, Koichi KATO<sup>1,2</sup>, Akifumi ODA<sup>1,3</sup>

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P36 THREE DIMENSIONAL HPLC ANALYSIS OF D-SERINE, D-THREONINE AND D-ALLOTHREONINE IN THE MOUSE TISSUES AND PHYSIOLOGICAL FLUIDS

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- P37 COMPUTATIONAL STUDIES OF SUBSTRATE RECOGNITION MECHANISMS OF HUMAN PIMT BASED ON MOLECULAR DYNAMICS SIMULATIONS  
Tomoki NAKAYOSHI<sup>1,2</sup>, Koichi KATO<sup>1,3</sup>, Eiji KURIMOTO<sup>1</sup>, Akifumi ODA<sup>1,4</sup>  
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Riko OKABE<sup>1</sup>, Takeyuki AKITA<sup>1</sup>, Chiharu ISHII<sup>1</sup>, Masashi MITA<sup>2</sup>, Kenji HAMASE<sup>1</sup>  
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- P39 DEVELOPMENT OF A 3D-HPLC SYSTEM FOR THE DETERMINATION OF ALIPHATIC CHIRAL AMINO ACIDS IN THE PLASMA OF CHRONIC KIDNEY DISEASE PATIENTS  
Yuri NAGATA<sup>1</sup>, Takeyuki AKITA<sup>1</sup>, Chiharu ISHII<sup>1</sup>, Mai OYAIDE<sup>1</sup>, Masashi MITA<sup>2</sup>, Masataka IKEDA<sup>3</sup>, Tomomi IDE<sup>3</sup>, Tomonori KIMURA<sup>4</sup>, Kenji HAMASE<sup>1</sup>  
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- P40 TWO-DIMENSIONAL HPLC DETERMINATION OF ALANINE, ASPARTIC ACID, GLUTAMIC ACID AND SERINE ENANTIOMERS IN FERMENTED BEVERAGES  
Kyoka ODA<sup>1</sup>, Chiharu ISHII<sup>1</sup>, Akira FUJII<sup>2</sup>, Masashi MITA<sup>3</sup>, Takeyuki AKITA<sup>1</sup>, Masanobu NAGANO<sup>2</sup>, Jen-Ai LEE<sup>4</sup>, Kenji HAMASE<sup>1</sup>  
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Chiharu ISHII<sup>1</sup>, Mayumi YAMABE<sup>1</sup>, Yukiko SHIMIZU<sup>2</sup>, Takeyuki AKITA<sup>1</sup>, Masashi MITA<sup>3</sup>, Tadashi OKAMURA<sup>2</sup>, Kenji HAMASE<sup>1</sup>  
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- P42 EFFECT OF TEMPERATURE ON THE SEPARATION OF NBD-CHIRAL AMINO ACIDS USING A PIRKLE-TYPE STATIONARY PHASE AND ANALYSIS OF REAL-WORLD SAMPLES  
Takuho KOZONO<sup>1</sup>, Chiharu ISHII<sup>1</sup>, Masashi MITA<sup>2</sup>, Takeyuki AKITA<sup>1</sup>, Kenji

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