

Conference Program

Tuesday, September 2, 2014

◆ **Registration open** 10:30

◆ **Opening** 13:00-13:15 Chair: Ryuichi KONNO

13:00-13:05 Ryuichi KONNO

13:05-13:15 Kenji SODA

◆ **Oral Presentation**

Session 1 13:20-14:35

Chair: Jonathan V. SWEEDLER, Hiroshi HOMMA

13:20-13:45 L1 **D-ASPARTATE IS A NEUROTRANSMITTER IN *Aplysia***
Jonathan V. SWEEDLER, Amit PATEL, Nobutoshi OTA, Stanislav S. RUBAKHIN

13:45-14:05 L2 **THE ROLE AND BEHAVIOR OF D-AMINO ACIDS IN LIVING ORGANISMS**
Hiroshi HOMMA

14:05-14:20 L3 **ANALYSIS OF D-GLUTAMATE IN A SINGLE CELL VIA CAPILLARY ELECTROPHORESIS COUPLED WITH AN ONLINE SAMPLE PRECONCENTRATION METHOD**
Takayuki KAWAI, Amit PATEL, Stanislav S. RUBAKHIN, Jonathan V. SWEEDLER

14:20-14:35 L4 **ANALYSIS OF D-ALANINE VIA CAPILLARY ELECTROPHORESIS**
Nobutoshi OTA, Stanislav S. RUBAKHIN, Jonathan V. SWEEDLER

Session 2 14:55-16:10

Chair: Loredano POLLEGIONI, Tohru YOSHIMURA

14:55-15:20 L5 **CLASSIFICATION OF MUTATIONS IN HUMAN D-AMINO ACID OXIDASE RELATED TO HUMAN PATHOLOGIES**

Loredano POLLEGIONI, Pamela CAPPELLETTI, Laura CALDINELLI, Silvia SACCHI, Gianluca MOLLA

15:20-15:40 L6 **REACTION MECHANISM OF EUKARYOTIC SERINE RACEMASE**

Tohru YOSHIMURA, Mai MATSUOKA, Hisashi HEMMI, Tomokazu ITO

15:40-15:55 L7 **CREATION OF THERMOSTABLE NADP-DEPENDENT D-AMINO ACID DEHYDROGENASE BY SITE-DIRECTED MUTAGENESIS AND ITS APPLICATION**

Toshihisa OHSHIMA, Hironaga AKITA, Katsumi DOI, Hirokazu SUZUKI

15:55-16:10 L8 **USE OF NEWLY EVOLVED (R)-AMINE OXIDASE FROM PORCINE KIDNEY D-AMINO ACID OXIDASE IN THE DERACEMIZATION OF (R)-MBA**

Kazuyuki YASUKAWA, Shogo NAKANO, Yasuhisa ASANO

◆ **Poster Session** 16:30-18:00

P1 **CHARACTERIZATION OF D-AMINO ACID OXIDASE OF THE THERMOPHILIC BACTERIUM *Rubrobacter xylanophilus***

Makoto FURUKAWARA, Keishi OMAE, Namiho TADOKORO, Katsumasa ABE, Shouji TAKAHASHI, Yoshio KERA

P2 **THE ROLE OF HISTIDINE 56 IN THE SUBSTRATE SPECIFICITY OF THE YEAST *Cryptococcus humicola* D-ASPARTATE OXIDASE**

Kozue SHIMADA, Shunske NOZAWA, Masaru GOTO, Katsumasa ABE, Shouji TAKAHASHI, Yoshio KERA

P3 **PURIFICATION AND CHARACTERIZATION OF D-AMINO ACID OXIDASES FROM *Aspergillus* sp. GI-3**

Atsuo KARIYONE, Genta ISOHASHI, Shigekazu YANO, Kazuyoshi TAKAGI, Mamoru WAKAYAMA

P4 **PURIFICATION AND CHARACTERIZATION OF N-ACYL-D-AMINO ACID AMIDOHYDROLASE FROM *Pseudomonas fluorescens* Ser82**

Kohei IKEDA, Kaoru KASAKAWA, Shigekazu YANO, Kazuyoshi TAKAGI, Mamoru WAKAYAMA

- P5 **D-AMINO ACID OXIDASE IS INVOLVED IN THE OVARIAN DEVELOPMENT OF ASEXUAL PLANARIAN WORMS**
Hiroyuki TANAKA, Takanobu MAEZAWA, Yoshihiro NISHIMURA, Tetsuo ISHIDA, Kazuya KOBAYASHI, Yasutoshi AGATA
- P6 **INVOLVEMENT OF D-ASPARTATE OXIDASE IN SCHIZOPHRENIA AND IN PSYCHOTIC-LIKE SYMPTOMS INDUCED BY PHENCYCLIDINE IN MICE**
Francesco ERRICO, Francesco SFORAZZINI, Valeria D'ARGENIO, Felice IASEVOLI, Marta SQUILLACE, Giulia GUERRI, Francesco NAPOLITANO, Tiziana ANGRISANO, Anna DI MAIO, Daniela VITUCCI, Lorenzo CHIARIOTTI, Andrea DE BARTOLOMEIS, Francesco SALVATORE, Alessandro GOZZI, Alessandro USIELLO
- P7 **RAPID PURIFICATION OF D-GLUTAMATE-RICH BIO-NYLON POLYMER FROM JAPANESE FERMENTED SOYBEAN FOOD "Natto" AND ITS CHEMICAL TRANSFORMATION INTO ANTIMICROBIAL THERMOPLASTICS**
Makoto ASHIUCHI, Shota OIKE, Taisuke WAKAMATSU
- P8 **THE HUNT FOR D-ASPARTYL ENDOPEPTIDASE IN VARIOUS LIVING THINGS: VERTEBRATES, AQUATIC ANIMALS, AND PLANTS**
Tadatoshi KINOUCHI and Noriko FUJII
- P9 **OXIDATION AND RACEMIZATION OF RAT LENS CRYSTALLINS BY GAMMA IRRADIATION**
Ingu KIM, Takeshi SAITO, Noriko FUJII
- P10 **A D-AMINO ACID-CONTAINING NEUROPEPTIDE DISCOVERY FUNNEL**
Itamar LIVNAT, Hua-Chia TAI, Erik T. JANSSON, Stanislav S. RUBAKHIN, Jonathan V. SWEEDLER
- P11 **ANALYSIS OF ISOMERIZATION AT ASN127 IN MOUSE LYSOYME AT pH 7 WITHOUT DEAMIDATION**
Reina FUJITA, Shoto ISHIGO, Yurika MIYOSHI, Kenji HAMASE, Takashi SAITOH, Fumina OHSAKA, Katsumi MAENAKA, Mitsunori SHIROISHI, Yoshito ABE, Tadashi UEDA
- P12 **ESTABLISHMENT OF A TWO-DIMENSIONAL CHIRAL HPLC-MS/MS SYSTEM FOR THE DETERMINATION OF TRACE AMOUNTS OF D-AMINO ACID RESIDUES IN PROTEINS**
Shoto ISHIGO, Reina FUJITA, Yurika MIYOSHI, Eiichi NEGISHI, Hirohisa ONIGAHARA,

Masashi MITA, Tetsuya MIYAMOTO, Haruhiko MASAKI, Hiroshi HOMMA, Tadashi UEDA,
Kenji HAMASE

P13 D-AMINO ACID AS A PROMORTER FOR SALIVATION

Masanobu YOSHIKAWA, Migiwa OKUBO, Yurika MIYOSHI, Kenji HAMASE, Ryuichi
KONNO, Mitsuru KAWAGUCHI

**P14 ADSORPTION OF ABIOTIC D- AND L-AMINO ACIDS BY A SHORT RANGE ORDER
MINERAL, ALLOPHANE**

Hideo HASHIZUME

**P15 D-ASPARTIC ACID, BUT NOT L-ASPARTIC ACID, MODULATES OSTEOBLAST
MARKER GENE EXPRESSION IN MC3T3E-1 OSTEOBLASTS**

Yousuke ARIMA, Yuuji YOSHIKO, Akira NAMERA, Masataka NAGAO

**P16 ALTERNATIONS OF URINARY D-LACTATE LEVELS COINCIDE WITH RENAL
FUNCTION IN ARISTOLOCHIC ACID NEPHROPATHY MICE RECEIVING
METFORMIN**

Hung-Hsiang CHEN, Mei-Chun LEE, Tzu-Chuan HUANG, Yi-Min SHIH, Yi-Chieh LI, Shih-
Ming CHEN, Jen-Ai LEE

**P17 THE INHIBITION EFFECT OF METFORMIN ON D-LACTATE CONCENTRATIONS
IN GENTAMICIN-INDUCED RAT RENAL INJURY**

Mu-Cheng TSAI, Yi-Min SHIH, Yi-Chieh LI, Pen-Yuan LIN, Jen-Ai LEE, Shih-Ming CHEN

**P18 ESTABLISHMENT OF A 2D-HPLC SYSTEM FOR CHIRAL AMINO ACID
METABOLOMICS USING A NOVEL FL/MS/MS REAGENT WITH 6-METHOXY-4-
QUINOLONE MOIETY AND ITS DEUTERATED ANALOG**

Tsubasa OYAMA, Eiichi NEGISHI, Hirohisa ONIGAHARA, Yurika MIYOSHI, Masashi
MITA, Sumio OHTSUKI, Akio OJIDA, Wolfgang LINDNER, Kenji HAMASE

◆ **Welcome Reception** 18:00-19:30

Wednesday, September 3, 2014

◆ Oral Presentation

Session 3 9:00-10:20

Chair: Roger J.W. TRUSCOTT, Noriko FUJII

9:00-9:20 L9 **D-AMINO ACID RESIDUES IN PROTEINS AND THEIR IMPORTANCE IN HUMAN AGING**

Roger J.W. TRUSCOTT, Michael FRIEDRICH, Brian LYONS, Michelle HOOI

9:20-9:40 L10 **A NOVEL RAPID COMPREHENSIVE ANALYSIS OF D-AMINO ACIDS IN CATARACT LENS PROTEINS USING LC-MS/MS**

Noriko FUJII, Norihiko FUJII, Takumi TAKATA, Hiroki MAEDA, Hiroaki SAKAUE

9:40-10:00 L11 **STRUCTURAL INSIGHT OF POLY- γ -GLUTAMIC ACIDS AND ITS IMMUNOLOGICAL APPLICATIONS**

Kwang KIM, Jae Chul CHOI, Mie IWAMOTO, Norikazu UYAMA, Seiki KURAMITSU, Moon-Hee SUNG

10:00-10:20 L12 **D-GLUTAMIC ACID IN MICROBIAL EXO-POLYMER, POLY- γ -GLUTAMATE**

Makoto ASHIUCHI

Session 4 10:40-11:55

Chair: Yong X. WANG, Tadao OIKAWA

10:40-11:00 L13 **SPINAL DAAO/H₂O₂ PATHWAY IN CHRONIC PAIN, MORPHINE ANALGESIC TOLERANCE AND HYPERALGESIA**

Yong X. WANG

11:00-11:20 L14 **D-AMINO ACID IN SAKE: DISTRIBUTION, PRODUCTION MECHANISM, AND FUNCTION**

Tadao OIKAWA

11:20-11:40 L15 **SUBLIMATION OF ALPHA-AMINO ACIDS AS A PLAUSIBLE MODEL OF SEGREGATION OF D- AND PREBIOTIC HOMOCHEMISTRY OF**

L-AMINO ACIDS

Jean-Claude GUILLEMIN, Arkadii V. TARASEVYCH

11:40-11:55 L16 **FLEXIBLE TRYPTOPHANASE STEREOSPECIFICITY INDUCED FROM TRIAMMONIUM PHOSPHATE**

Ikumi OTSUKA, Akihiko SHIMADA

◆ Short Tour (with lunch)

12:00-17:30 Bus Tour to Nikko

◆ Chiral Science Seminar (in Japanese) Chair: Ryuichi KONNO

14:00-14:05 Opening

14:05-14:35 S1 **CHIRAL AMINO ACID METABOLOMICS STUDIES USING SENSITIVE AND SELECTIVE TWO-DIMENSIONAL HPLC**

Kenji HAMASE

14:35-15:05 S2 **D-SERINE- δ 2 GLUTAMATE RECEPTOR INTERACTION: A NOVEL D-SERINE SIGNALING FOR SYNAPTIC PLASTICITY AND LEARNING**

Wataru KAKEGAWA

15:05-15:35 S3 **INTRINSIC FREE D-AMINO ACIDS IN HUMAN SKIN – THEIR PHYSIOLOGICAL FUNCTIONS ON THE SKIN HOMEOSTASIS –**

Yosuke TOJO

15:50-16:20 S4 **ABBERANT REGULATION OF D-AMINO ACIDS IN DISEASES**

Jumpei SASABE

16:20-16:50 S5 **FUNCTIONS AND ROLES OF AMINO ACID TRANSPORTERS**

Shushi NAGAMORI

16:50-16:55 Closing

◆ Poster Session 17:30-19:00

P19 **SERINE RACEMASE IN *Dictyostelium discoideum***

Saki KOBAYASHI, Natsuki HAMAUCHI, Tomokazu ITO, Hisashi HEMMI, Tamao SAITO,

Tohru YOSHIMURA

P20 THE RAT AND HUMAN HOMOLOGUES OF MOUSE ASPARTATE RACEMASE ARE NOT RESPONSIBLE FOR THE BIOSYNTHESIS OF D-ASPARTATE

Satsuki MATSUDA, Masumi KATANE, Kazuhiro MAEDA, Yuusuke KANEKO, Yasuaki SAITOH, Tetsuya MIYAMOTO, Masae SEKINE, Hiroshi HOMMA

P21 CLONING AND EXPRESSION OF ALANINE RACEMASE GENE FROM THE GREEN ALGA *Chlamydomonas reinhardtii*

Yuki HIRATO, Minoru TANIGAWA, Mayumi ODA, Katsushi NISHIMURA

P22 THE PRESENCE OF PUTATIVE SERINE RACEMASE/DEHYDRATASE GENES IN SEaweEDS

Takehiko YOKOYAMA, Koji MIKAMI

P23 ISOLATION AND CHARACTERIZATION OF THE AMINO ACID RACEMASE GENES FROM SEVERAL INVERTEBRATE SPECIES

Koji UDA, Keita ABE, Yoko DEHARA, Kiriko MIZOBATA, Natsumi SOGAWA, Yuki AKAGI

P24 SYNERGISTIC ANTIMICROBIAL EFFECTS AND MEMBRANE DISTURBANCE INDUCED BY BOMBININ H2 AND H4 PEPTIDES FROM FROG SKIN SECRETION

Yuki KITAHASHI, Izuru KAWAMURA, Akira NAITO

P25 MEMBRANE BINDING STRUCTURE OF ANTIMICROBIAL PEPTIDE BOMBININ H2 AND H4 STUDIED BY SOLID-STATE NMR AND MD SIMULATIONS

Izuru KAWAMURA, Namsrai JAVKHLANTUGS, Nyamsambuu ALTANNAVCH, Yuki KITAHASHI, Kazuyoshi UEDA, Akira NAITO

P26 STORAGE OF HEN-EGG INDUCES D-SERINE GENERATIONS AT SPECIFIC SITES IN EGG-WHITE PROTEIN, OVALBUMIN, MODULATING ITS PROPERTIES FOR FOOD-PROCESSING AND ALLERGY

Masayuki YAMASAKI, Rina KODERA, Hitomi SHIMIZU, Nobuyuki TAKAHASHI

P27 RACEMIZATION OF AMINO ACID RESIDUES IN AMYLOID β -PEPTIDE BY RADICAL REACTION

Koharu TAMBO, Tomomi YAMAGUCHI, Keiko KOBAYASHI, Eri TERAUCHI, Ikuyo ICHI, Shosuke KOJO

- P28 **PREDICTIONS OF BINDING MODES BETWEEN PROTEIN L-ISOASPARTYL (D-ASPARTYL) O-METHYLTRANSFERASE AND LIGANDS**
Akifumi ODA, Ikuhiko NOJI, Shuichi FUKUYOSHI, Ohgi TAKAHASHI
- P29 **HOW DOES THE NEIGHBORING SERINE RESIDUE ON THE CARBOXYL SIDE ASSIST THE SUCCINIMIDE FORMATION FROM ASPARTIC ACID RESIDUES? NEW COMPUTATIONAL INSIGHTS**
Ryota KIRIKOSHI, Noriyoshi MANABE, Ohgi TAKAHASHI
- P30 **GENETIC ASSOCIATION AND POSTMORTEM ANALYSES OF PAPST1, A D-SERINE MODULATOR IN SCHIZOPHRENIA AND BIPOLAR DISORDER**
Akihito UEZATO, Dai SHIMAZU, Daisuke JITOKU, Yoshimi IWAYAMA, Tomoko TOYOTA, Kazuo YAMADA, Takeo YOSHIKAWA, Naoki YAMAMOTO, Toru NISHIKAWA
- P31 **NEURONAL REGULATION OF TISSUE AND EXTRACELLULAR D-SERINE CONCENTRATIONS IN THE RAT BRAIN**
Asami UMINO, Hisayuki IWAMA, Sayuri ISHIWATA, Michio ITASAKA, Toru NISHIKAWA
- P32 **D-METHIONINE AS A PROTECTOR FOR IRRADIATION-INDUCED ORAL MUCOSITIS OR SALIVARY GLANDS HYPOFUNCTION**
Masanobu YOSHIKAWA, Chieko MURAYAMA, Ana P. COTRIM, Ryoichi HIRAYAMA, Hideo TSUKADA, Yoshiya FURUSAWA, Bruce J. BAUM
- P33 **A SENSITIVE ASSAY METHOD OF ASPARTATE-SPECIFIC AMINO ACID RACEMASE**
Masumi KATANE, Kazuki NAKAYAMA, Tomonori KAWATA, Satsuki MATSUDA, Yuusuke KANEKO, Yasuaki SAITOH, Tetsuya MIYAMOTO, Masae SEKINE, Hiroshi HOMMA
- P34 **CHIRAL RECOGNITION ABILITY OF IMMOBILIZED CROWNPAC COLUMNS**
Kenichi YOSHIDA, Keiji NISHIHARA, Ryota HAMASAKI, Kenichiro MIYAZAWA, Atsushi OHNISHI
- P35 **ESTABLISHMENT OF A 2D-HPLC SYSTEM FOR THE ENANTIOSELECTIVE DETERMINATION OF AROMATIC AMINO ACIDS**
Reiko KOGA, Yurika MIYOSHI, Hirohisa ONIGAHARA, Masashi MITA, Wolfgang LINDNER, Kenji HAMASE
- P36 **DEVELOPMENT OF NOVEL HIGH-PERFORMANCE PIRKLE-TYPE CHIRAL**

STATIONARY PHASES HAVING BRANCHED ALIPHATIC AMINO ACIDS

Hirohisa ONIGAHARA, Nao KUSANO, Yurika MIYOSHI, Yasuhiko KADOTA, Yasuhiro NISHIO, Masashi MITA, Akio OJIDA, Wolfgang LINDNER, Kenji HAMASE

◆ Japanese Tea Ceremony 18:00-

Thursday, September 4, 2014

◆ Oral Presentation

Session 5 9:00-10:10

Chair: Roland REISCHL, Kenji HAMASE

9:00-9:20 L17 **THE DIRECT STEREOSEPARATION OF ASP AND SER PEPTIDES BY ZWIX CSPs AND ITS APPLICATION TO THE ELUCIDATION OF PEPTIDE RACEMIZATION MECHANISMS**

Roland REISCHL, Wolfgang LINDNER

9:20-9:40 L18 **URINARY D-LACTATE LEVELS REFLECT KIDNEY FUNCTION IN DIABETIC PATIENTS**

Jen-Ai LEE

9:40-9:55 L19 **CHIRAL AMINO ACID METABOLOMICS USING TWO-DIMENSIONAL HPLC FOCUSING ON NEURO-ACTIVE AMINO ACIDS**

Yurika MIYOSHI, Eiichi NEGISHI, Masanobu NAGANO, Jumpei SASABE, Maiko NAKANE, Masashi MITA, Ryuichi KONNO, Sadakazu AISO, Kenji HAMASE

9:55-10:10 L20 **THE CHIRAL AMINO ACID METABOLOMICS: APPLICATIONS TO FOOD SCIENCE**

Maiko NAKANE, Yurika MIYOSHI, Yosuke TOJO, Masashi MITA, Kenji HAMASE

Session 6 10:30-11:45

Chair: Céline OLLIVAUX, Yutaka SADAKANE

10:30-10:55 L21 **D-AMINO ACID CONTAINING PEPTIDES IN ANIMALS: FROM STRUCTURE TO FUNCTION**

Céline OLLIVAUX

10:55-11:15 L22 **ANALYSIS OF STRUCTURAL ALTERATION OF ASN RESIDUE IN THE PEPTIDE FRAGMENTS OF PRION PROTEIN AND DETERMINATION OF FIBRIL FORMATION RATE OF THESE PEPTIDES**

Yutaka SADAKANE, Sayumi SENDA, Yukino TANAKA, Ayuko USAMI,

Rikako YAMAMOTO, Masahiro KAWAHARA, Isao OTSUKA

11:15-11:30 L23 **ASP ISOMERIZATION IN EYE LENS DERIVED PEPTIDE ASSOCIATED WITH PEPTIDE-PEPTIDE AND PEPTIDE-PROTEIN INTERACTIONS**

Takumi TAKATA, Hiroaki SAKAUE, Noriko FUJII

11:30-11:45 L24 **ACETIC ACID CAN CATALYZE THE SUCCINIMIDE FORMATION FROM ASPARTIC ACID RESIDUES. IMPLICATIONS FROM DENSITY FUNCTIONAL THEORY CALCULATIONS**

Ohgi TAKAHASHI, Takumi HAMAUCHI, Natsumi HOSHI, Kengo MIKAWA, Tomoyuki MORIYAMA, Ryota KIRIKOSHI, Noriyoshi MANABE

◆ Committee Meeting 12:00-13:00

◆ Poster Session 13:00-14:30

P37 **D-ASPARTATE OXIDASE DEFICIENCY IN *C. elegans* EXTENDS LIFESPAN BY INHIBITING NMDA RECEPTOR AND TOR**

Yasuaki SAITOH, Mari OKUTSU, Syunya NAKANO, Tetsuya MIYAMOTO, Masae SEKINE, Masumi KATANE, Taro SAKAMOTO, Hirotaka IMAI, Hiroyuki ARAI, Hiroshi HOMMA

P38 **D-AMINO ACID AMINOTRANSFERASE LOCALIZATION IN *Arabidopsis thaliana***

Masae SEKINE, Sho SUGAWARA, Masumi KATANE, Yasuaki SAITOH, Tetsuya MIYAMOTO, Hiroshi HOMMA

P39 **D-SERINE METABOLISM IN CELLULAR SLIME MOLD AND EFFECTS OF D-SERINE DEHYDRATASE MUTATION**

Tomokazu ITO, Natsuki HAMAUCHI, Hisashi HEMMI, Tamao SAITO, Tohru YOSHIMURA

P40 **CATALYTIC MECHANISM OF PLP- AND Zn²⁺-DEPENDENT D-SERINE DEHYDRATASE**

Mai MATSUOKA, Tomokazu ITO, Hisashi HEMMI, Tohru YOSHIMURA

P41 **DEVELOPMENT OF A NOVEL ENZYMATIC METHOD FOR D-AMINO ACIDS SYNTHESIS BY USING D-SUCCINYLAASE AND N-SUCCINYLAMINO ACIDS RACEMASE**

Yosuke SUMIDA, Sachio IWAI, Yoshiaki NISHIYA, Shinya KUMAGAI, Toshihide YAMADA

- P42 **D-AMINO-ACID OXIDASE IN RODENTS**
Hiroko OHIDE, Masahiro YAMANAKA, Ryuichi KONNO
- P43 **INVERSION OF ASPARTYL RESIDUE DISTURBS ASSEMBLY OF CRYSTALLIN IN HUMAN CATARACT LENS**
Hiroaki SAKAUE, Takumi TAKATA, Norihiko FUJII, Hiroshi SASAKI, Noriko FUJII
- P44 **ANALYSIS OF ASPARTYL ISOMERS IN SKIN PROTEIN BY LC-MS/MS**
Yui SUZUKI, Hiroaki SAKAUE, Noriko FUJII
- P45 **ESTIMATION OF HYDROPHOBICITY OF OLIGOPEPTIDES PARTLY COMPRISING D-AMINO ACIDS**
Toratane MUNEGUMI
- P46 **ANALYSIS OF D-AMINO ACID RESIDUES IN PROTEINS TREATED WITH ALKALINE**
Tetsuya MIYAMOTO, Nobuyuki TAKAHASHI, Masae SEKINE, Tetsuhiro OGAWA, Makoto HIDAHA, Hiroshi HOMMA, Haruhiko MASAKI
- P47 **A COMPUTATIONAL STUDY OF SUCCINIMIDE FORMATION IN THE ASX-TURN**
Ryota KIRIKOSHI, Noriyoshi MANABE, Ohgi TAKAHASHI
- P48 **A COMPUTATIONAL STUDY OF SUCCINIMIDE FORMATION IN ASP-ASP MOTIF**
Noriyoshi MANABE, Ryota KIRIKOSHI, Ohgi TAKAHASHI
- P49 **ENANTIOSELECTIVE AMINO ACID SENSOR USING MOLECULARLY IMPRINDED SENSOR GRAFTED ON ELECTRODE**
Yasuo YOSHIMI
- P50 **AMINO ACID ANALYSIS OF MOUSE MACROPHAGE**
Shiro KATO, Yuki MASUDA, Morichika KONISHI, Tadao OIKAWA
- P51 **ANTINOCICEPTIVE EFFECT OF INTRACEREBROVENTRICULAR ADMINISTRATION OF D-SERINE ON THERMAL- OR FORMALIN-INDUCED PAIN**
Masanobu YOSHIKAWA, Miho ITO, Kenji ITO, Xing Lu JIN, Shigeru TAKAHASHI, Hiroyuki KOBAYASHI, Toshiyasu SUZUKI
- P52 **PLASMA KINETICS OF D-SERINE IN RATS**
Hiroshi HASEGAWA, Yoshihiko SHINOHARA, Nami MASUDA, Takumi NATORI, Kimiyoshi ICHIDA

P53 CHIRAL AMINO ACID METABOLOMICS OF HUMAN URINE USING TWO-DIMENSIONAL HIGH-PERFORMANCE LIQUID CHROMATOGRAPHY

Yayoi YONENAGA, Yurika MIYOSHI, Hirohisa ONIGAHARA, Eiichi NEGISHI, Masashi MITA, Jumpei SASABE, Sadakazu AISO, Kenji HAMASE

P54 ENANTIOSELECTIVE 2D-HPLC DETERMINATION OF AMINO ACIDS IN AN ANTARCTIC CM2 METEORITE

Yusuke NAKAUCHI, Yurika MIYOSHI, Reiko KOGA, Hirohisa ONIGAHARA, Hiroshi NARAOKA, Hajime MITA, Yasuhiko KADOTA, Yasuhiro NISHIO, Masashi MITA, Wolfgang LINDNER, Kenji HAMASE

◆ Oral Presentation

Session 7 14:30-15:45

Chair: Herman WOLOSKER, Hisashi MORI

14:30-14:55 L25 **THE SERINE SHUTTLE: A GLIA-NEURON CROSSTALK AFFECTING NEUROTRANSMISSION AND NEURODEGENERATION**

Herman WOLOSKER

14:55-15:15 L26 **INCREASED SENSITIVITY TO INFLAMMATORY PAIN INDUCED BY SUBCUTANEOUS FORMALIN INJECTION IN SERINE RACEMASE KO MICE**

Hisashi MORI, Ayako TABATA-IMAI, Ran INOUE

15:15-15:30 L27 **ENERGETIC REGULATION OF D-SERINE IN ASTROCYTES**

Masataka SUZUKI, Jumpei SASABE, Kenji HAMASE, Sadakazu AISO

15:30-15:45 L28 **GLUTAMATERGIC AND GABAERGIC REGULATION OF THE EXTRACELLULAR D-SERINE CONCENTRATIONS IN THE MEDIAL FRONTAL CORTEX**

Sayuri ISHIWATA, Asami UMINO, Hisayuki IWAMA, Toru NISHIKAWA

Session 8 16:05-17:10

Chair: Guochuan Emil TSAI, Toru NISHIKAWA

16:05-16:30 L29 **NMDA TREATMENTS FOR CNS DISORDERS**

Guochuan Emil TSAI

16:30-16:50 L30 **POSSIBLE IMPLICATION OF DISTURBED BRAIN D-SERINE SIGNALING IN THE PATHOPHYSIOLOGY OF SCHIZOPHRENIA**

Toru NISHIKAWA

16:50-17:10 L31 **D-SERINE AND THE NMDA RECEPTOR: RELEVANCE TO NEUROPLASTICITY AND SCHIZOPHRENIA**

Darrick T. BALU, Shunsuke TAKAGI, Yan LI, Matthew D. PUHL, Toru NISHIKAWA, Vadim Y. BOLSHAKOV, Joseph T. COYLE

◆ Award Lectures Chair: Hiroshi HOMMA

17:30-17:50 Award Ceremony

17:50-18:10 A1 **D-AMINO ACID PRODUCTIONS IN LACTIC ACID BACTERIA AND THE IDENTIFICATION OF A NOVEL AMINO ACID RACEMASE**

Yuta MUTAGUCHI

18:10-18:30 A2 **D-SERINE CONTROLS LEARNING AND MEMORY THROUGH IONOTROPIC GLUTAMATE RECEPTORS**

Wataru KAKEGAWA

◆ Banquet 19:00-21:00

Friday, September 5, 2014

◆ Oral Presentation

Session 9 9:00-9:55

Chair: Alessandro USIELLO, Yoshio KERA

9:00-9:20 L32 **D-ASPARTATE OXIDASE MODULATES GLUTAMATERGIC SYSTEM
IN THE MAMMALIAN BRAIN**

Alessandro USIELLO

9:20-9:40 L33 **THE THREE-DIMENSIONAL STRUCTURE OF D-ASPARTATE
OXIDASE OF THE YEAST *Cryptococcus humicola***

Shouji TAKAHASHI, Masaru GOTO, Katsumasa ABE, Yoshio KERA

9:40-9:55 L34 **CRYSTAL STRUCTURE OF AN ALKALINE D-STEREOSPECIFIC
ENDOPEPTIDASE FROM *Bacillus cereus***

Shogo NAKANO, Seiji OKAZAKI, Nobuhiro KAWAHARA, Hidenobu
KOMEDA, Yasuhisa ASANO

Session 10 10:15-11:45

Chair: Jackie de BELLEROCHE, Kiyoshi FUKUI

10:15-10:40 L35 **THE IDENTITY OF THE NMDA RECEPTOR CO-AGONIST IS SYNAPSE
SPECIFIC AND DEVELOPMENTALLY REGULATED IN THE
HIPPOCAMPUS**

Matildé LE BAIL, Silvia SACCHI, Inna RADZISHEVSKY, Natalia YATSENKO,
Karima AIT OUARES, Herman WOLOSKER, Loredano POLLEGIONI, Jean-
Marie BILLARD, Jean-Pierre MOTHET

10:40-11:05 L36 **ELUCIDATING THE ROLE OF D-AMINO ACIDS IN CHRONIC
NEURODEGENERATIVE DISEASES**

Jackie de BELLEROCHE, Praveen PAUL

11:05-11:25 L37 **D-SERINE IN THE AGING HIPPOCAMPUS**

Jean-Marie BILLARD

11:25-11:45 L38 **D-AMINO ACID METABOLISM IN HEALTH AND DISEASES:**

**PATHOPHYSIOLOGICAL BASES FOR SCHIZOPHRENIA AND
CANCER GENE THERAPY**

Kiyoshi FUKUI, Yoshiteru URAI, Hwan Ki PARK, Tomoya KAWAZOE, Sanae IWANA, Koji ONO, Rabab Abou M. EL-MAGD, Seong Pil CHUNG, Salah M. EL SAYED, Diem Hong TRAN, Huong Thi Thanh TRINH, Hirofumi SOGABE, Takanaga AKO, Yuji SHISHIDO, Kazuko YORITA, Takashi SAKAI

◆ General Assembly 11:45-12:15

◆ Closing 12:15-12:30