

## The 13th International Congress on Amino Acids, Peptides and Proteins (ICAPP)

October 5-7, 2013  
Galveston, Texas, USA

Honorary President: Dr. Gert Lubec, Vienna Medical University, Vienna, Austria  
President: Dr. Guoyao Wu, Texas A&M University, College Station, Texas, USA (e-mail: [g-wu@tamu.edu](mailto:g-wu@tamu.edu))  
Vice President: Dr. C. Andy Hu, University of New Mexico, Albuquerque, New Mexico, USA  
Vice President: Dr. E. Lichar Dillon, University of Texas Medical Branch, Galveston, Texas, USA

### Organizing Committee:

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Dr. Lin Li, Vienna Medical University, Vienna, Austria  
Dr. Miro Smruga, International Council of Amino Acid Science, Brussels, Belgium  
Dr. Guoyao Wu, Texas A&M University, College Station, Texas, USA (Chair)  
Dr. Yulong Yin, The Chinese Academy of Science, Changsha, China

### WELCOME FROM THE ORGANIZING COMMITTEE

Dear Colleagues:

It is a great pleasure to welcome you, on behalf of the Organizing Committee, to the 13th ICAPP at Galveston, Texas, USA. Scientific topics for this conference include biochemistry, biomedicine, chemistry, food science, immunology, nutrition, physiology, pharmacology, reproduction, and toxicology of amino acids, peptides, and proteins, as well as genetics and bioinformatics related to their synthesis, catabolism, and utilization in humans and other animal species. Submitted abstracts span a wide range of research involving animals (e.g., fish, mice, rats, pigs and sheep), humans, microorganisms, plants, and cell culture models.

ICAPP was founded by Prof. Gert Lubec (Vienna Medical University, Vienna, Austria) in 1989 and had since been a European scientific tradition. It is exciting that the 13th ICAPP is held for the first time in North America. More than 135 papers from 32 countries and regions will be presented at the 13th ICAPP either as oral or poster presentations. We appreciate your participation in this conference by discussing research progress in the fields of amino acids, peptides, and proteins. It is our goal that the forum will provide an invaluable opportunity for both scientists and graduate students to learn about exciting research conducted outside of their own laboratories, foster new research collaborations, develop long-lasting friendships, and freely exchange scientific ideas in a relaxing setting. Galveston is a beautiful coastal city and I hope that you will also enjoy tours of the Galveston Island before or after our Congress.

Once again, thank you very much for joining us at the 13th ICAPP. Please feel free to contact me if I can be of assistance in your travel to, and your stay at, Galveston, Texas, USA.

Yours sincerely,



Guoyao Wu, Ph.D.  
Chair of the 13th ICAPP Organizing Committee  
President of the 13th ICAPP

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## Acknowledgments

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**We also thank the support of this conference by:**

International Council of Amino Acid Science (Brussels, Belgium)

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College of Agriculture and Life Sciences

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Texas A&M AgriLife Research (College Station, Texas, USA)

University of Texas Medical Branch (Galveston, Texas, USA)

Ms. Valerie L. Weber, Coordinator of Conference Services at Texas A&M AgriLife Extension Service

### General information

1. **Abstract submission.** If you have not done so, please send titles and abstracts of your presentations to Dr. Guoyao Wu by e-mail (g-wu@tamu.edu) before June 1, 2013.
2. **Online registration** (<https://agriferegister.tamu.edu>; Keyword Search: ICAPP): \$525 before or on July 30, 2013; \$625 after July 30, 2013; closed at 11:59 PM, September 29 (Texas time), 2013. This service is provided by Texas A&M University.
  - (1) Log into <https://agriferegister.tamu.edu>
  - (2) Enter **ICAPP** as Keyword for the Conference and Click "Search". You will see the following: "13th International Congress on Amino Acids, Peptides and Proteins (ICAPP)"
  - (3) Click "More Details" and then "Enroll Now"
  - (4) Fill in Contact Information and select an option (e.g., "Conference Fee" or "Sponsorship Only")
  - (5) Click "Continue".
  - (6) Follow prompted instructions to complete fund transfer via check, credit card or wire transfer.

Please contact Ms. Valerie Weber (e-mail: vlweber@ag.tamu.edu) if you have any question about payment to the ICAPP account at Texas A&M University.

3. **On-site registration:** \$650 at GALVESTON ISLAND CONVENTION CENTER, GALVESTON; credit cards (Visa, Mastercard or Discover), cash or checks will be accepted for the payment of on-site registration fees.
  - October 4, 2013: 1:00 - 6:00 PM
  - October 5-7, 2013: 8:00 AM - 12:00 noon; and 1:30 - 5:30 PM
4. **Location of Conference:** GALVESTON ISLAND CONVENTION CENTER, GALVESTON, TX, USA. The Galveston Island Convention Center is a non-smoking facility. Galveston is a beautiful coastal city located on the Galveston Island in TX, USA.

To view the elegant Gulf front Galveston Island Convention Center visit:

[www.galvestonislandconventioncenter.com](http://www.galvestonislandconventioncenter.com)

For additional information about Galveston, Texas, visit: [www.galveston.com](http://www.galveston.com)

5. **Hotel: GUEST ACCOMODATIONS AT DISCOUNTED RATES (October 4 - October 7, 2013)**

Room	Single Rate	Double Rate	Reservation (Group Code: TAAA)
Hilton Resort	\$149	\$149	By phone (877-425-4753) or online (see below)

**ARRIVAL/DEPARTURE: Check-In time is after 3:00 p.m. Check-Out time is prior to 12:00 p.m.**

**RESERVATION CUT-OFF DATE:** The "cut-off date" for accepting reservations into this group block is **September 10, 2013**. Reservation requests and/or name/date change requests received after 5:00 p.m. local time at Hotel on the cut-off date will be accepted based on rate and/or category availability.

#### **RESERVATION METHOD:**

**Option 1 (Individual Call-in Option):** All guests may make their reservations by calling hotel Reservations Department directly Hilton Resort - 877-425-4753 (toll free). In order to obtain special group rate, guests need to identify themselves as being with International Conference on Amino Acids. The Hilton requires a first night's deposit of room and tax or credit card, per room, to guarantee individual reservations. The Hotel accepts all major credit cards as a guarantee. Guests may cancel individual reservations up to 72-hours prior to arrival without

penalty to the individual. Cancellations received inside of 72-hours of arrival will forfeit first night room and tax deposit. All guests will be required to provide either a credit card imprint or cash deposit upon check-in.

**Option 2:** On-line reservation is available at The Hilton Resort.

Hilton Galveston Island Resort (5400 Seawall Boulevard, Galveston, Texas, USA 77551):

web page:

[http://www.hilton.com/en/hi/groups/personalized/G/GLSGIHF-TAAA-20131003/index.jhtml?WT.mc\\_id=POG](http://www.hilton.com/en/hi/groups/personalized/G/GLSGIHF-TAAA-20131003/index.jhtml?WT.mc_id=POG)

Group Name: Texas A&M Conference on Amino Acids; Group Code: TAAA

Check-in: 04-OCT-2013; Check-out: 07-OCT-2013.

Phone Number: 409-744-5000

**6. Transportation from Houston IAH airport or Houston Hobby airport to Galveston, Texas, USA:**

Participants of the 13th ICAPP can take flights to the Houston Intercontinental Airport (IAH; ~65 miles from Galveston) or Houston Hobby Airport (HOU - Hobby; 30 miles from Galveston). Arrangements can be made with Clearlake Shuttle (Tel. 281-229-0299 or 409-933-4500) for meeting participants to travel from the Houston IAH or the Houston Hobby airport to the Conference's Galveston Hotels.

For reserving the transportation service between Houston and Galveston, **please contact Clearlake Shuttle by e-mail (chartergalveston@aol.com)**. In the e-mail, please provide information about: 1) traveler's name, e-mail, and contact phone number; 2) arrival airport, date, time, and flight number; and 3) departure airport, date, time, and flight number. The costs of one-way trip are as follows:

Houston Intercontinental Airport (IAH) to Galveston: \$140 per person plus \$15 for an additional passenger

Houston Hobby Airport (HOU - Hobby) to Galveston: \$110 per person plus \$15 for an additional passenger

**7. Special event at 13th ICAPP:** A reception dinner for all conference's participants will be held at 6:30 PM, October 5, 2013 (Saturday), at GALVESTON ISLAND CONVENTION CENTER, GALVESTON.

**8. "Amino Acids" Editorial Board Meeting:** 12:00 noon - 2:00 PM, October 6, 2013 (place to be announced)

**9. Rooms and time schedules:**

- (1) All scientific sessions are held at GALVESTON ISLAND CONVENTION CENTER.
- (2) Room "Spinnaker" is used for speakers to preview their ppt slides, except for the afternoon of Oct. 6 (Sunday).
- (3) Each talk must be completed within the allotted time. No extension of time is allowed.
- (4) In case that a speaker is not present for his/her prescheduled talk, it will be cancelled and the next talk will resume at the prescheduled time.

## The Scientific Program of the 13th ICAPP (as of June 12, 2013)

*October 5, Saturday (9:00 AM - 12:00 noon)*

### Keynote Lectures (Grand Ballroom A/B)

*Chair: Guoyao Wu, Ph.D., Texas A&M University, College Station, Texas, USA*

- 9:00 - 9:05 AM      **Guoyao Wu, Ph.D.**, University Distinguished Professor  
Texas A&M University, College Station, Texas, USA  
*"Introduction to keynote lectures"*
- 9:05 - 9:55 AM      **Fuller W. Bazer, Ph.D.**, University Distinguished Professor  
Texas A&M University, College Station, Texas, USA  
Laureate of the Wolf Prize in Agriculture  
*"Amino acids, peptides and proteins as histotroph in embryo development: discoveries and important roles in reproductive health"*
- 9:55 - 10:45 AM    **Teresa A. Davis, Ph.D.**, Professor of Pediatrics  
USDA/ARS, Baylor College of Medicine, Houston, Texas, USA  
*"Amino acid signaling: mechanisms and translational relevance in medicine and nutrition"*
- 10:45 - 11:10 AM    Coffee/tea break
- 11:10 AM - 12:00    **Gert Lubec, M.D.**, University Professor  
Medical University of Vienna, Vienna, Austria  
Fellow of Royal Society (U.K.)  
*"Proteomics: limitations and postulates"*

*October 5, Saturday (2:00 - 5:30 PM)*

### Neurobiology (I): Neuroprotection from excitotoxicity via homologous and heterologous mechanisms -- Room "Harbor"

- Session Chair: Ann M. Marini, Ph.D.*, Department of Neurology and Neuroscience, Uniformed Services University of the Health Sciences, Bethesda, Maryland, USA
- 2:00 - 2:05 PM      **Ann M. Marini, Ph.D.**, Uniformed Services Univ. of the Health Sciences, Bethesda, USA  
*"Introduction"*
- 2:05 - 2:40 PM      **Robert H. Lipsky, Ph.D.**, Dept. of Neurosciences, Inova Health System, Annandale, VA, USA  
*"Functional characterization of promoter polymorphisms of the human GRIN2B glutamate receptor gene associated with altered memory functioning in older adults."*
- 2:40 - 3:15 PM      **Steven Kerr, Ph.D.**, Pharmacology & Toxicology, Otago School of Medical Sciences, New Zealand  
*"Low dose GYKI-52466: a prophylactic approach to neuroprotection"*
- 3:15 - 3:50 PM      **Randy Strong, Ph.D.**, Pharmacology, Barshop Institute, University of Texas Health Science Center at San Antonio, Texas, USA  
*"Biogenic aldehydes as therapeutic targets in Parkinson's disease"*
- 3:50 - 4:20 PM      Coffee/tea break

- 4:20 - 4:55 PM **Kenneth M. Johnson**, Ph.D., Department of Pharmacology and Toxicology, University of Texas Medical Branch, Galveston, Texas, USA  
*"Phencyclidine: It ain't excitin', but it sure is toxic"*
- 4:55 - 5:30 PM **Lin Li**, Ph.D., Department of pediatrics, Vienna Medical University, Vienna, Austria  
*"Protein kinases linked to memory formation"*

**October 5, Saturday (2:00 - 5:30 PM)**

**Amino Acids and Proteins in Nutrition (I) -- Room "Galleon I"**

*Session Chair:* **Douglas Burrin**, Ph.D., Baylor College of Medicine, Houston, Texas, USA

- 2:00 - 2:15 PM **Reza Rezaei, Sichao Jia, Houssein Assaad, Ana San Gabriel, Yoshiyuki Fujishima, Hisayuki Uneyama, and Guoyao Wu**, Department of Animal Science, Texas A&M University, College Station, TX, USA; and Ajinomoto Inc., Chuo-ku, Tokyo, Japan  
*"Monosodium glutamate supplementation to the diet for lactating sows enhances growth performance and survival of suckling piglets"*
- 2:15 - 2:35 PM **Sally A. Nofs, Ellen Dierenfeld, and Robert Backus**, Nashville Zoo at Grassmere, University of Missouri, Division of Animal Science, University of Missouri College of Veterinary Medicine; Baylor College of Medicine, Department of Molecular Virology and Microbiology, Houston, TX, USA.  
*"Effect of increasing methionine supplementation on dietary requirement for taurine in a model insectivore, the Giant Anteater (Myrmecophaga tridactyla)"*
- 2:35 - 2:55 PM **Chao Wu Xiao, Qixuan Chen, Carla Wood, Jiajie Liu, Christine Gagnon, Elroy R. Cober, Judith A. Fréreau-Reid, Stephen Gleddie**, Health Products and Food Branch, Health Canada, Banting Research Centre, Ottawa, Ontario, Canada; Agriculture and Agri-Food Canada, Ottawa, Ontario, Canada  
*"Soy proteins with knockout of the  $\alpha'$  subunit of  $\beta$ -conglycinin and the A1-5 subunits of glycinin remain hypolipidemic in rats"*
- 2:55 - 3:15 PM **Synne M. Andersen, Elisabeth Holen, Anders Aksnes, Ivar Rønnestad, Jens-Erik Zerrahn, Marit Espe**, National Institute for Nutrition & Seafood Research, Bergen, Norway  
*"Enhanced polyamine turnover after arginine supplementation in an Atlantic salmon model – implications on growth and animal welfare"*
- 3:15 - 3:35 PM **M.E. Brosnan, S.P. Waghmare, K. Clow, R.J. Brown, and J.T. Brosnan**, Department of Biochemistry, Memorial University of Newfoundland, St John's, NF, Canada  
*"Creatine supplementation of Zucker fatty rats attenuates hepatic steatosis"*
- 3:35 - 4:00 PM Coffee/tea break
- 4:00 - 4:30 PM **E. Lichar Dillon**, Department of Internal Medicine, University of Texas Medical Branch, Galveston, Texas, USA  
*"Can we fine-tune the efficiency of essential amino acids in the fight against muscle loss during aging and disease?"*
- 4:30 - 4:50 PM **Zhengfeng Fang, De Wu, Lianqiang Che, Yan Lin, Shengyu Xu, and Yves Mercier**, Animal Nutrition Institute, Sichuan Agricultural University, Ya'an, China; and <sup>2</sup>Adisseo France S.A.S., CERN, Commeny, France  
*"Increased consumption of methionine as methionine hydroxy analog promotes sow milk synthesis without compromise of lysine availability"*

- 4:50 - 5:10 PM **S. H. Choi, L. A. Gilmore, T. Wickersham, G. Wu, and S. B. Smith**, Department of Animal Science, Texas A&M University, College Station, TX, USA  
*"Lipid metabolism in subcutaneous adipose tissue of Angus steers by abomasal infusion of conjugated linoleic acid and/or arginine"*
- 5:10 - 5:30 PM **Yinfei Lv, Zheng Ruan\*, Yuhui Yang, Yan Zhou, Min Jiang, Zeyuan Deng, Kang Yao, Yulong Yin, and Guoyao Wu**, Nanchang University, Nanchang, China; Institute of Subtropical Agriculture, Chinese Academy of Sciences, Changsha, China; Department of Animal Science, Texas A&M University, College Station, TX, USA  
*"Metabolomic analysis reveals altered amino acid metabolism in weanling rats fed a lactosucrose-supplemented diet"*

**October 5, Saturday (2:00 - 5:30 PM)**

**Protein Structure -- Room "Helm"**

- Session Chair:* **Petri Kulsula, Ph.D.**, University of Oulu, Finland & University of Hamburg, Germany
- 2:00 - 2:30 PM **George Harauz**, Molecular and Cellular Biology, University of Guelph, Canada  
*"Myelstones – Intrinsically-disordered basic proteins of central nervous system myelin"*
- 2:30 - 3:00 PM **Julian Chen**, University of Toledo, USA  
*"Neutron crystallography: visualizing hydrogen atoms in proteins and elucidating enzyme mechanisms"*
- 3:00 - 3:30 PM **Mee Whi Kim**, University of Texas Southwestern Medical School, Dallas, Texas, USA  
*"Structural study on Huntingtin protein using X-ray crystallography"*
- 3:30 - 4:00 PM Coffee/tea break
- 4:00 - 4:30 PM **Petri Kursula**, University of Oulu, Finland & University of Hamburg, Germany  
*"An atomic-resolution view into protein-membrane interactions"*
- 4:30 - 4:50 PM **Tsung-Lin Li**, Genomics Research Center, Academia Sinica, Taipei 115, Taiwan  
*"Multi-phased acyltransferase crystal structures lead to discovery of new chemistry and chemicals"*
- 4:50 - 5:10 PM **Dan Yang**, Department of Chemistry, The University of Hong Kong, Hong Kong, China  
*"Self-assembled synthetic ion channels and their potential biomedical applications"*
- 5:10 - 5:30 PM **Wei Li, Hongfei Wang, Chengli Wang, and Xiangshi Tan**, Department of Chemistry, Fudan University, Shanghai China.  
*"Structural basis and molecular mechanism of metal specificity to superoxide dismutase from human pathogen Clostridium difficile"*

**October 5, Saturday (2:00 - 5:30 PM)**

**Polyamines -- Room "Galleon II"**

- Session Chair:* **Enzo Agostinelli, Ph.D.**, "Sapienza" University of Rome and CNR, Biology and Molecular Pathology Institute, Rome, Italy
- Co-Chair:* Patrick Woster, Ph.D., Medical University of South Carolina, South Carolina, USA
- 2:00 - 2:10 PM **Enzo Agostinelli, Ph.D.**, "Sapienza" University of Rome, Italy.  
*"Introduction"*



- 2:10 - 2:55 PM **Jun Li and Heather M Wallace**, Division of Applied Medicine, University of Aberdeen, Scotland, UK  
*"SSAT activity determines the speed of prostate cancer cell growth"*
- 2:55 - 3:25 PM **Flavio Ballante**, Giampiero Tempera, Enzo Agostinelli, Rino Ragno, Istituto Pasteur Fondazione Cenci Bolognetti, "Sapienza" University of Rome and CNR, Biology and Molecular Pathology Institute, Rome, Italy.  
*"Computational strategies to design new highly potential BSAO polyamine substrates"*
- 3:25 - 4:00 PM **Koichiro Shiokawa, Takeshi Kondo, Senji Takahashi, and Kazuei Igarashi**  
Faculty of Medical Technology, Teikyo University, Utsunomiya, Tochigi, Japan; School of Science and Engineering, Teikyo University, Tochigi, Japan; <sup>3</sup>Graduate School of Pharmaceutical Sciences, Chiba University, Chiba, Japan.  
*"Polyamines added in the culture medium of *Xenopus* fertilized eggs induce massive cell dissociation at the blastula stage by interfering with Ca<sup>2+</sup>-dependent cell adhesion"*
- 4:00 - 4:30 PM Coffee/tea break
- 4:30 - 5:15 PM **Giampiero Tempera, Martina Meringolo, Marco Coccia, Pietro Matricardi, Agnese Molinari, Enzo Agostinelli**, Istituto Pasteur Fondazione Cenci Bolognetti, "Sapienza" University of Rome; CNR, Biology and Molecular Pathology Institute, Rome; Dept. of Technology & Health, Italian National Institute of Health, Rome, Italy  
*"Cloroquine enhances cytotoxicity on human cancer cells induced by polyamines metabolites: Nanotechnological approaches for anticancer agents delivery"*
- 5:15 - 5:30 PM **Heather M Wallace**, Division of Applied Medicine, University of Aberdeen, Scotland, UK  
*"Concluding remarks"*

**October 5, Saturday (2:00 - 5:30 PM)**

**Amino Acids, Proteins, and Cancers -- Room "Galleon III"**

- Session Chair:* **James Phang**, M.D., National Institutes of Cancer, Frederick, MD, USA
- 2:00 - 2:10 PM **James Phang**, M.D., National Institutes of Cancer, Frederick, MD, USA  
*"Introduction to the session on amino acids, proteins and cancers"*
- 2:10 - 2:40 PM **Richard Possemato, Kivanc Birsoy and David M. Sabatini**, Whitehead Institute for Biomedical Research and Dept. Massachusetts Institute of Technology, Cambridge, MA, USA; Broad Institute of Harvard and MIT, Cambridge, MA, USA; and The David H. Koch Institute for Integrative Cancer Research at MIT, Cambridge, MA, USA  
*"Cancer's dependence on serine biosynthesis and adequate nutrient availability"*
- 2:40 - 3:10 PM **Wei Liu**, Ph.D., National Institutes of Cancer, Frederick, MD, USA  
*"Proline biosynthesis augments MYC-induced aerobic glycolysis and cell growth"*
- 3:10 - 3:40 PM **Chad Hancock**, Ph.D., National Institutes of Cancer, Frederick, MD, USA  
*"Effect of co-regulation of proline oxidase and succinate dehydrogenase on oxidative respiration"*
- 3:40 - 4:10 PM Coffee/tea break
- 4:10 - 4:40 PM **Kristine Glunde**, Ph.D., Division of Cancer Imaging Research, JHU ICMIC, The Russell H. Morgan Department of Radiology and Radiological Science, The Johns Hopkins University School of Medicine, Baltimore, Maryland, USA  
*"Imaging of collagen I fibers in primary breast cancer to predict metastasis"*

- 4:40 - 5:10 PM **Chien-An A. Hu, Ph.D. and Songqin Pan, Ph.D.**, Dept. of Biochemistry and Molecular Biology, Univ. of New Mexico School of Medicine, Albuquerque, New Mexico, USA; and Proteomics Center for Plant Cell Biology (CEPCEB); Department of Botany and Plant Sciences, University of California, Riverside, CA, USA  
*"Amino acids and autophagy: integrative proteomics and functional analysis in the identification of regulatory proteins in amino acids-induced survival in cancer cells"*
- 5:10 - 5:30 PM **Jung-Mo Ahn, Ph.D.**, Dept. of Chemistry, Univ. of Texas at Dallas, Richardson, TX, USA  
*"Rational Design of Peptidomimetics for Mimicking Protein Helices and Targeting Androgen Receptor in Prostate Cancer"*

**October 6, Sunday (9:00 AM - 12:00 noon)**

**Oxidative Stress and Its Defense Mechanisms -- Room "Galleon I"**

- Session Chair:* **Cynthia J. Meininger**, Department of Medical Physiology, Texas A&M Health Science Center, Temple, Texas, USA
- 9:00 - 9:25 AM **Michael Davies**, The Heart Research Institute, Newtown, Sydney, Australia  
*"Structural and functional consequences of oxidative modification of matrix proteins"*
- 9:25 - 9:45 AM **Carmen D. Tekwe, Fuller W. Bazer, Cynthia J. Meininger, and Guoyao Wu**. Texas A&M Health Science Center and Texas A&M University, College Station, Texas, USA  
*"Use of interferon tau to reduce obesity in Zucker diabetic fatty rats"*
- 9:45 - 10:05 AM **Jin-Xia Li, Hai-Zhou Sun, Cun-Fa Zhao, Hong-Li Zhao, Dan Sang, Sheng-li Li, Chun-Hua Zhang**, Inner Mongolia Academy of Agriculture and Animal Husbandry, Hohhot, China  
*"Effects of arginine and N-carbamylglutamic acid on protein synthesis in skeletal muscle and mRNA levels for intestinal basic amino acid transporters in sheep"*
- 10:05 - 10:30 AM Coffee/tea break
- 10:30 - 10:50 AM **Bie Tan, Xia Xiong, Hao Xiao, Jing Wang, Guangran Li, Yulong Yin, Zhenlong Wu, and Guoyao Wu**, Institute of Subtropical Agriculture, The Chinese Academy of Sciences, Changsha, Hunan, China; State Key Laboratory of Animal Nutrition, China Agricultural University, Beijing, China; Department of Animal Science, Texas A&M University, College Station, TX, USA  
*"L-arginine stimulates DNA synthesis and reduces LPS-induced DNA damage in porcine intestine epithelial cells"*
- 10:50 - 11:15 AM **Hiroshi Takagi**, Laboratory of Applied Stress Microbiology, Department of Systems Biology, Nara Institute of Science and Technology, Ikoma, Nara, Japan  
*"A novel antioxidative mechanism mediated by proline/arginine/NO metabolism in yeast"*
- 11:15 - 11:45 AM **Cynthia J. Meininger**, Department of Medical Physiology, Texas A&M Health Science Center, Temple, TX, USA  
*"Tetrahydrobiopterin, nitric oxide, and diabetes"*
- 11:45 AM - 12:00 **Man Ren, Shihai Zhang, Xiangfang Zeng, and Shiyan Qiao**, State Key Laboratory of Animal Nutrition, China Agricultural University, Beijing, China  
*"Branched-chain amino acids up-regulate  $\beta$ -defensins expression and affect intestinal immune defence of weaned piglets"*

**October 6, Sunday (9:00 AM - 12:00 noon)**

**Neurobiology (II): Neuroprotection and neurological function -- Room "Harbor"**

- Session Chair:* **Hari S Sharma**, Ph.D., Uppsala University, Uppsala, Sweden
- 9:00 - 9:05 AM **Hari S Sharma**, Uppsala University, Uppsala, Sweden  
*"Introduction"*
- 9:05 - 9:40 AM **Hari S Sharma, Dafin F Muresanu, Ranjana Patnaik, Herbert Mössler, Aruna Sharma**, University Hospital, Uppsala University, Uppsala, Sweden; University of Medicine & Pharmacy, Cluj-Napoca, Romania; National Institute of Technology, Banaras Hindu University, Uttar Pradesh, India; and Ever NeuroPharma, Oberburgau, Unterach, Austria  
*"Neurotoxicity of Single walled carbon nanotubes (SWCNT, 2-10 nm) and Neuroprotection by TiO<sub>2</sub> Nanowired delivery of Cerebrolysin"*
- 9:40 - 10:05 AM **Xue-Ying He, Carl Dobkin, Charles Isaacs, Manfred Philipp, W. Ted Brown, and Song-Yu, Yang**, NYS Institute for Basic Research in Developmental Disabilities, NY, USA; and Department of Chemistry, Lehman College, City University of New York, USA  
*"Mental retardation and isoleucine metabolism"*
- 10:05 - 10:30 AM **Dafin F Muresanu, Aruna Sharma, Ranjana Patnaik, Herbert Mössler, Hari S Sharma**, Department of Clinical Neurosciences, University Hospital, University of Medicine & Pharmacy, Cluj-Napoca, Romania.  
*"Cerebrolysin restores amino acid neurotransmitters balance in the brain following traumatic head injury: an experimental study in the rat"*
- 10:30 - 11:00 AM Coffee/tea break
- 11:00 - 11:35 AM **Fred Nyberg**, Department of Pharmaceutical Biosciences, Uppsala University, Sweden  
*"Beneficial effects of growth hormone on cognitive function"*
- 11:35 AM - 12:00** **G. Tosi, B. Ruozi, A. Vilella, D. Belletti, P. Veratti, E. Baraldi, M. Zoli, A. Grabrucker, A. Sharma, H.S. Sharma, F. Forni, M. Vandelli**  
Pharmaceut. Sci., Te.far.t.I, Dept of Pharmaceut. Sciences, Univ. of Modena and Reggio Emilia, Modena, Italy; Dept of Biomed. Sciences, Univ. of Modena and Reggio Emilia, Modena, Italy; Dept. of Psychiatry and Behavioral Sci., Univ. of Ulm, Ulm, Germany.  
*"Nanotechnology and central nervous system drug delivery"*

**October 6, Sunday (9:00 AM - 12:00 noon)**

**Amino Acids and Proteins in Nutrition (II) -- Room "Galleon II"**

- Session Chair:* **Catherine F. Field**, Ph.D., University of Alberta, Edmonton, Canada
- 9:00 - 9:20 AM **Houssein Assaad, Kang Yao, Fuller W. Bazer, Lan Zhou, Raymond J. Carroll, Cynthia J. Meininger, and Guoyao Wu**, Dept. of Animal Science and Statistics, Texas A&M Univ. and Dept. of Medical Physiology, Texas A&M Health Science Center, TX, USA  
*"Analysis of energy expenditure in diet-induced obese rats with abnormal metabolism of amino acids"*
- 9:20 - 9:40 AM **Marit Espe, Synne M Andersen, Elisabeth Holen, Jens-Erik Zerrahn & Anders Aksnes**, NIFES (National Institute for Nutrition and Seafood Research), Bergen, NORWAY  
*"Methionine limitations - a threat to health? using Atlantic salmon as the model"*

- 9:40 - 10:00 AM **Emad Fawzy Eskander, Hanna Hamdy Ahmed, and Ashraf El-Sherbiny**, Dept. Of Hormones, Dept. of Internal Medicine, National Research Center, Cairo, Egypt  
*"Therapeutic trials for HCV and diabetic patients type II using sprouting seeds"*
- 10:00 - 10:25 AM Coffee/tea break
- 10:25 - 10:45 AM **Yu-Xiang Yang, Zhao-Lai Dai, Wei-Yun Zhu**, Laboratory of Gastrointestinal Microbiology, Nanjing Agricultural University, Nanjing 210095, China; and Zhao-Lai Dai, College of Animal Science and Technology, China Agricultural University, Beijing, China  
*"Variations in the metabolism of amino acids by bacteria derived from different compartment of the pig small intestine"*
- 10:45 - 11:05 AM **Reza Rezaei, Sudath Dahanayaka, Weston W. Porter, Robert C. Burghardt, Gregory A. Johnson, Yanan Tian, Fuller W. Bazer, and Guoyao Wu**, Departments of Animal Science, Veterinary Integrative Biosciences, and Veterinary Physiology and Pharmacology, Texas A&M University, College Station, Texas 77840, USA  
*"Preparation and culture of porcine mammary epithelial cells"*
- 11:05 - 11:30 AM **Zhaolai Dai, Zhenlong Wu, Weiyun Zhu, Junjun Wang, and Guoyao Wu**, China Agricultural University, Beijing, China; Nanjing Agricultural University, Nanjing, China; and Texas A&M University, College Station, Texas, USA  
*"Nitrogen metabolism in the gut microbiota: impact on host nutrition and health"*
- 11:30 AM - 12:00 **Douglas Burrin, Barbara Stoll, Nancy Benight, and Caroline Bauchart-Thevret**, Baylor College of Medicine, Houston, Texas, USA  
*"New insights into sulfur amino acid function in gut health and disease"*

**October 6, Sunday (9:00 AM - 1:15 PM)**

**ICAAS SYMPOSIUM:**

**Aging and amino acid metabolism: from physiopathology to therapy with a special emphasis on safe intake**

**-- Room "Galleon III"**

*Chairmen:* **D.M. Bier**, M.D., Baylor College of Medicine, Houston, USA; and **L. Cynober**, Ph.D., Paris, France

09:00	<b>L. Cynober</b> (Paris, France)	Opening Aging : a public health concern and an opportunity for ICAAS
09:20	<b>N. Fukagawa</b> (Burlington, VT, USA)	Overview on amino acid metabolism in aging.
09:50	<b>E. Volpi</b> (Galveston, TX, USA)	Leucine intake and insulin resistance in elderly patients: are we ready to go ahead?
10:20	<b>BREAK</b>	
10:45	<b>J. Morley</b> (St. Louis, MO, USA)	Protein, calories and sarcopenia
11:15	<b>W. Campbell</b> (West Lafayette, IN, USA)	Essential amino acid requirements of elderly adults
11:45	<b>P. Atherton</b> (Nottingham, UK)	Effects of amino acids on skeletal muscle metabolism in young and older individuals: past, present and future directions
12:15	<b>BREAK</b>	
12:30	General discussion	Facilitators: <b>J. Fernstrom</b> (Pittsburgh, PA, USA), L. Cynober (Paris, France)
01:15	<b>Closure</b>	

Discussants: **Dr. M. Deutz** (Texas A&M University, TX, USA); **Dr. R. Elango** (University of British Columbia, Canada); **Dr. S.M. Morris Jr.** (University of Pittsburg, USA)

**October 6, Sunday (9:00 AM - 12:00 noon)**

**Taurine (I): Effects of taurine deficiency -- Room "Helm"**

*Session Chair:* **Steve Schaffer**, Ph.D., Department of Pharmacology, Univ. of South Alabama, Mobile, USA

9:00 - 9:25 AM **Eunkyue Park, Seung Yong Park, Bo Sook Kim, In Soo Cho, Carl Dobkin, Euisun Jung, Chuanhua Wang, and Georgia Schuller-Levis**, New York State Institute for Basic Research in Developmental Disabilities, Staten Island NY, USA; College of Veterinary Medicine, Konkuk University, Seoul, Korea; Seoul Grand Zoo, Gyunggido, Korea; National Veterinary Research and Quarantine Service, Gyunggido, Korea  
*"Taurine improves neonatal survival in cysteine sulfinic acid decarboxylase knockout mice"*

9:25- 9:50 AM **Takashi Ito, Stephen W. Schaffer, Junichi Azuma**, Hyogo University of Health Sciences, School of Pharmacy, Kobe, Japan; and University of South Alabama, Department of Pharmacology, College of Medicine, Mobile, AL  
*"The impact of tissue taurine deficiency on senescence and longevity; a study in taurine transporter knockout mouse"*

9:50 - 10:15 AM **Xiaobin Han, Andrea B. Patters, Takashi Ito, Junichi Azuma, Stephen Shaffer, and Russell W. Chesney**, Department of Pediatrics, University of Tennessee Health Science Center, Memphis, Tennessee, USA; Hyogo University of Health Sciences, Kobe, Japan; and University of South Alabama, Department of Pharmacology, Mobile, AL  
*"Knockout of the TauT gene predisposes C57BL/6 mice to STZ-induced diabetic nephropathy"*

10:15 - 10:45 AM Coffee/tea break

10:45 - 11:10 AM **Chian Ju Jong, Takashi Ito, Junichi Azuma, Stephen Schaffer**, University of South Alabama, Department of Pharmacology, College of Medicine, Mobile, AL; and Hyogo University of Health Sciences, School of Pharmacy, Kobe, Japan  
*"Mechanism underlying the role of taurine as an antioxidant and a cytoprotective agent"*

11:10 - 11:35 AM **Stephen Schaffer, K C Ramila, Takashi Ito and Junichi Azuma, University of South Alabama**, College of Medicine, Department of Pharmacology, Mobile, AL; and Hyogo University of Health Sciences, School of Pharmacy, Kobe, Japan  
*"Alteration of myofibrillar calcium sensitivity by taurine deficiency"*

11:35 AM - 12:00 **El Idrissi A**, Department of Biology, City University of New York Graduate School, Staten Island, NY 10314, USA  
*"Taurine and brain excitability"*

**October 6, Sunday (2:00 - 3:15 PM)**

**Taurine (II): Antioxidant and protective mechanisms of taurine -- Room "Helm"**

*Session Chair:* **Steve Schaffer**, Ph.D., Department of Pharmacology, Univ. of South Alabama, Mobile, USA

2:00 - 2:25 PM **Miyazaki T**, Tokyo Medical University Ibaraki Medical Center, Ibaraki, Japan  
*"The heterogeneous hepatoprotective properties of taurine"*

2:25 - 2:50 PM **Svend Høime Hansen, Niels Grunnet**, Dept. of Clinical Biochemistry, Copenhagen University Hospital, and University of Copenhagen, Copenhagen, Denmark  
*"pH and redox buffering of mitochondrial oxidation"*

2:50 - 3:15 PM **C.A. Lau-Cam**, Department of Pharmaceutical Sciences, St. John's University, College of Pharmacy and Health Professions, Jamaica, New York  
*"Evaluation of the role of taurine supplementation in the metabolic and antioxidant actions of metformin in an animal model of diabetes"*

3:15 - 3:30 PM Coffee/tea break

**October 6, Sunday (3:30 - 5:50 PM)**

**Taurine (III): CNS actions of taurine -- Room "Helm"**

*Session Chair:* **Steve Schaffer**, Ph.D., Department of Pharmacology, Univ. of South Alabama, Mobile, USA

3:30 - 3:55 PM **El Idrissi A**, Department of Biology, City University of New York Graduate School, Staten Island, NY 10314, USA  
*"Neuroprotective role of taurine during aging"*

3:55 - 4:20 PM **Howard Prentice, Payam Gharibani, Jigar Modi, Chunliu Pan, Zhiyuan Ma, Janet Menzie, Po-Chih Chen, Rui Tao and Jang-Yen Wu**, Florida Atlantic University, Charles E. Schmidt College of Medicine, Boca Raton, FL, U.S.A.  
*"Neuroprotective functions of taurine"*

4:20 - 4:45 PM **Fengyuan Piao, Fanyin Cheng**, Dept. of Occupational and Environmental Health, and Dept. of Health Administration, Dalian Medical Univ. Dalian, Liaoning, P.R. China  
*"Protective effect of taurine on the up-regulated expressions of retinoid X receptor genes in brains of mice exposed to arsenic"*

4:45 - 5:00 PM Coffee/tea break

5:00 - 5:25 PM **Amanda N. Freeman, and James E. Olson**, Wright State University School of Medicine, Dayton, Ohio, USA  
*"Differential regulation of the hippocampal taurine transporter protein in rat brain: Mechanisms contributing to neuronal volume regulation during cytotoxic brain edema"*

5:25 - 5:50 PM **Yu-Teh Li, Su-Chen Li**, Department of Biochemistry and Molecular Biology, Tulane University School of Medicine, New Orleans LA  
*"Taurine-conjugated GM2 in Tay-Sachs brain"*

**October 6, Sunday (2:00 - 5:30 PM)**

**Small proteins and peptides for multimodality molecular imaging -- Room "Harbor"**

*Session Chair:* **Zhen Cheng**, Ph.D., Stanford University Medical School, Stanford, CA, USA

2:00 - 2:05 PM **Zhen Cheng**, Ph.D., Stanford University Medical School, Stanford, CA, USA  
*"Introduction"*

2:05 - 2:35 PM **Eva M. Sevick**, Ph.D., Center for Molecular Imaging and Center in the NCI Network for Translational Research, Brown Foundation Institute of Molecular Medicine, Houston, USA  
*"Peptide- and protein- based near-infrared fluorescence imaging agents for intraoperative imaging"*

2:35 - 3:05 PM **Andreas Kjaer**, MD, PhD, DMSc, Department of Clinical Physiology, Nuclear Medicine & PET, Copenhagen University Hospital, Copenhagen, Denmark  
*"Translational molecular imaging with PET using peptide-based probes"*

- 3:05 - 3:35 PM **Jeffrey Smith**, Ph.D., Dept. of Radiology, University of Missouri - Columbia, MO, USA  
*"Molecular imaging probes based upon Bombesin peptide"*
- 3:35 - 4:00 PM Coffee/tea break
- 4:00 - 4:30 PM **Yubin Miao**, Ph.D., College of Pharmacy, Univ. of New Mexico, Albuquerque, NM, USA  
*"Radiolabeled alpha-melanocyte stimulating hormone peptides for melanoma imaging"*
- 4:30 - 5:00 PM **Richard Kimura**, Ph.D., Cell Molecular Biology Core, Stanford Univ., Stanford, CA, USA  
*"Knottins and cyclotides: the cystine knots. Next generation radiotracers engineered for molecular precision in cancer detection"*
- 5:00 - 5:30 PM **Zhen Cheng**, Ph.D., Molecular Imaging Program, Stanford University, Stanford, CA, USA  
*"Affibody proteins for multimodality molecular imaging and therapy of cancer"*

**October 6, Sunday (2:00 - 5:30 PM)**

**Glutamine and Glutamate -- Room "Galleon I"**

- Session Chair:* **Malcolm Watford**, D.Phil, Dept. of Nutritional Sciences, Rutgers Univ., New Jersey, USA
- 2:00 - 2:35 PM **Kunio Torii**, Torii Nutrient-Stasis Institute, Inc., Tokyo, Japan  
*"Physiological roles of glutamate signaling as taste and visceral information via gut-brain axis due to efficient digestion and metabolism for homeostasis"*
- 2:35 - 3:05 PM **Yuhua Zhu, Tianjiao Zhou, Zhaolai Dai, Tiantian Li, Zhenlong Wu, Guoyao Wu, and Junjun Wang**, State Key Lab of Animal Nutrition, China Agricultural Univ., Beijing, China  
*"Deprivation of L-glutamine induces autophagy in porcine intestinal epithelial cells"*
- 3:05 - 3:25 PM **Guangran Li, Bie Tan, Jing Wang, Xia Xiong, Yulong Yin, Zhenlong Wu, and Guoyao Wu**, Institute of Subtropical Agriculture, Chinese Academy of Sciences; Changsha, Hunan, China; University of the Chinese Academy of Sciences; Beijing, China; State Key Laboratory of Animal Nutrition, China Agricultural University, Beijing, China; and Department of Animal Science, Texas A&M University, College Station, TX, USA  
*"Molecular cloning, distribution, and ontogenetic expression of the amino acid transceptor SNAT2 mRNA in the small intestine of piglets"*
- 3:25 - 3:55 PM Coffee/tea break
- 3:55 - 4:15 PM **Katharina Prauss, Marlen Haegele and Andreas Moser**, Department of Neurology, University of Luebeck, Ratzeburger Allee 160, D-23538 Luebeck, Germany  
*"Glutamate-glutamine outflow from fresh human cortical slices"*
- 4:15 - 4:50 PM **Malcolm Watford and Samantha Dori**, Department of Nutritional Sciences, Rutgers University, New Jersey, USA  
*"Role for glutamine in adipocyte metabolism and obesity"*
- 4:50 - 5:10 PM **Han Fei**, Academy of State Administration of Grain, Beijing, China  
*"Large scale enzyme production of a glutamine-rich peptide and evaluation of its nutritional effects on the small intestine of suckling pigs"*
- 5:10 - 5:30 PM **Salyha N.O.**, Institute of Animal Biology NAAS, 38 Lviv, Ukraine  
*"Protective effect of glutamic acid against oxidative stress in rats"*



**October 6, Sunday (2:00 - 5:30 PM)****Protein Chemistry and Proteomics -- Room "Spinnaker"**

- Session Chair:*        **Kevin Burgess**, Dept. of Chemistry, Texas A&M University, College Station, Texas, USA
- 2:00 - 2:20 PM        **Marleny Fernández, Zully Hernández, Liliana Kurz, Lellys M. Contreras, and Jeff Wilkesman**, Universidad de Carabobo, FACYT, Laboratorio de Investigaciones Bioquímicas  
*"Multiple detection of thermophilic exoenzymes by transfer zymography"*
- 2:20 - 2:45 PM        **Long Chen, Riddhi Kharidia, Zhigang Tu, Nicole Patrone, Jun F. Liang**, Departments of Chemistry, Chemical Biology, and Biomedical Engineering, Charles V. Schaefer School of Engineering and Sciences, Stevens Institute of Technology, Hoboken, NJ, USA  
*"The pH sensitive bioactive peptides for wide biomedical applications"*
- 2:45 - 3:05 PM        **Yuriy A. Zolotarev**, Institute of Molecular Genetics, Russian Academy of Sciences, Moscow, Russia  
*"High temperature solid state catalytic isotope exchange (HSCIE) reaction"*
- 3:05 - 3:30 PM        **Mark Safro**, Dept. of Structural Biology, Weizmann Institute of Science, Rehovot, Israel.  
*"Editing activity of aaRSs is not a "guaranteed bill" against misincorporation of L-Dopa into polypeptide chains"*
- 3:30 - 4:00 PM        Coffee/tea break
- 4:00 - 4:25 PM        **Kevin Burgess**, Dept. of Chemistry, Texas A&M University, College Station, Texas, USA  
*"EKO: A method to discover small molecules to perturb protein-protein interactions"*
- 4:25 - 4:45 PM        **Chiara Cabrele**, University of Salzburg, Dept. of Molecular Biology, Div. of Chemistry and Bioanalytics, Billrothstr. 11, 5020 Salzburg, Austria  
*"Towards the modulation of the negative HLH transcription factor Id by chemically modified peptides"*
- 4:45 - 5:10 PM        **Carmen D. Tekwe**, Texas A&M Health Science Center, College Station, Texas, USA  
*"Statistical approaches to proteomics"*
- 5:10 - 5:30 PM        **Marek Trojanowicz**, Department of Chemistry, University of Warsaw, Poland  
*"Protein profiling in plant extracts using chip-based capillary electrophoresis for identification of genetically modified organisms (GMO)"*

**October 6, Sunday (2:00 - 5:30 PM)****Intestinal nitrogen metabolism (I) -- Room "Galleon II"**

- Session Chairs:*        **Dr. Francois Blachier**, INRA, Paris, France
- 2:00 - 2:10 PM        **Dr. Francois Blachier**, INRA, Paris, France  
*"Introduction"*
- 2:10 - 2:40 PM        **Juan C. Marini**, Ph.D., Baylor College of Medicine, Houston, Texas, USA  
*"Arginine production in the neonate"*
- 2:40 - 3:10 AM        **Janet Brunton**, Ph.D., University of Newfoundland, Canada  
*"The role of dipeptides in the injured small intestine"*

- 3:10 - 3:40 PM **Frederic Bouillaud**, Ph.D., Institut Cochin, Paris, France  
*"Adaptation of colonocyte mitochondria to lumen borne hydrogen sulfide"*
- 3:40 - 4:10 PM Coffee/tea break
- 4:10 - 4:40 PM **Luc Cynober**, Pharm.D, Ph.D., Université Paris-Descartes, France  
*"Specificity of citrulline metabolism in the intestine: causes and consequences"*
- 4:40 - 5:10 PM **Zhenlong Wu**, State key Laboratory of Animal Nutrition, College of Animal Science and Technology, China Agricultural University, Beijing, China  
*"Glutamine enhances intestinal epithelial barrier function by modulating tight junction protein expression"*
- 5:10 - 5:30 PM **Didier Rémond**, INRA de Clermont-Fd/Theix, Unité de Nutrition Humaine, Clermont-Ferrand, France  
*"How to choose the best dietary precursor of cysteine for glutathione synthesis?"*

**October 6, Sunday (2:00 - 5:30 PM) -- Room "Galleon III"**

- 1:30 - 2:00 PM **Poster set-up (maximum size of a poster = 1.2 m x 1 m)**
- 4:00 - 5:30 PM **Poster presentations** (please see page 25 for a list of posters)

**October 7, Monday (9:00 AM - 12:00 noon)**

**Intestinal nitrogen metabolism (II) -- Room "Galleon II"**

- Session Chairs:* **Francois Blachier**, Ph.D., INRA, Paris, France
- 9:00 - 9:30 AM **Hidehiro Nakamura**, Ph.D., Institute for Innovation, Ajinomoto, Tokyo, Japan  
*"Intestinal nitrogen metabolism of non-essential amino acids in rats"*
- 9:30 - 10:00 AM **Yulong Yin**, Ph.D., Institute of Subtropical Agriculture, The Chinese Academy of Sciences, Changsha, Hunan, China  
*"Glutamate and N-carbamoylglutamate supplementation for swine production"*
- 10:00 - 10:30 AM **Catherine J. Field**, Ph.D., University of Alberta, Edmonton, Alberta, Canada  
*"Consequences of supplementation with specific amino acids on the gut-associated lymphoid tissue"*
- 10:30 - 11:00 AM Coffee/tea break
- 11:00 - 11:30 AM **Barbara Stoll**, Ph.D., Baylor College of Medicine, Houston, Texas, USA  
*"Intestinal amino acid sensing: Role of dietary monosodium glutamate in preterm pigs"*
- 11:30 AM - 12:00 **Francois Blachier**, Ph.D., INRA/AgroParisTech, Paris, France  
*"Fate of proteins and amino acids in the small and large intestine: what consequences for the mucosa?"*

**October 7, Monday (9:00 AM - 12:00 noon)****Amino Acid Chemistry and Analysis (I) -- Room "Harbor"**

- Session Chair:* **C. Andy Hu**, Ph.D., Department of Biochemistry and Molecular Biology, University of New Mexico School of Medicine, Albuquerque, New Mexico, USA
- 9:00 - 9:30 AM **Ravi Bhushan and Manohar Lal**, Department of Chemistry, Indian Institute of Technology Roorkee, Roorkee – 247667, India  
*"Liquid chromatographic enantioseparation of fifteen DL-amino acids using new reagents having (S)-(+)-1-benzyl-3-aminopyrrolidine as chiral auxiliary on cyanuric chloride platform"*
- 9:30 - 10:00 AM **Manohar Lal and Ravi Bhushan**, Department of Chemistry, Indian Institute of Technology Roorkee, Roorkee – 247667, India  
*"Separation and analysis of thirty component mixture of diastereomers of proteinogenic amino acids by liquid chromatography using two new cyanuric chloride based reagents having (R)-(+)-naphthylethyl amine as chiral auxiliary"*
- 10:00 - 10:30 AM **Oliver Reiser**, Universität Regensburg, Institut für Organische Chemie, Germany  
*"Cyclic cis- $\beta$ -amino acids: Unique building blocks for bioactive ligands, organocatalysts and foldamers"*
- 10:30 - 11:00 AM Coffee/tea break
- 11:00 - 11:30 AM **Sichao Jia, Sudath Dahanayaka, Zhenlong Wu, Zhaolai Dai, Ying Yang, Junjun Wang, and Guoyao Wu**, Department of Animal Science, Texas A&M University, College Station, TX; and State Key Laboratory of Animal Nutrition, China Agricultural Univ., Beijing, China  
*"Analysis of free and peptide-bound amino acids using HPLC"*
- 11:30 AM - 12:00 **Li Qi**, Institute of Chemistry, Chinese Academy of Sciences, Beijing, P.R. China  
*"Study on MCE-LIF method for the hydrolysis of L-glutamine with L-asparaginase enzyme reactor based on gold nanoparticle"*

**October 7, Monday (9:00 AM - 12:00 noon)****Amino Acids in Plants -- Room "Helm"**

- Session Chair:* **Natalia Dudareva**, Ph.D., Department of Horticulture and Landscape Architecture, Purdue University, West Lafayette, IN, USA
- 9:00 - 9:05 AM **Natalia Dudareva**, Ph.D., Department of Horticulture and Landscape Architecture, Purdue University, West Lafayette, IN, USA  
*"Introduction"*
- 9:05 - 9:40 AM **Hiroshi Maeda**, Ph.D., Department of Botany, University of Wisconsin - Madison, WI, USA  
*"The evolution of plant phenylalanine biosynthesis"*
- 9:40 - 10:15 AM **Efraim Lewinsohn**, Ph.D. Institute of Plant Sciences, Newe Ya'ar Research Center, Agricultural Research, Ramat Yishay, Israel  
*"The conversion of essential amino acids into aroma volatiles in melon fruits"*
- 10:15 - 10:45 AM Coffee break

- 10:45 - 11:05 AM **Saete A Gaziola**, Ph.D., Genetics Department, ESALQ/USP, Piracicaba, SP - BRAZIL  
*"Lysine Metabolism under heavy metal (Cd) stress conditions in rice seeds (Oriza sativa L.)"*
- 11:05 - 11:25 AM **Pallavi Gahlot, Shilpi Kumari, Kanwarpal Singh Dhugga, and G. S. Randhawa**, Department of Biotechnology, Indian Institute of Technology Roorkee, India; and Crop Research & Development, IA, USA.  
*"Expression and characterization of the soluble domain of gaur [Cyamopsis tetragonoloba (L.) Taub.]  $\beta$ -mannan synthase in a heterologous system"*
- 11:25 AM - 12:00 **Natalia Dudareva**, Ph.D., Department of Horticulture and Landscape Architecture, Purdue University, West Lafayette, IN, USA  
*"New insights into phenylalanine biosynthesis in plants"*

**October 7, Monday (9:00 AM - 12:00 noon)**

**Amino Acids and proteins in Reproductive Biology and Fetal Programming -- Room "Galleon I"**

- Session Chair:* **Carey Satterfield**, Department of Animal Science, Texas A&M University, College Station, Texas, USA
- 9:00 - 9:30 AM **Xiaoqiu Wang, Kathrin Dunlap, M. Carey Satterfield, Robert C. Burghardt, Greg A. Johnson, Guoyao Wu, and Fuller W. Bazer**, Department of Animal Science and Department of Veterinary Integrative Biosciences, Texas A&M University, College Station Texas, USA  
*"Arginine and secreted phosphoprotein 1 act synergistically to stimulate MTORC1/MTORC2 cell signaling and cytoskeletal organization for proliferation, migration and adhesion of ovine trophectoderm cells"*
- 9:30 - 10:00 AM **Cui Zhu, Fuller W. Bazer, Gregory A. Johnson, Robert C. Burghardt, Houssein Assaad, Zongyong Jiang, and Guoyao Wu**, Department of Animal Science, Texas A&M University, College Station, Texas, USA; Institute of Animal Science, Guangdong Academy of Agricultural Sciences, Guangzhou, China  
*"Expression of aquaporins in the porcine uterine endometrium"*
- 10:00 - 10:30 AM **Shannon Washburn**, Dept. of Veterinary Physiology and Pharmacology, Texas A&M University, College Station, Texas, USA  
*"Maternal glutamine supplementation mitigates negative fetal developmental effects from prenatal alcohol exposure"*
- 10:30 - 11:00 AM Coffee/tea break
- 11:00 - 11:30 AM **Haijun Gao, Chandra Yallampalli**, Department of Obstetrics & Gynecology, the University of Texas Medical Branch, Galveston, Texas, USA  
*"Impacts of maternal protein nutrition on fetal programming in rats"*
- 11:30 AM - 12:00 **Carey Satterfield**, Dept. of Animal Science, Texas A&M Universit., College Station, Texas, USA  
*"A novel role for arginine in enhancing neonatal thermogenesis"*

**October 7, Monday (9:00 AM - 12:00 noon)**

**Sulfur- and seleno-containing amino acids (I) -- Room "Galleon III"**

- Session Chair:* **Maria Wróbel**, Ph.D., Jagiellonian University, Collegium Medicum, Cracow, Poland

- 9:00 - 9:10 AM **Maria Wróbel**, Ph.D., Jagiellonian University, Collegium Medicum, Cracow, Poland  
*"Introduction"*
- 9:10 - 9:45 AM **Noriyuki Nagahara**, Isotope Research Center, Nippon Medical School, Tokyo, Japan  
*"Functional diversity of mercaptopyruvate sulfurtransferase"*
- 9:45 - 10:20 AM **Jerzy Beltowski**, Dept. of Pathophysiology, Medical University, Lublin, Poland  
*"Regulation of endogenous H<sub>2</sub>S in the kidney"*
- 10:20 - 10:50 AM Coffee/tea break
- 10:50 - 11:25 AM **Sonia Melino**, Department of Science and Chemical Technologies  
University of Rome "Tor Vergata" via della Ricerca Scientifica, Rome, Italy  
*"Allyl sulfur compounds conjugates in cancer inhibition and tissue repair"*
- 11:25 AM - 12:00 **Arthur J. L. Cooper**, Department of Biochemistry and Molecular Biology, New York  
Medical College, Valhalla, NY, USA  
*"Aminotransferases catalyze conversion of organoselenium and organosulfur amino acids to chemopreventive metabolites"*

**October 7, Monday (2:00 - 5:30 PM)**

**Sulfur- and seleno-containing amino acids (II) -- Room "Galleon III"**

- Session Chair:* **Maria Wróbel**, Ph.D., Jagiellonian University Medical College, 31-034 Kraków, Poland
- 2:00 - 2:35 PM **Hideo Kimura**, Department of Molecular Pharmacology, National Institute of Neuroscience,  
National Center of Neurology and Psychiatry, Tokyo, Japan  
*"H<sub>2</sub>S production from D-cysteine and polysulfides as H<sub>2</sub>S-derived signaling molecules"*
- 2:35 - 3:10 PM **Hieronim Jakubowski**, UMDNJ-New Jersey Medical School, Department of Microbiology  
and Molecular Genetics, International Center for Public Health, Newark, NJ  
*"Homocysteine as a protein amino acid"*
- 3:10 - 3:45 PM **Maria Wróbel**, Jagiellonian University Medical College, Kraków, Poland  
*"Some aspects of L-cysteine transsulfuration in human brain"*
- 3:45 - 4:10 PM Coffee/tea break
- 4:10 - 4:30 PM **Zhengfeng Fang, De Wu, Lianqiang Che, Yan Lin, Shengyu Xu, Yves Mercier**, Key  
Laboratory for Animal Disease Resistance Nutrition of the Ministry of Education of China,  
Animal Nutrition Institute, Sichuan Agricultural University, Ya'an 625014, China; and  
Adisseeo France S.A.S., CERN, Commentry, France  
*"Increased consumption of methionine as methionine hydroxy analog is positive to alleviate  
early weaning induced growth retardation in piglets"*
- 4:30 - 4:50 PM **Sita Arjune, Guenter Schwarz and Abdel Ali Belaidi**, Institute of Biochemistry,  
Department of Chemistry and Center for Molecular Medicine, University of Cologne,  
Cologne, Germany  
*"Cysteine catabolism to sulfate in humans: enzymatic properties and regulation"*
- 4:50 - 5:10 PM **Avadh Kumar, Guenter Schwarz and Abdel Ali Belaidi**, Institute of Biochemistry,  
Department of Chemistry and Center for Molecular Medicine, University of Cologne, 50674  
Cologne, Germany

*"S-Sulfocysteine and taurine: Involvement in neuronal excitotoxicity and protection in molybdenum cofactor deficiency"*

- 5:10 - 5:30 PM **Yulong Tang, Weikai Ren, Fengna Li, Gang Liu, Bie Tan, Guoyao Wu, Charles M. Nyachoti and Yulong Yin**, Institute of Subtropical Agriculture, The Chinese Academy of Science, Changsha City, Hunan, China; Department of Animal Science, Texas A&M University, College Station, TX, USA; Department of Animal Science, University of Manitoba, Winnipeg, MB, Canada  
*"Methionine deficiency in culture medium promotes apoptosis in intestinal epithelial cells infected with enterotoxigenic Escherichia coli"*

**October 7, Monday (2:00 - 5:30 PM)**

**Amino Acid Chemistry and Analysis (II) -- Room "Harbor"**

- Session Chair:* **Patrick Meffre**, Ph.D., Institut des Biomolécules Max Mousseron (IBMM) - UMR 5247 CNRS-UM1-UM2 and Laboratoire de recherche en Chimie BioOrganique (LCBO) de l'Université de Nîmes, Nîmes, France
- 2:00 - 2:25 PM **Hariom Nagar and Ravi Bhushan**, Department of Chemistry, Indian Institute of Technology Roorkee, Roorkee – 247667, India.  
*"L-amino acids as chiral auxiliaries to develop reagents for enantioseparation of DL-selenomethionine by reversed-phase high-performance liquid chromatography"*
- 2:25 - 2:50 PM **A.A. Sladkova, A.A. Sosnovskaya, I.P. Yedzimecheva, O.I. Shadyro**, Research Institute for Physical Chemical Problems, Belarusian State University, Minsk, Republic of Belarus  
*"Photo- and radiation-induced transformations of serine, threonine and the respective dipeptides"*
- 2:50 - 3:20 PM **Zohra Benfodda, Stephanie Ortial, David Benimelis, Valérie Rolland, Patrick Meffre**, Institut des Biomolécules Max Mousseron (IBMM) and Laboratoire de recherche en Chimie BioOrganique (LCBO) de l'Université de Nîmes, Nîmes, France  
*"Synthesis of acetylenic analogue of phenylalanine"*
- 3:20 - 3:50 PM Coffee/tea break
- 3:50 - 4:15 PM **Shuchi Dixit, Manohar Lal, Ravi Bhushan**, Department of Chemistry, Yeungnam University, Gyeongsan, South Korea; and Department of Chemistry, Indian Institute of Technology Roorkee, Roorkee, India  
*"Application of amino acids as chiral auxiliaries to synthesize trichloro-s-triazine based chiral derivatizing reagents for liquid chromatographic enantioseparation of amino alcohols"*
- 4:15 - 4:40 PM **A.A. Sladkova, A.A. Sosnovskaya, I.P. Yedzimecheva, O.I. Shadyro**, Research Institute for Physical Chemical Problems, Belarusian State University, Minsk, Republic of Belarus  
*"A novel pathway of free-radical destruction of hydroxyl-containing amino acids and their derivatives"*
- 4:40 - 5:05 PM **Yi Guo, Yao Fu, Sen Yang, Li Xu**, Key Laboratory for Molecular Enzymology and Engineering, College of Life Science, Jilin University, Changchun, China  
*"A novel chemical strategy for the synthesis of RGD<sub>X</sub> (X: amino acid) tetrapeptide"*
- 5:05 - 5:30 PM **Chuangang Qin, Huifang Liu, Bo Lian, Yuanyan Shen**, Department of Applied Chemistry, School of Natural and Applied Sciences, Northwestern Polytechnical University, Xi'an, China  
*"Total solid-phase synthesis of Jagaricin, a novel natural macrocyclic lipodepsipeptide from the mushroom pathogen Janthinobacterium agaricidamnorum"*

**October 7, Monday (2:00 - 5:30 PM)****Gene Expression and Protein Turnover -- Room "Helm"**

- Session Chair:*        **Teresa A. Davis**, Ph.D., Baylor College of Medicine, Houston, Texas, USA
- 2:00 - 2:25 PM        **Fumiaki Yoshizawa**, Department of Bioproductive Science, Faculty of Agriculture  
Utsunomiya University, Utsunomiya, Tochigi, Japan  
*"Analysis of the mechanism of action of tryptophan-induced protein synthesis in the rat liver"*
- 2:25 - 2:50 PM        **Kang Yao, Chenxing Fu, Yulong Yin, Youngqing Hou, Junjun Wang, Zhenlong  
Wu, and Guoyao Wu**, The Chinese Academy of Science, Changsha, China; Texas A&M  
University, College Station, TX, USA; Hunan Agricultural University, Changsha, China;  
Wuhan Polytech Univ., Wuhan, China; and China Agricultural University, Beijing, China  
*"Alpha-ketoglutarate enhances protein synthesis in intestinal porcine epithelial cells"*
- 2:50 - 3:20 PM        **Agus Suryawan, Hanh V. Nguyen, and Teresa A. Davis**, USDA/ARS-CNRC, Baylor  
College of Medicine, Housotn, Texas, USA  
*"The Regulation of mTORC1 signaling by amino acids in skeletal muscle of neonatal pigs"*
- 3:20 - 3:45 PM        **Liliana Kurz, María Fernanda Padrón, Sahar Awde, Hervé Rémygnon, Jeff  
Wilkesman**, Universidad de Carabobo, Valencia, Venezuela; INRA, Castanet-Tolosan,  
rance; Université de Toulouse, Castanet-Tolosan, France  
*"Protease characterization in duck liver steatosis by 1- and 2-dimensional zymography"*
- 3:45 - 4:15 PM        Coffee/tea break
- 4:15 - 4:40 PM        **Gregory A. Johnson**, Dept. of Veterinary Integrative Biosciences, Texas A&M University,  
College Station, TX, USA  
*"Expression and function of osteopontin in the conceptus"*
- 4:40 - 5:05 PM        **Nirmal Chhikara, Vikash Kumar Yadav, Mayank Saraswat, Anil Kumar Tomar,  
Kamaldeep Gill, Sharmistha Dey, Sarman Singh, Savita Yadav**, Dept. of Biophysics and  
Dept. of Lab. Medicine, All India Institute of Medical Sciences, New Delhi INDIA  
*"Human epididymal protein-4 and cystatins: Novel cross class protease inhibitors from  
human seminal plasma"*
- 5:05 - 5:30 PM        **Savita Yadav**, Dept. of Biophysics, All India Institute of Medical Sciences, New Delhi, India  
*"Human epididymal protein-4 and cystatins: Novel cross class protease inhibitors from  
human seminal plasma"*

**October 7, Monday (2:00 - 5:30 PM)****Monosodium Glutamate: effects on appetite, food intake/selection and body weight -- Room "Galleon II"**

- Session Chair:*        **John D. Fernstrom**, Ph.D., University of Pittsburgh School of Medicine, Pittsburgh, USA
- 2:00 - 2:10 PM        **John D. Fernstrom**, Ph.D., University of Pittsburgh School of Medicine, Pittsburgh, USA  
*"Introduction"*
- 2:10 - 2:50 PM        **John T. Brosnan**, Ph.D., Memorial University of Newfoundland, St. Johns, NF, Canada  
*"Metabolic actions of glutamate and ingested MSG in relation to energy and fat metabolism,  
and body weight"*
- 2:50 - 3:30 PM        **Mark I. Friedman**, Ph.D., Monell Chemical Senses Center, Philadelphia, PA, USA  
*"Effect of MSG ingestion on appetite, food intake and body weight in animals"*

- 3:30 - 4:00 PM Coffee break
- 4:00 - 4:40 PM **Adam Drewnowski**, Ph.D., University of Washington, Seattle, USA  
*"Effects of MSG ingestion on appetite, food intake and body weight in humans"*
- 4:40 - 5:30 PM **John D. Fernstrom**, Ph.D., University of Pittsburgh, Pittsburgh, USA  
*"Group discussion and summary"*

**October 7, Monday (2:00 - 5:30 PM)**

**Antimicrobial and bioactive peptides -- Room "Galleon I"**

- Session Chair:* **Lichar Dillon**, University of Texas Medical Branch, Galveston, Texas, USA
- 2:00 - 2:20 PM **Sanjay Kumar, Anil Kumar Tomar, Sudhuman Singh, Kamaldeep Gill, Sharmistha Dey, Sarman Singh, Savita Yadav**, Dept. of Biophysics, All India Institute of Medical Sciences, New Delhi, India; School of Life Sciences, Jawaharlal Nehru University; and Dept. of Laboratory Medicine, All India Institute of Medical Sciences, New Delhi, India.  
*"Identification of carboxypeptidase E in human semen which binds to heparin and exhibits antibacterial property"*
- 2:20 - 2:40 PM **N. Dong, X. Zhu, Y. F. Lv, Q. Q. Ma, and A. S. Shan**, Institute of Animal Nutrition, Northeast Agricultural University, Harbin, China  
*"Biochemical properties and molecular mechanisms of antibacterial actions of carboxy-terminal RWL-tagged antimicrobial peptides"*
- 2:40 - 3:00 PM **Alice B. Nongonierma and Richard J. FitzGerald**, Department of Life Sciences and Food for Health Ireland (FHI), University of Limerick, Limerick, Ireland  
*"Dipeptidyl peptidase IV inhibitory properties of milk protein-derived peptides"*
- 3:00 - 3:20 PM **Q.Q. Ma and A.S. Shan**, Institute of Animal Nutrition, Northeast Agricultural University, Harbin, China  
*"Novel antimicrobial peptides rich in Val/Arg residues and the biological activities in vitro and in vivo"*
- 3:20 - 3:50 PM Coffee/tea break
- 3:50 - 4:10 PM **H. S. Yang, Z. K. Liu, Li Li, X. Xiong, G. Y. Wu, and Y. L. Yin**, Institute of Subtropical Agriculture, Chinese Academy of Sciences; Changsha, Hunan, China; Veterinary Faculty, Hunan Agric. Univ., Changsha, Hunan, China; Guangzhou Glam Biotechnology Co., Ltd., Guangzhou, China; and Dept. of Animal Science, Texas A&M Univ., College Station, TX  
*"Effects of antimicrobial peptide on growth performance and survival of weaned pigs"*
- 4:10 - 4:30 PM **C. Z. Cai, C. M. Santos, Y. Li, A. Kumar, G. T. Qin, A. Lopez, S. Kolar and A. M. McDermott**, Department of Chemistry and College of Optometry, University of Houston, Houston, Texas 77204, USA  
*"Antibacterial properties of immobilized antimicrobial peptides"*
- 4:30 - 4:50 PM **Li Lv-mu, Peng Hui-hui**, College of Tea & Food Science and Technology, Anhui Agricultural University, Hefei, China  
*"Purification and antioxidant activity analysis of solid state fermentation sesame meal peptide"*
- 4:50 - 5:10 PM **Yoshinori Mine**, Department of Food Science, University of Guelph, Ontario, Canada  
*"Gamma-glutamyl di-peptides and chronic inflammation"*



5:10 - 5:30 PM **X. Zhu and A.S. Shan**, Northeast Agricultural University, Harbin, China, *"Importance of tryptophan along the nonpolar helix face of an antimicrobial amphipathic peptide for improving killing efficacy against Pseudomonas aeruginosa"*

### List of Posters

**1. Ajinkya Sase, Sudath Dahanayaka, Harald Höger, Guoyao Wu, and Gert Lubec**, Dept. of Pediatrics, Vienna Medical University, Vienna, Austria; and Dept. of Animal Science, Texas A&M Univ., College Station, Texas, USA *"Changes of hippocampal  $\beta$ -alanine and citrulline levels parallel early and late phase of retrieval in the Morris Water Maze"*

**2. Alexander A. Zhloba, Tatiana F. Subbotina**, Biochemical Department of Scientific Centre, Pavlov State Medical University of St. Peterburg, Russia; Proteomics Group, Almazov Federal Heart, Blood and Endocrinology Centre, St.-Petersburg, Russia *"Large-scale method of blood plasma fractionation for sulfur amino acids transport evaluation"*

**3. Tatiana F. Subbotina, Alexander A. Zhloba**, Biochemical Department of Scientific Centre, Pavlov State Medical University of St. Peterburg, Russia; Proteomics Group, Almazov Federal Heart, Blood and Endocrinology Centre, St.-Petersburg, Russia. *"Fibrinolysis as an additional source of basic amino acids in plasma"*

**4. Stephanie Ortial, Zohra Benfodda, David Benimelis, and Patrick Meffre**, Institut des Biomolécules Max Mousseron (IBMM) - UMR 5247 CNRS-UM1-UM2 and Laboratoire de recherche en Chimie BioOrganique (LCBO) de l'Université de Nîmes, Nîmes, France *"Synthesis of 5-trifluoromethyl-L-proline from L-glutamic acid"*

**5. M. Holeček, M. Kovařík, and L. Šišpera**, Department of Physiology, Charles University in Prague, Faculty of Medicine in Hradec Kralove, Czech Republic *"Effect of ammonia and glutamine on branched-chain amino acid oxidation and protein metabolism in healthy and endotoxemic rats"*

**6. Sonika Batra and Ravi Bhushan**, Department of Chemistry, Indian Institute of Technology, Roorkee, India *"L-amino acids as chiral selectors for enantioseparation of ( $\pm$ )-Bupropion using chiral ligand-exchange thin layer chromatography"*

**7. Pavla Krulisova, Barbora Jankovicova, Jana Kucerova, Zuzana Bilkova**, Department of Biological and Biochemical Sciences, Faculty of Chemical Technology, University of Pardubice, Pardubice, Czech Republic *"Optimization of magnetic bead enzyme-linked immunosorbent assay for detection of specific antibodies against Amyloid beta representing biomarkers of Alzheimer's disease"*

**8. Barbora Jankovicova, Petr Muller, Jan Lakota, Borivoj Vojtesek, Zuzana Bilkova**, Department of Biological and Biochemical Sciences, University of Pardubice, Pardubice, Czech Republic; Department of Oncological and Experimental Pathology, Masaryk Memorial Cancer Institute, Brno, Czech Republic; and Laboratory of Molecular Oncology, Cancer Research Institute, Slovak Academy of Sciences, Bratislava, Slovakia *"Immunodominant epitope of carbonic anhydrase I identified by phage display peptide library"*

**9. Noor Riyadh Thiab, Graham L Jones and Nicola King**, School of Science and Technology, University of New England, Armidale, Australia NSW *"Effect of ageing and oxidative stress on the glutathione concentration in different kidney regions"*

**10. Amer Almashhadany, Shatha Ahmad, Pierre Moens, Graham L Jones and Nicola King**, School of Science and Technology, University of New England, Armidale, Australia NSW *"Supplementation with L-glycyl-L-glutamine Improves Functional Recovery Following Ischaemia Reperfusion In the Isolated Rat Heart"*

**11. Othman A Alghamdi, Pierre Moens, Graham L Jones and Nicola King**, School of Science and Technology, University of New England, Armidale, Australia NSW  
*"A new use of the biosensor DiS-C<sub>3</sub>-(3) to measure dipeptide transport across the apical membrane of the renal proximal tubule"*

**12. Weiwei Wang, Reza Rezaei, Zhenlong Wu, Zhaolai Dai, Junjun Wang, and Guoyao Wu**, Department of Animal Science, Texas A&M University, College Station, Texas, USA; and State Key Laboratory of Animal Nutrition, China Agricultural University, Beijing, China  
*"Concentrations of free and peptide-bound hydroxyproline in sow's milk and piglet plasma"*

**13. Weiwei Wang, Bin Wang, Zhenlong Wu, Zhaolai Dai, Junjun Wang, and Guoyao Wu**, State Key Laboratory of Animal Nutrition, China Agricultural University, Beijing, China  
*"Dietary supplementation with glycine decreases glutamine concentrations in the plasma of milk protein-fed piglets"*

**14. Gang Lin, Defa Li, Junjun Wang, Fuller W. Bazer, and Guoyao Wu**, State Key Laboratory of Animal Nutrition, China Agricultural University, Beijing, China 100193; and Department of Animal Science, Texas A&M University, College Station, Texas, USA  
*"Stimulation of pentose cycle activity in porcine trophectoderm cells by L-glutamine, but not L-arginine"*

**15. Ying Yang, Zhenlong Wu, Katherine Kelly, Cynthia J. Meininger, and Guoyao Wu**, Department of Animal Science, Texas A&M University, College Station, Texas, USA; State Key Laboratory of Animal Nutrition, China Agricultural University, Beijing, China; Department of Medical Physiology, Texas A&M Health Science Center, College Station, Texas, USA.  
*"N-Ethyl-L-glutamine enhances the synthesis of nitric oxide by endothelial cells"*

**16. Chengbo Yang, Tiejun Huang, Li Wu, Tiejun Li, Guoyao Wu, and Yulong Yin**, Institute of Subtropical Agriculture, The Chinese Academy of Sciences, Changsha, Hunan, China; Lucta (Guangzhou) Flavor, co., Ltd, Guangzhou, Guangdong, China; Department of Animal Science, Texas A&M Univ., College Station, Texas, USA  
*"Molecular cloning and characterization of porcine calcium-sensing receptor (CaSR)"*

**17. Ashif Iqbal Bhuiyan, Felicia Carotenuto, Emanuela Vitale, Arianna Mauretti, Annalisa Neri, Francesca Nanni, Paolo Di Nardo, and Sonia Melino**, Department of Chemical Sciences and Technologies, Department of Clinical Sciences and Translational Medicine, and Department of Industrial Engineering, University of Rome Tor Vergata, Rome Italy  
*"Allyl sulfur compounds conjugates in cancer inhibition and tissue repair"*

**18. Gang Liu, Yordan Martínez Aguilar, Wenkai Ren, Shuai Chen, Tiejun Li, Guyao Wu and Yulong Yin**, Institute of Subtropical Agriculture, Chinese Academy of Sciences, Changsha, Hunan, China; Study Center of Animal Production, Veterinary Faculty, University of Granma, Bayamo, Carretera Manzanillo, Granma, Cuba  
*"Effect of dietary supplementation with samgiomarome on growth performance, diarrhea score and serum concentrations of amino acids in weanling pigs"*

**19. Peng Yi, Chen Yi, Fu Shao-Hui, Chen Li-Xiang, and He Jian-Hua**, College of Animal Science and Technology, Hunan Agricultural University, Hunan, Changsha, China  
*"Dietary valine supplementation improves immune and endocrine function of lactating sows"*

**20. Shota Watanabe, Yasumasa Shiraishi, Minoru Tanigawa, Hideyuki Tamegai, Chiaki Kato, and Katsushi Nishimura**, Dept. of Materials & Applied Chemistry, College of Science & Technology, Nihon University, Dept. of Chemistry, College of Humanities & Science, Nihon University; Japan Agency for Marine-Earth Science & Technology, Japan  
*"Role of D-amino acids in a deep-sea bacterium Shewanella violacea DSS12"*

**21. Koichiro Suzumoto, Hitomi Usui, Katsuya Sato, Shota Watanabe, Minoru Tanigawa, Hideyuki Tamegai, Chiaki Kato, and Katsushi Nishimura**, Department of Materials and Applied Chemistry, College of Science and

Technology, Nihon University; Department of Chemistry, College of Humanities and Science, Nihon University; and Japane Agency for Marine-Earth Science and Technology, Japan

*"Role of D-amino acid dehydrogenases of three microorganisms in different environments"*

**22. Ashif Iqbal Bhuiyan, RidvanNepavishta, Vilma Papajani, Maurizio Paci, Sonia Melino**, Dept. of Chemical Sciences and Technologies Univ. of Rome Tor Vergata, Rome, Italy; and Univ. of Medicine, Tirana, Albania

*"Towards the production of GSH-sulfur compound conjugates for therapeutic applications"*

**23. Minhui Long, Wanjin Ouyang, Dan Yi, Yongqing Hou, Guoyao Wu**, Hubei Key Laboratory of Animal Nutrition and Feed Science, Wuhan Polytechnic University, Wuhan, China; and Dept. of Animal Science, Texas A&M University, College Station, TX, USA

*"N-acetylcysteine stimulates proliferation and prevents lipopolysaccharide-induced death of intestinal porcine epithelial cells"*

**24. Xiang-Guang Li, Xiu-qi Wang**, College of Animal Science, South China Agricultural University; Guangdong Provincial Key Laboratory of Agro-Animal Genomics and Molecular Breeding; and Key Laboratory of Chicken Genetics, Breeding and Reproduction, Ministry of Agriculture, Guangzhou, 510642, P. R. China

*"The relationship between excitatory amino acid transporter 3 and the growth of small intestine in chick embryos"*

**25. Chunxiao Wang, Wenhui Wu**, Branch of Marine Biopharmaceutical, College of Food Science & Technology, and Institute of Marine Sciences, Shanghai Ocean University, Shanghai, China

*"Proline-centered cis-trans isomerization in peptides and proteins, behaviors in vivo and in vitro"*