

Chinese American Society of Nephrology **NEWSLETTER**

美洲華人腎臟學會

Volume XI, No. 1

February 2006



Jing Zhou, M.D., Ph.D.

PRESIDENT'S MESSAGE AND REPORT OF THE 2005 ANNUAL MEETING

Happy New Year!

We have had a successful 2005. In the last year, we have established an endowment for a new award – the CASN Young Investigator Award – to promote the career of young physician scientist or physician/scientist in nephrology research. We have established a new website for

CASN (<http://casn.bwh.harvard.edu/>). CASN meeting information and other activities will be posted on the website.

Our 2005 annual meeting was held in the Philadelphia Marriott Downtown on November 10th, 2005 in Philadelphia, Pennsylvania.

The meeting turned out to be a great success. Dr. Victoria Lim, the CASN Board member and the Chair of the Young Investigator Award Committee introduced the first CASN Young Investigator Award recipients: Drs. Liqun Bai and Weining Lu, two outstanding young physician scientists. Each Young Investigator Awardee delivered a short speech. I had the pleasure to present the award to both recipients. I look forward to seeing more young talented physician/scientists to receive this annual award!

The Chinese American Society of Nephrology
美洲華人腎臟學會
2005 Annual Meeting
Keynote Speaker
Recipient of the 2005 Distinguished Scientist Award
Robert Tjian, Ph.D.
HHMI, U. C. Berkeley
"A Biochemist's Journey Through the Land of Transcription Biology"
Young Investigator Award Addresses
by Weining Lu, M.D., Liqun Bai, M.D., Ph.D.
Thursday November 10th, 6:30pm
Marriott Hotel, Liberty Ballroom, Salon C
Food and refreshments will be served
ALL ARE WELCOME!!

President

Jing Zhou, M.D., Ph.D.
Brigham and Women's Hospital
Boston, MA

Executive

Director/Secretary/Treasurer

Kurt Lee, M.D.
Biotronics Kidney Center
Beaumont, TX

Directors

Alfred Cheung, M.D.
University of Utah Health Science Center
Salt Lake City, UT
Laurence Chan, M.D.
University of Colorado Health Sciences Center
Denver, CO

Todd Ing, M.D.
Hines VA Medical Center
Hines, IL

David B.N. Lee, M.D.
UCLA School of Medicine
Los Angeles, CA

Howard Lien, M.D.
University of Arizona Health Sciences Center
Tucson, AZ

Victoria Lim, M.D.
University of Iowa
Iowa City, IA

York Pei, M.D., FRCP(C), FACP, FASN
University Health Network
Toronto, Ontario, Canada M5G2N2

John Wang, M.D.
The New York Hospital Cornell Medical Center
New York, NY

X. Joseph Zhou, M.D.
UT Southwestern Medical Center
Dallas, TX

Inside This Issue

President's Message	1
Young Investigator Award	2
Distinguished Scientist Award	3
Dr. Gordon Ku, MD	4
Dr. Weining Lu, MD	5
Dr. Liqun Bai, MD	6
From the Board of Directors	7

CASN Young Investigator Award Presentations at the 2005 CASN Annual Meeting



The YIA Committee Chair Dr. Vicky Lim introduces Young Investigator Awardees



The Young Investigator Awardee Dr. Weining Lu giving a speech



The Young Investigator Awardee Dr. Lichun Bai giving a speech



The CASN president Dr. Jing Zhou presents the Young Investigator Award to Dr. Lichun Bai



The CASN president Dr. Jing Zhou presents the Young Investigator Award to Dr. Weining Lu

The Chinese American Society of Nephrology (CASN) Young Investigator Award

was established in 2005 with the support of the Kidney Dialysis Foundation in Singapore, founded by Dr. Gordon Ku. This award is designed to encourage and recognize young scientists active in basic or patient-oriented research related to the functions and diseases of the kidney. This award is limited to individuals who are less than 41 years of age on the day of the CASN meeting at which the award is presented. The award consists of a certificate of recognition and \$1,000 in support of travel to ASN.

Dr. Tjian Receives the Distinguished Scientist Award

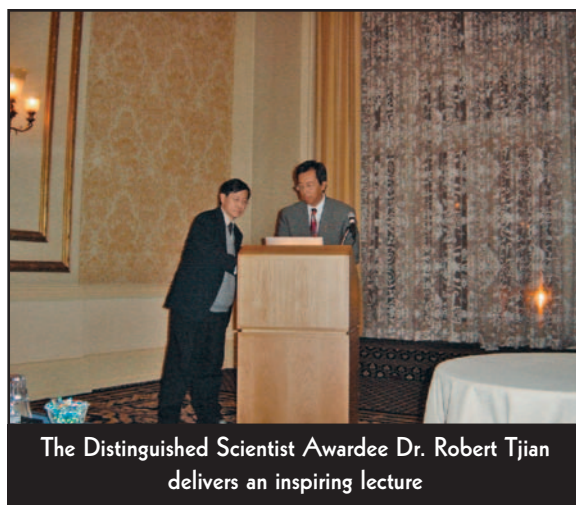
CASN board director Dr. Larry Chen introduced our *keynote* speaker Robert Tjian, recipient of the 2005 *Distinguished Scientist Award* of CASN. Dr. Tjian gave a fabulous lecture on “A Biochemist’s Journey through the Land of Transcription Biology”. Dr. Tjian is an outstanding scientist, and a pioneer on studies of gene transcription. Dr. Tjian has ranked among the world’s 10 most-cited scientists for several years by ISI. Dr. Tjian is a Howard Hughes Investigator and Professor of Biochemistry and Molecular Biology at University of California, Berkeley, a member of the Academia Sinica of China, the U.S. National Academy of Sciences, and the American Academy of Arts and Sciences. Tjian’s lecture was philosophical, inspiring, and illuminating. Dr. Tjian’s lecture was followed by an open live discussion with the audience on “how to succeed as a Chinese”. We had many excellent practical questions and answers and discussions! We also had excellent food with coconut shrimps!



The CASN president Dr. Jing Zhou presents the Distinguished Scientist Award to Dr. Robert Tjian



CASN Board director Dr. Larry Chan introduces the Distinguished Scientist Award to Dr. Robert Tjian



The Distinguished Scientist Awardee Dr. Robert Tjian delivers an inspiring lecture

**CASN 2005
Annual Meeting
Sponsors**

The CASN gratefully acknowledge the generous support from the following companies and organizations:

Amgen

**Fresenius Medical Care
North America**

**and Kidney Dialysis
Foundation of Singapore**



Dr. Gordon Ku

Founder of Kidney Dialysis Foundation of Singapore

Dr Gordon Ku is a well-known nephrologist who runs a well established nephrology practice at the Ku Kidney & Medical Centre in Mount Elizabeth Hospital in Singapore. However, his achievements go well beyond the realms of clinical medicine.

He graduated from the Hong Kong University in 1965 and did his housemanship in Hong Kong in General Surgery and Paediatrics. He then became a medical officer in Clinical Pathology after which he decided to move to the University College Hospital in London to take up the post of Honorary Senior House Officer in Medicine. He attained the Membership of the Royal College of Physicians in 1970. After postings as Senior House Officer in Medicine at Hammersmith Hospital, then in Nephrology at the Royal Free Hospital, he became Registrar in the same Hospital in 1972.

He then made the important decision to move to Singapore as a Lecturer in the Department of Medicine of the then University of Singapore in 1973. Since then, he has been a resident in Singapore for more than 30 years. He held the post of Senior Lecturer from 1974 to 1978.

Specialist recognition came in the form of Fellowships of the Academy of Medicine, Singapore in 1974, Royal Australasian College of Physicians in 1978 and Royal College of Physicians (London) in 1987.

Armed with his knowledge attained in institutional practice, he set his innovative and creative mind to develop nephrology in the private sector. He was the first nephrologist to operate a chronic haemodialysis programme in the private sector in 1979, and founded the first commercial dialysis provider company, Renalcare, in 1985. He was also the first physician to start a renal transplantation programme in the private sector.

Even though he was in the private sector, he has been called upon to perform several national duties: namely as President of the Singapore Society of Nephrology in 1981 and 1982, Honorary Lecturer in Post-graduate Medicine, National University of Singapore from 1979 to 1983, as a member of the Renal Medicine Specialty Board, Academy of Medicine from 1996 to 1998 and a co-opted member, National Committee on Renal Care 1999 to 2001, and then full member of the same Committee from 2002 to now.

Those who know Dr Ku also know his passion for wine. To testify to the height of achievement in this area, he became a member of an elite brotherhood called the Chevalier du Tastevin of Burgundy in France in 1987.

Perhaps what has made Dr Ku most well known in recent years is his effort to bring dialysis to the financially needy. To this end, he founded the Kidney Dialysis Foundation in 1996 to complement the role of the existing National Kidney Foundation (NKF) of Singapore. It is well known that he did not always agree with the NKF on certain policy issues. Some of these have been debated publicly in the media when KDF was first formed. He is the only person who organized a group of equally committed individuals to form the Kidney Dialysis Foundation. With the backing of the Ministry of Health, KDF has since helped a total of about 300 patients to receive subsidized dialysis treatment. Some of them were denied dialysis by the NKF for various reasons.

Dr Ku also spearheaded the State-of-the-Art Nephrology Course in 1997, 1999 and 2002 to bring nephrology education to the regional community complementing the traditional conference formula. Dr. Ku is a keen promoter of the careers of young physicians/scientists in nephrology research. He is a strong believer and supporter of the establishment of the Young Investigator Award of CASN.

Last but not least, his wife Mrs (Dr) Gloria Ku has to be mentioned, as she has been supportive of Dr Ku's ventures all these years.



Weining Lu, MD, Co-Recipient of the First CASN Young Investigator Award

The Chinese American Society of Nephrology (CASN) is proud to present the 1st Young Investigator Award to Dr. Weining Lu, Assistant Professor of Medicine at the Boston University Medical Center.

Weining Lu was born in 1966 in Ningbo city, Zhejiang province, China. He attended Zhejiang University School of Medicine (former Zhejiang Medical University) where he studied clinical medicine. After receiving his medical degree, Dr. Lu spent three years as a surgical resident in the Department of Surgery at the Second Affiliated Hospital of Zhejiang University School of Medicine. In the

meantime, he developed a keen desire to move into scientific research and came to the United States in 1992 for advanced scientific training.

After completing his graduate studies and received his M.Sc. in the biomedical science from Northeastern University in Boston, Massachusetts, Dr. Lu joined the laboratory of Dr. Jing Zhou at the Renal Division, Brigham and Women's Hospital, Harvard Medical School. Dr. Lu spent next four years in Zhou's lab, where he was instrumental in creating the very first mouse model of autosomal dominant polycystic kidney disease (ADPKD) using gene-targeting strategies. After the gene (*PKD1*) that is mutated in ADPKD was found, progress was limited until an animal model was available to study the progression and cellular biology of the disease. The studies of two *Pkd1* mouse models Dr. Lu created further established that loss of heterozygosity and protein function of the *PKD1* gene is the cause of human ADPKD.

In 1999, Dr. Lu became Technical Director of the Genome Laboratory at Brigham and Women's Hospital and Instructor in Medicine at Harvard Medical School, where he continued to expand his molecular genetic and genomic skills. A number of projects were planned for the Genome Laboratory and Dr. Lu was responsible for all technical aspects of genome research - planning, design, and implementation of new technologies, including high-throughput and shotgun DNA sequencing, transcriptional profiling, TaqMan real-time quantitative PCR, genotyping, BAC library screening and physical mapping. Meanwhile, Dr. Lu participated in a mouse N-ethyl-N-nitrosourea (ENU) mutagenesis project and the positional cloning of the juvenile cystic kidney (*Jck*) gene in the laboratory of Dr. David R. Beier. He identified a point mutation in the *Pkd1* gene in an ENU mutant line with polycystic kidney disease. This is the first report of a missense mutation in the mouse *Pkd1* gene causing polycystic kidney disease, which is similar in nature to the mutations occurring in humans. This ENU mutant provided a better animal model than knockout mice, which carry a large deletion and neomycin selection cassette. Together with other colleagues, Dr. Lu also found a mutation in a 'novel' *Nek* kinase gene that causes juvenile cystic kidney (*Jck*) in mice.

In 2002, Dr. Lu joined the laboratory of Dr. Richard L. Maas in the Genetics Division, Brigham and Women's Hospital to study early kidney development, and participated in related research in the Developmental Genome Anatomy Project (DGAP), which is a program project headed by Dr. Cynthia C. Morton. The objective of DGAP is to clone and analyze genes that are disrupted or dysregulated by balanced chromosomal translocations in patients with multiple congenital anomalies. Dr Lu's research focus is on several DGAP cases with renal and urinary tract defects, generating mouse models of several cloned candidate genes. Dr. Lu has identified several genes that are associated with vesicoureteral reflux (VUR) and congenital anomalies of the kidney and urinary tract (CA-KUT) in human subjects and mouse models.

In 2004, Dr. Lu was recruited by Dr. David J. Salant to the Renal Section, Department of Medicine, Boston University Medical Center as Assistant Professor of Medicine. He is now an independent principal investigator and studies development of the kidney and urinary tract and molecular genetics of congenital renal diseases. Dr. Lu has been invited to speak and present his research work at national and international conferences, including

the annual meetings of the American Society of Nephrology and the American Society of Human Genetics. He has also been invited to chair scientific session at the annual meeting of the American Society of Nephrology. Dr Lu has been awarded 2005 Young Investigator Grant from the National Kidney Foundation and has received research project grant from the Evans Medical Foundation. He has also been selected to be Boston University's applicant for the 2006 Searle Scholars Award. The long-term goal of Dr. Lu's research is to understand the molecular basis of congenital anomalies of the kidney and urinary tract, which is one of the commonest genetic disorders affecting 1% of human fetuses.

A selection of Dr. Lu's published articles are listed below:

Lu W, Peissel B, Babakhanlou H, Pavolva A, Geng L, Fan X, Larson C, Brent G, Zhou J. Perinatal lethargy with kidney and pancreas defects in mice with a targeted Pkd1 mutation. *Nature Genet* 1997; 17:179-181.

Lu W, Fan X, Basora N, Babakhanlou H, Law T, Rifai N, Harris PC, Perez-Atayde AR, Rennke HG, Zhou J. Late onset of renal and hepatic cysts in Pkd1 targeted heterozygotes. *Nature Genet* 1999; 21:160-161.

Lu W, Shen X, Pavlova A, Lakkis M, Ward CJ, Pritchard L, Harris PC, Genest DR, Perez-Atayde AR, Zhou J. Comparison of Pkd1-targeted mutants reveals that loss of polycystin-1 causes cyst formation and bone defects. *Hum Mol Genet* 2001; 10:2385-2396

Herron BJ, Lu W, Rao C, Liu S, Peters H, Bronson RT, Justice MJ, McDonald JD, Beier DR. Efficient generation and mapping of recessive developmental mutants using ENU mutagenesis. *Nature Genet* 2002; 30:185-189

Liu S, Lu W, Obara T, Kuida S, Lehoczyk J, Dewar K, Drummond IA, Beier DR. A mutated novel Nek kinase causes cystic disease. *Development* 2002; 129(24):5839-5846



LIQUN BAI, MD, CO-RECIPIENT OF THE FIRST CASN YOUNG INVESTIGATOR AWARD

Every year, approximately one out of every 3000 American is diagnosed with end-stage renal disease (ESRD) and started dialysis. Based on the United States Renal Data System 2004 annual data report, by 2030 the ESRD population could increase by 460,000, with two thirds of these new patients having diabetes as the primary cause of their kidney failure (USRDS 2003 ADR). With growth of the aging baby boomer population, diabetes and its complications, such as chronic kidney disease (CKD) and cardiovascular diseases, have emerged as a major public health concern.

Liqun Bai, MD, one of two recipients of 2005 Young Investigator Award of the Chinese American Society of Nephrology, is a Fellow of Nephrology and Research Assistant Professor in the University of Arizona. He is currently exploring ways to prevent diabetes and diabetes related CKD. Dr. Bai finished his medical school in the First Military Medical University (Now as Southern Medical University) in Guang Zhou, China in 1988 and received his first nephrology training in the General Hospital of Chinese PLA in Beijing. In 1993, He started his first molecular biology study in nephrology by establishing molecular structure of Aquaporin 2, the vasopressin regulated water channel, in Tokyo, Japan. He came to the United States in 1995 as a postdoctoral Research Associate in the University of Arizona. Dr. Bai has been working on molecular structure and gene regulation of renal transporters, including sodium-dependent citrate transporter, sodium-dependent phosphate cotransporters, and vesicular glutamate transporter (VGLUT). Recently, he received a NIH R01 grant to explore the role of glutamate and vesicular glutamate transporter in insulin regulation in response to glucose concentration.

Linqun Bai, MD - CONTINUED FROM PAGE 6

Glutamate has been demonstrated as a signal molecule that actively involves insulin secretion in conjunction with intracellular calcium in the pancreatic beta cells. Dr. Bai's research team has found that VGLUT2 is a rate-limiting step for the glutamate signaling in insulin secretion, and increased glucose concentration has directly impact on the gene transcription of VGLUT2. He found that AMP kinase is a key signal pathway in upregulation of VGLUT2 transcripts by glucose. The promoter activity of VGLUT2 is tightly controlled by the interaction of transcriptional factors Sp1, NFkb and GATA3. Further study of signaling pathway between AMP kinase and these transcriptional factors is undertaking to elucidate the precise mechanism of glucose-mediated transcriptional regulation of VGLUT2. The results of his study will contribute to our knowledge of regulation of insulin secretion in diabetes.

Key References:

1. Linqun Bai, Kiyohide Fushimi, Sei Sasaki, Fumiaki Marumo. (1996) *J. Biol. Chem.* 271: 5171-5176
2. Linqun Bai, James F. Collins, Hua Xu, and Fayez K. Ghishan. (2001) *Am. J. Physiol.* 280: C1168-C1175.
3. Linqun Bai, Hua Xu, James F. Collins, and Fayez K. Ghishan. (2001) *J. Biol. Chem.* 276: 36764-36769.
4. Linqun Bai, Xiaohong Zhang, and Fayez K. Ghishan. (2003) *Am. J. Physiol.* 284: G808-G814.
5. Tao Li, Jacob Walsh, Fayez K. Ghishan, and Linqun Bai. (2004) *Biochim. Biophys. Acta*, 1681(1): 53-8.
6. Tao Li, Fayez K. Ghishan, and Linqun Bai. (2005) *World Journal of Gastroenterology*. 11(12): 1731-1736.

From The Board Of Directors

The CASN Board of Directors would like to thank the following retiring board directors for their steadfast support of our organization:

James Chan, MD
Chen-Hsing Hsu, MD

Jonathan Kwong, MD
Liem Som Oei, MD

James Chan- He moved from Virginia to Maine. He is Professor of Pediatrics at the University of Vermont and Director of Research at the Maine Medical Center in Portland, Maine. He is very active in Pediatric Nephrology, traveling extensively in the US and internationally on speaking engagements. He and his family are enjoying the unspoiled beauty of the rock-bound Northwest Atlantic coast.

Chen-Hsing Hsu- Professor Emeritus at the University of Michigan. He still lives in Ann Arbor and is currently busy editing a book on calcium and phosphorus metabolism in chronic kidney disease. Dr. Hsu did much original work and published extensively on calcium, phosphorus and vitamin D metabolism.

Jonathan Kwong- born and raised in Hong Kong and trained in the United Kingdom, Jonathan is one of the very few Nephrology Consultants of Chinese descent in England.

Liem Som Oei- Following a fellowship training at the University of Iowa Medical Center, Som runs an enviably successful Nephrology practice in Sioux City, Iowa. He has two partners.

How to Sign Up to the CASN Email List

To sign up to the CASN member emailing list, you need to simply send an empty email to:

CASNmember-L-ON@listserv.bwh.harvard.edu

You will then receive a confirmation email, if you reply to this confirmation message, your email address will be automatically registered in the list.

CHINESE AMERICAN SOCIETY OF NEPHROLOGY MEMBERSHIP APPLICATION

First Name	Middle Name	Last Name	Date
------------	-------------	-----------	------

Name in Chinese (Optional) _____

Home Address:

Street _____
 City _____ State _____ Zip Code _____
 Country _____
 Phone No. () _____ Fax No. () _____

Office Address:

Name of Institution/Company _____
 Street _____
 City _____ State _____ Zip Code _____
 Country _____
 Phone No. () _____ Fax No. () _____
 E-mail: _____

Professional Activity:

Please check appropriate box(es)

Research _____ (Basic) _____ (Clinical) _____
 Direct Patient Care _____
 Administration _____
 Teaching _____
 Training _____ (Trainee does not need to pay membership fee)

Degree:

M.D. _____ PhD _____
 MSc. _____ Fellowship _____
 Others _____
 Medical School _____ Year of Graduation _____

Agreement:

I hereby apply as an active member of the Chinese American Society of Nephrology. I agree to abide by the Society's bylaws and pay the established membership dues and agree to support the Society's objectives, maintain and enhance the prestige of the Society.

Signature _____

Date _____

Payment:

Please send U.S. \$50.00 (check or money order) to:
 Chinese American Society of Nephrology (Dr. Kurt Lee)
 2965 Harrison, Suite 116
 Beaumont, Texas 77702