Chinese nephrology, like background modern Chinese medicine, has grown tremendously from the nineties on. From a quick PubMed search, I realized that from the creation of Index Medicus (including manuscripts published in the early twentieth century) to 31 December, 1990, about 16,000 Chinese manuscripts were deposited into this database. From 1 January, 1991 to today, 522,634 publications, i.e. a 32-times higher number of Chinese publications have been added to the same database, a tremendous increase in the contribution that Chinese medicine has made towards world medicine. Remarkably, the growth rate of publications related to research mentioning the word “kidney” was much higher than the global growth of background Chinese medicine (a 69-times higher number of PubMed “kidney” manuscripts during the last 22 years!). China now has leading centers performing cutting-edge research in the whole spectrum of renal medicine, from basic science to clinical epidemiology. Some of these centers are among the best on a world scale, and I feel that China is now well poised to rapidly climb the rank of countries that contribute to nephrology literature.

The success of Chinese Nephrology notwithstanding, the geography of renal medicine in China is still scarcely known to most renal physicians of the Western hemisphere. From informal talks with several European colleagues, I understood that a survey of Chinese nephrology providing information on leading centers and ongoing research in China would be of great interest to most NDT readers. For this reason I contacted Dr. Nan Chen (a continental editor for NDT) and proposed that she produce a special NDT newsletter on “Nephrology in China”. We now have a nice, compact and effective description of leading academic nephrology units in China as well as essential information on the epidemiology of CKD in China, and I am grateful to Dr. Nan Chen for having assembled such a nice newsletter.

This newsletter includes as a conclusive pearl also an enlightening testimony by Dr William Couser, an outstanding renal scientist and a long-time supporter of Chinese nephrology.

Carmine Zoccali
NDT Editor in Chief
Epidemiology of CKD in China

Chronic kidney disease (CKD) has received increased attention not only for its burden on global health-care resources but also for its impact on patients and their families. The progressive nature of CKD can lead to end-stage renal disease (ESRD), a devastating condition that requires dialysis or kidney transplantation. In this regard, a better understanding of the nature of CKD as well as early detection and prevention of the disease could improve the prognosis.

China is a developing country with the largest population in the world, and CKD is highly prevalent in developing countries. However, there have not been many articles published on the epidemiology of CKD in China until recently. In a nationwide survey, Zhang and colleagues [1] demonstrated that the overall prevalence of CKD in China was 10.8% and the estimated number of patients with CKD was approximately 119.5 million. Contrary to the high prevalence of CKD, the awareness was only 12.5%. By disease stages, prevalence of CKD stage 1 was higher than the other CKD stages nationwide, and the prevalence of CKD decreases as the CKD stages advance. The explanation for such a phenomenon, according to the authors, might be related to the lag of effects of the changing epidemiology of hypertension and diabetes on increase of CKD prevalence. By geographic region, the prevalence of CKD was higher in the middle, north and southwest areas. Furthermore, urban areas with high economic development had lower prevalence of renal insufficiency and albuminuria. The authors speculate that certain factors could contribute to these discrepancies, such as difference in health care or level of education in association with economic development. Moreover, the study showed that economic development was independently associated with the presence of albuminuria in rural areas. In addition, the independent factors associated with kidney damage included age, sex, hypertension, history of cardiovascular disease, hyperuricemia, area of residence and economic status.

Apart from this nationwide survey, there were several other epidemiological studies on CKD in China, among which were a community-based study in Shanghai and a cross-sectional study in Guangzhou. Shanghai is one of the largest cities in east China with a population of over 20 million. In the study, Chen and colleagues [2] found that the prevalence of CKD was 11.8% in Shanghai. Despite the high prevalence of CKD, the awareness was as low as approximately 8.2%. Many asymptomatic participants were identified due to the employment of ultrasonography for each participant as well as repeated analysis for those with albuminuria during the screening period. In contrast to the nationwide survey, the prevalence of CKD stage 3 was higher for the participants than other CKD stages. As Shanghai is one of the economic centers in China, the prevalence of diabetes or hypertension might be higher than in other regions, which could lead to high prevalence of CKD stage 3 among the participants [2]. Similar to the nationwide survey, hyperuricemia was also one of the factors associated to kidney damage in Shanghai. Guangzhou is another metropolitan city in southern China. In the CKD survey carried out in Guangzhou [3], Chen and colleagues demonstrated that 12.1% had CKD while the awareness was at 9.6%. By disease stages, prevalence of
CKD stage 2 was higher than other CKD stages. Similar to a nationwide survey and community-based study in Shanghai, hyperuricemia was also one of the risk factors associated with kidney damage. The rise in the number of patients with CKD is reflected in the increasing number of people with end-stage renal diseases (ESRD) treated by renal replacement therapy, dialysis or transplantation. In China, the nationwide data on ESRD and dialysis are unavailable because the database is still being constructed. However, a recently published Shanghai Dialysis Registry Report (SDRR) and data from the Chinese Society of Blood Purification (CSBP) provided us with some data on epidemiology of ESRD [4]. By 2009, the incidence of ESRD in Shanghai was 104.2 per million population (pmp) and point prevalence was 635.6 pmp. The data from the CSBP from 27 provinces and/or regions showed that the number of patients with maintenance hemodialysis (MHD) or peritoneal dialysis (PD) was 102,863 by the end of 2008 and the point prevalence was estimated to be 79.1pmp [5]. The data also pointed out regional differences regarding the epidemiology of ESRD exist in China. As for the etiology of ESRD, both SDRR and CSBP showed that primary glomerulonephritis was still the leading cause of ESRD followed by diabetic kidney diseases (DKD) and hypertensive nephropathy (HN). However, due to the change in lifestyle and epidemiology of hypertension and diabetes, the cause of ESRD in China is also changing—more and more CKD patients progressed to ESRD due to DKD or HN, and in the next decade, DKD and HN might be the leading causes of ESRD in China [4-5].

Transplantation is one of the effective therapies to treat patients with ESRD. Due to the large number of patients with ESRD, transplantation in China ranked second in terms of number of transplants per country. In 2006, there were about 11000 organ transplantations in China. According to the data from the Chinese Ministry of Health, the number of kidney transplantations had been increasing until 2004, and then decreased. As the organ sources are limited, many ESRD patients must rely on dialysis while awaiting transplantation. The government is now working on setting up an organ-donation policy and discussing the diagnostic criteria for brain death, which is a necessary initial step to set up alternative sources of organs in China [6].

Due to the limitations on the number of references listed, many other works could not be cited in this newsletter. However, current CKD epidemiological studies demonstrated that the prevalence of CKD in China is high – more than 10% – and the awareness is low. All of these studies showed that most CKD patients in China were in the early stages of disease which support the necessity for further early prevention programs in China. As management of CKD requires the collaboration of medical institutions, medical staff and government as well as non-government organizations, many new policies have been recently initiated. Furthermore, the government has increased the research budget on CKD studies significantly, due to its high prevalence and impact on the society. We hope that these collaborations and initiatives will ensure that the challenge of CKD is taken seriously and that adequate resources will be made available to attain the successful management of CKD in the future.

Reference

In this newsletter, we also provide the readers with a brief introduction of several leading renal centers in China and briefly summarize their on-going studies. In addition, Prof. William G. Couser will offer his personal perspective of nephrology in China. We hope this newsletter will serve as a bridge to connect the Chinese Society of Nephrology to the rest of world and thus to share the Chinese experience with the colleagues elsewhere.

1. Nephrology Department at Jinling Hospital, Nanjing University School of Medicine, Nanjing, China

The Research Institute of Nephrology at Jinling Hospital, Nanjing University School of Medicine, is recognized as a leading renal center in China. The director of the institute is Prof. Zhi-Hong Liu, who is also the president of the Chinese Society of Nephrology.

For clinical service, the institute possesses a well-equipped facility with 220 beds for inpatients, and a multi-functional facility for outpatients. Each year the institute receives ~7000 inpatients and over 26,000 outpatient visits, and performs diagnoses of ~5000 renal biopsies. Its dialysis center has 90 stations, conducts nearly 40,000 hemodialysis sessions and receives 500 peritoneal dialysis patients annually. The transplant center of the institute performs approximately 100 kidney transplantations every year. Stem cell transplantation is also available in the institute for patients with kidney diseases secondary to myeloma, amyloidosis and immunological disorders.

The institute carries out both clinical and basic research. It has a bio-bank comprised of specimens from over 40,000 patients, including urine, serum, DNA and kidney biopsies. Its laboratories have state-of-the-art equipment for basic research. A translational medicine research network consisting of multi-disciplinary, multi-centered research platforms has been established. In 2011, the institute launched a translational medical research center for renal disease. The institute has recently been funded by several national grants in China, including the National Basic Research Program of China (973 Program), National Key Technology R&D Program, and Major International Joint Research Project of the National Natural Science Foundation of China. Dozens of research papers from this institute are published each year.

The Research Institute of Nephrology also serves as a medical educational center of kidney disease in China by offering training to medical students, including MD and PhD students. In addition, the institute has several advanced training programs provided to professionals in the field all over the country. The institute is publisher of the Chinese Journal of Nephrology, Dialysis & Transplantation, which is one of the major journals in the field of nephrology in China, with Prof. Zhi-Hong Liu as the Editor-in-Chief.

Furthermore, the institute is actively involved in international collaborations, including the validation of the Oxford classification of IgA nephropathy and the international multi-centered clinical trial for the treatment of lupus nephritis. The director of the institute, Dr. Zhi-Hong Liu, is a council member of the ISN and a board member of KDIGO.

2. Renal Division of Peking University First Hospital, Beijing, China

The renal division of Peking University First Hospital, also known as Peking University Institute of Nephrology, was the first clinic with a sub-specialty for kidney disease in China, established nearly 60 years ago by Professor Shuxian Wang (the founder of modern nephrology of China). Since the mid-1980’s, this division, under the leadership of Professor Hai-yan Wang, has been one of the top
academic nephrology centers in China. The institute was honored by being named the Key Laboratory of Renal Disease, Ministry of Health; as the State Key Discipline and the Key Lab of CKD Prevention and Treatment, Ministry of Education.

Since its foundation, the division has been delivering the most innovative and comprehensive care for patients with all types of acute and chronic diseases of the kidney and is in charge of the Beijing Hemodialysis Quality Control and Improvement Center. The peritoneal dialysis center has over 400 CAPD patients. Annually, the renal pathology lab receives over 2000 renal biopsies from all over China. The division also maintains extensive programs to educate the next generation of leading academic kidney physicians and scientists in China. Currently, around 40 clinical and research fellows are receiving training, and during the last 20 years, an annual training program of the division has attracted 700 nephrologists from 31 provinces of China. The construction of a bio-bank in the division was initiated in the early 1980s, mainly collecting bio-samples of patients receiving renal biopsies. The division provides academic and research work in both clinical and bench research activities. Clinical research involves studies of epidemiology, as well as patient-oriented research and clinical trials. It has also been leading the epidemiological studies of CKD in China throughout the last decade, and has received a chair in an international RCT study of IgA nephropathy (TESTING). Bench research continues to grow in a variety of different areas including molecular genetics, mechanisms of autoimmune kidney disease, mechanisms of progression of kidney disease and renal pathology. Within the last five years, this division has received over 40 research grants, with a sum of 60 million RMB, and has 152 SCI cited papers (as corresponding author) published in peer-reviewed English-language journals, including a recent publication in Lancet.

3. Chinese PLA General Hospital National Key Disciplines of Nephrology and State Key Laboratory of Kidney Diseases, Beijing, China

The division of Nephrology of the Chinese PLA General Hospital was founded in 1986. With 25 years of rapid and continuous development, the institution has now been named the National Key Disciplines of Nephrology, State Key Laboratory of Kidney Diseases, and Ministry of Health Medical Quality Control Center. There are five wards: primary glomerular diseases, secondary kidney disease, chronic kidney diseases with renal insufficiency and critical care unit for severe kidney disease (KICU). The institution has 160 ward beds and 86 dialysis beds in the blood purification center and stands as one of the largest and most influential medical centers for prevention and treatment of kidney diseases in China.

The institution consists of both a clinical center and basic research lab, devoting long-term to the study of common kidney diseases in China. Serial accomplishments have been achieved in the following fields: interaction of inflammation and sclerosis in progressive kidney diseases, basic and clinical study of IgA nephropathy, renal aging and the protection of kidney injury in the elderly and renal replacement therapy in critically ill patients with acute renal injury. In recent years, we have carried out a nation-wide epidemiological survey of hospitalized CKD patients, established a nation-wide registry network for hemodialysis and peritoneal dialysis and promoted the standardized operation procedure of hemodialysis and peritoneal dialysis treatment.

The institution was awarded the National Science and Technology Progress Prize of China four times, in 2001, 2004, 2006 and 2010. More than 600 English or Chinese
original research papers were published in such prestigious journals as J Am Soc Nephrol, Kidney Int, Diabetes, Mol Cell Proteomics, etc.

Prof. Xiangmei Chen is the head of the institution; she is an academician of the Chinese Academy of Engineering and served as president of the Chinese Society of Nephrology twice (2006-2008 and 2009-2011). She also serves as the Editor-in-Chief of the Chinese Journal of Nephrology and the Counselor of Asia-Pacific Society of Nephrology. As team member of the institution, she received an award from the National Natural Science Foundation Committee for Creative Research Groups.

4. Department of Nephrology, Ruijin Hospital, Shanghai Jiao Tong University, School of Medicine, Shanghai, China

The department of Nephrology of Ruijin Hospital affiliated to Shanghai Jiao Tong University was established in the 1960's. As one of the earliest and best equipped centers in Shanghai, it has become a leading medical discipline of the Shanghai Municipality and the Shanghai Municipal Health Bureau, and ranks among top disciplines of Nephrology in China. Professor Dechang Dong, the founder of our nephrology department, used to be the president of the Chinese Society of Nephrology and the Councilor of association of Asian Pacific Society of Nephrology. Professor Nan Chen, the academic leader and director of the department of Nephrology is the vice president of the Chinese Medical Doctor Association Nephrology Branch and president of the Shanghai Medical Association Nephrology branch. Our department is one of the earliest established centers that provide training programs for nephrologists in China. The department is specialized in diagnosis and treatment of primary glomerulonephritis, hereditary nephropathy and secondary glomerulonephritis, such as hypertensive nephropathy, diabetic nephropathy, ANCA-associated vasculitis, monoclonal Immunoglobulin-associated kidney diseases, Acute Kidney Injury etc. At present, we have 82 regular beds and annually accept nearly 190,000 outpatient/emergencies visits and more than 3,000 inpatients. The number of patients who received renal biopsies is more than 1,000 annually. Our blood purification center manages treatment for 300 maintenance hemodialysis patients, 270 peritoneal dialysis patients and more than 1,600 person-times of CRRT per year. Our department is also the state-level clinical pharmacology base of China and actively involved in international clinical trials. Further to clinical work, numerous research projects have been carried out in our department. We have received several major grants in the recent years such as the National Basic Research Program of China, National Nature Science Foundation and key project of Shanghai Foundation for Development of Science and Technology. Totally, more than 400 peer-reviewed articles have been published on high impact journals including Nature Genetics and...
Nature Medicine. The department is actively engaged in developing academic communication and cooperation with domestic and international areas. It has maintained long-term, stable and profound cooperative relationships with several world-renowned centers and universities in both North America and Europe.

5. Division of Nephrology, Nanfang Hospital, Southern Medical University, Guangzhou, China

The division of Nephrology, Nanfang Hospital, is an affiliated hospital of the Southern Medical University and consists of an in-hospital ward with 139 beds, a dialysis facility with 85 dialysis machines, a renal pathology unit (~1000 cases of biopsy/year) and a research institute. The division is currently the National Clinical Pharmacology Base and the key laboratory of the National Ministry of Education.

Professor Fan Fan Hou is the chief of the division. She is currently the Academician in both Chinese Academy of Sciences and the Third World Academy of Sciences. She is currently the Vice President of the Chinese Society of Nephrology and Chinese Medical Doctor Association Nephrology Branch.

The major research interests of the center are:

1. Development of clinical approaches for delaying progression of CKD

The team has focused on developing clinical approaches for delaying the progression of CKD. They demonstrated the efficacy and safety of ACE inhibitor Benazepril for preventing renal function loss in patients with advanced CKD which was published in the N. Engl. J. Med. They have also developed optimal pharmacologic approaches for maximal reno-protection in patients with proteinuric CKD through titrating RAS blockers against proteinuria (ROAD study). These works are highlighted in ‘Cecil Medicine’ and ‘The Kidney’ and listed as the top 1% most-cited literatures by Essential Science Indicator (ESI).

2. Identifying the pathogenic molecules and elucidating the mechanisms underlying the progression of CKD

The group has identified the oxidized protein products, such as advanced oxidation protein products (AOPPs) as a novel class of pathogenic mediators promoting the progression of CKD, as well as atherosclerosis.

3. Revealing the novel risk factors and the mechanisms for CKD and complicated CVD

The team, through nationwide epidemiologic studies, has revealed demographic and clinical characteristic of CVD in Chinese dialysis population, identified tissue AGE accumulation as a previously unrecognized risk factor for CVD in patients on peritoneal dialysis.

4. Discovering new compounds for intervention of CKD and CVD

The team has screened and purified several novel compounds from traditional Chinese herbs, and found these compounds ameliorated renal fibrosis and atherosclerosis via their anti-oxidative/inflammatory activities. These works have won the ‘National Invention Patent Authorization’ (four items).

Around the mentioned research, the team has published 61 papers in peer-reviewed journals indexed by SCI.

6. Department of Nephrology, The First Affiliated Hospital, Sun Yat-sen University, Guangzhou, China

Department of Nephrology, The First Affiliated Hospital, Sun Yat-sen University is one of the earliest Departments of Nephrology set up in China. The department has been recognized as the National key discipline of Nephrology. It also owns the key laboratory of Nephrology, Ministry of Health, as well as Guangdong Province. Now the department is one of the largest kidney centers in China, with 120 beds and 60 hemodialysis machines, three
individual clinical renal units, a Hemodialysis Center and the biggest Peritoneal Dialysis Center in the world, with more than 1000 CAPD patients, and the Editorial Office of The Chinese Journal of Nephrology.

Professor Xueqing Yu is the Director of Institute of Nephrology, Vice President of the First Affiliated Hospital, SunYat-sen University. He is also the President-elect of the Chinese Society of Nephrology and Chairman of the Chinese Medical Doctor Association Nephrology Branch and Deputy Editor-in-Chief of Chinese Journal of Nephrology.

The department is focused on both clinic and basic research. The major research fields are genetic susceptibility of kidney diseases, especially IgA nephropathy and lupus nephritis, immune pathogenesis of renal diseases, comprehensive prevention and treatment of chronic kidney diseases, hemodialysis and peritoneal dialysis.

Up to now, the department has trained a lot of competitive nephrologists for further development of nephrology in China, including PhD students and postdoctoral trainees. At the same time we provide a training program for nearly 30 senior physicians every year and have trained about 1800 nephrologists from different provinces of China. Most of them have become the leading doctors in their own region.

7. Kidney Institute of the Second Military Medical University Chang Zheng Hospital, Shanghai, China

The Division of Nephrology, which is affiliated with the Second Military Medical University Changzheng Hospital, was firstly founded in 1979, and expanded to be Kidney Institute in 2006. It is Shanghai Center for Kidney Disease Quality Control and the National Peritoneal Dialysis Training Center.

110 staffs work in the kidney institute, including 30 nephrologists and 80 nurses and technicians. The institute is composed of 6 sections: kidney wards, outpatient center, hemodialysis center, peritoneal dialysis center, renal pathology center and laboratory. There are 70 licensed beds in the kidney wards, admitting more than 3000 patients annually. 655 A-V fistula, 107 long-term catheters and 117 PD catheter insertions were performed in 2011. Over 80,000 outpatients visit the outpatient center every year. The hemodialysis center is equipped with 100 hemodialysis machines and 5 CRRT machines; there are 600 cases of ESRD patients treated by maintenance hemodialysis. The peritoneal dialysis center is approved as National Peritoneal Dialysis Training Center and provides treatment for 314 patients now. The renal pathology center provides renal biopsy consulting services for many other kidney units and issues 3000 renal pathological reports per year. The laboratory is equipped with facilities valued over RMB 10 million, and 20 postgraduates are trained to do the research work supervised by mentors.

The research interests of the kidney institute focus on the three following topics: 1) pathogenesis, prevention and treatment of chronic kidney diseases (CKD);
2) pathogenesis and treatment of autosomal dominant polycystic kidney diseases (ADPKD); 3) pathogenesis, early diagnosis and treatment of acute kidney injury (AKI).

In the last 8 years, the institute has been funded by 54 research projects with accumulation of 23 million RMB, published 458 original and review articles, some of them are published in leading peer-reviewed journals, such as PNAS, KI, AJKD, NDT, and so on. The institute also has got 1 international patent and 7 Chinese patents.

8. Division of Nephrology at Huashan Hospital, Fudan University, Shanghai, China

The Division of Nephrology at the Huashan Hospital started in 1962 as “Renal Group”. The division performed the first renal biopsy in 1963, and the first kidney transplantation in 1972. During the past 50 years, two physicians from this division have served as the president of the Chinese Society of Nephrology (Drs. Chuanlu Qiu and Shanyan Lin); Dr. Lin has also served the International Society of Nephrology as a council member.

Patient Care. Our patient care services cover all aspects of clinical discipline including primary or secondary glomerular disease, tubule-interstitial disease, acute kidney injury, chronic kidney disease (CKD), and renal replacement therapy for end stage renal disease patients. In addition to general nephrology clinic and in-patient service, we also have specialized clinics, out-patient and in-patient hemodialysis units, an apheresis center, a PD unit, transplantation program and renal pathology service center. We see up to 50,000 out-patients, and have about 1000 renal biopsies each year.

Scientific Research. Our current areas of research focus include (1) clinical and translational research on diabetic nephropathy; (2) phosphorous disorder in kidney disease; (3) bio-markers and risk factors of acute kidney injury; (4) metabolic disorder associated complications of peritoneal dialysis; (5) blood purification technique in non-kidney diseases; (6) pharmacogenomics-based personalized medicine. Our faculty’s research is supported by the Natural Science Foundation of China, Minister of Health of China. During the past two years, our investigators have received a total of 15 million RMB of grant award. Our work has been published in the peer reviewed high profile scientific journals.

Education. We offer several levels of training: undergraduate medical student education; post-graduate training; post-doctoral training and clinical fellow training. For our postgraduate and postdoctoral fellows, we offer training in combined clinical and research aspects of nephrology, including bench and/or patient oriented investigation.

9. Nephrology Department of Peking Union Medical College Hospital, Beijing, China

Peking Union Medical College (PUMC) Hospital, founded in 1921 by the Rockefeller Foundation of U.S.A, maintains its leading position as one of the top-ranked hospitals in China for the past 90 years. In 1942 Professor Shihao Liu and Xianyi Zhu firstly introduced the concept of renal osteodystrophiy in the world. Since the establishment of the department in 1970s, several pioneer ideas have been put into practice routinely: low protein diet management in non-dialysis ESRD in late 1970s; introducing CVVH, CVVHD and hemodialysis to China in early 1980s; reporting the first refractory IgA nephropathy and glomerular damages of Sicca syndrome at same time; using Cyclosporine A as treatment of MCD, refractory nephrotic syndrome and lupus nephritis in early 1990s.

In 1971, PUMCH was designated as one of the earliest foreign health service institutions in China and is the national medical technical support centre for diagnosis
and treatment of severe and complicated diseases. As one of the main sections the department is composed of 90 staffs with 52 beds serving for about 1000 inpatients and 50,000 outpatients per year. There are 230 maintained HD and 200 PD patients in the blood purification center. An epidemiologic survey has been carried out on metabolic syndrome and CKD based on 7000 rural residents in Beijing, which was finished in 2010. Ongoing research projects include 8 basic and 5 clinical one on CKD progression and complications supported by the Ministry of Science & Technology, Ministry of Health (Charitable Funds) and Beijing Science & Technology Committee.

Nephrology in China – a personal perspective.

It is a pleasure to respond to the invitation from Dr. Nan Chen to provide a brief commentary on my experience with nephrology in China, which began in 1988 and continues today. It started in London at the 1987 meeting of the International Society of Nephrology (now the World Congress of Nephrology). One evening, as I hurried through the lobby of my hotel to attend one of London’s best theater productions, I was approached by a young Chinese woman who handed me a small, handwritten note from Dr. Leishi Li. The note requested that I come to a nearby Chinese restaurant in about an hour. The woman spoke no English and quickly disappeared leaving me to choose between the guaranteed excellence of the London theatre and the totally unknown implications of this mysterious invitation! Younger then, I quickly chose the adventure! From that evening came my first exposure to the late Dr. Li, a legendary figure in Chinese nephrology (see Liu et al, Kidney International 77:1051, 2010), an invitation to attend the first Nephrology Forum in Nanjing in 1988 and the first of 16 subsequent trips to China that have been highlights of both my professional and personal life ever since.

Nephrology in China in 1988 was very much a developing world enterprise. I knew this from training our first Chinese fellow at the University of Washington in Seattle, Dr. YiPu Chen, who worked with us in the laboratory from 1984-86 and from several interactions with Dr. Chen’s mentor at Beijing Medical University, Dr. Haiyan Wang, another now legendary figure in both Chinese and international nephrology. In 1988, Dr. Li’s fledgling Kidney Institute in Nanjing was one of the few providers of chronic hemodialysis in China utilizing some discarded machines obtained from my own Northwest Kidney Centers in Seattle. When Drs. Bob Schrier, Bob Atkins and I had the opportunity to also visit Dr. Wang’s nephrology program at Beijing Medical University in 1988, we saw a structural and intellectual replica of a traditional western academic nephrology program just waiting for western science and trained personnel to be plugged in so it could become, as Dr. Wang fully intended, one of the top academic renal programs in the world (a goal now achieved, incidentally). But China then was only beginning to stir – grey Mao suits were still standard wear for most men, transportation was almost exclusively by bicycle through the sea of bicycles that occupied much of the urban landscape and foreigners like myself provoked startled stares and intense curiosity. Much has changed! Indeed, the change has been almost breathtaking to witness and share in. What China had to work with was truly enlightened and creative leadership in
people like Leishi Li and Haiyan Wang, a cadre of incredibly energized, curious and bright young people attracted to the opportunities these individuals offered and a huge patient population ideal for good clinical research. Many visits during the 1990s were spent critiquing laboratory data, ideas and presentations as the nephrology research enterprise quickly picked up the technology and concepts of renal cell and molecular biology. This was greatly facilitated by the wise selection of talented young people sent abroad to train while committed to returning to China. Among them, five other individuals including Dr. Zhi-Hong Liu, Dr. Li’s successor in Nanjing and current president of the Chinese Society of Nephrology, followed Dr. Chen to our labs in Seattle, and all have contributed to the changes in Chinese nephrology. At the turn of the century, the sciences of clinical epidemiology had emerged as equivalent to the basic laboratory sciences, and the focus shifted from learning basic research to training in clinical research which has now led to considerable success in contributing new knowledge in this area. As Editor in Chief of the Journal of the American Society of Nephrology from 2001-2007 I was particularly rewarded to move from helping to rewrite Chinese manuscripts in English to seeing these papers now compete successfully for publication in nephrology’s best journals including JASN, KI and NDT.

Accompanying the rapid development of very high quality renal research in China, the Mao suits and bicycles have now largely disappeared from the westernized landscapes in the major eastern cities. Still very much present, however, is that same energy, curiosity and passion for knowledge that so enchanted me about the China of the 1980s. In my current role as Chair of the International Society of Nephrology’s Global Outreach Programs, I hope to encourage the now outstanding nephrology programs operating in cities like Nanjing, Beijing, Shanghai and Guangzhou to extend the hands from the west that helped them 25 years ago to the still underdeveloped western cities in their own country so those too can build on what has been now been achieved in the universities in the east.

Witnessing the rapid growth of academic nephrology in China has been one of the great pleasures and rewards of my own career and one of the real success stories in international medicine. My sincerest congratulations to China, its nephrology leaders like Leishi Li and Haiyan Wang and the many young people who have made it all happen. May their story serve as a beacon for the rest of the developing world to follow!

William G. Couser, MD
Head, Global Outreach Programs
International Society of Nephrology (ISN)

Belding H. Scribner Professor of Medicine (retired)
Affiliate Professor of Medicine
University of Washington
16050 169th AV NE
Woodinville, WA 98072-8949

Tel: 425 415 8436
Fax: 425 949 8438
Email: wgc@u.washington.edu