A TRIBUTE TO COMGAN

The global perspective of the International Society of Nephrology: A decade of experience with COMGAN

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The International Society of Nephrology (ISN) was founded in 1960, about 10 years after the emergence of nephrology as a medical specialty separate from general internal medicine. ISN was, from the beginning, international in both composition and outlook in its pursuit of the worldwide advancement of education, science, and better patient care. Initially, this was done through the ISN Congresses and though the Society journal, Kidney International. These also served to promote networking within a very diverse constituency. In 1981 President-elect Donald W. Seldin proposed that US $30,000 should be made available for ISN-sponsored postgraduate continuing education courses in developing countries [1]. This marked the first foray by ISN into substantively supported educational meetings beyond its own congresses.

In 1985, ISN launched the Fellowship Program in order to offer nephrology training opportunities to young physicians from developing nations with the ultimate aim of improving standards of training and care when they returned to their home country. Fellows received hands-on training at a host research institution in basic and clinical nephrology, dialysis, transplantation, epidemiology, and more. They then became teachers and leaders in their home countries, where the need for more knowledge and improved care was critical.

In 1990, at a strategic planning retreat in Toronto, Ontario, chaired by Barry Brenner, it was recommended that sessions with the leaders of national societies should be held to discuss the needs of developing countries [2]. In 1991, a strategic planning retreat again suggested expanded programs in support of developing countries [3] and, in 1992, the membership of ISN offered qualified endorsement to the support of nephrology in such regions [4]. Roscoe Robinson, President of the ISN from 1990 until June 1993, pointed out in his final speech at the Jerusalem World Congress that only one fourth of the world’s population were benefiting from the knowledge available in the developed world, and he emphasized the Society’s programs which were supporting the growth of nephrology in these regions. J. Stewart Cameron, who succeeded Roscoe Robinson, immediately noted that the “focus of ISN has rightly turned to those areas of the world where the Society is most needed, the developing world” [5]. It was clear by 1993 that the ISN was embarked on a unique course.

DEVELOPMENT OF COMGAN

Given the direction in which it was moving, it is not surprising that in 1993 President-elect Robert W. Schrier proposed a commission on nephrology in developing countries to coordinate ISN activities in the developing world, COMGAN, or the Commission for the Global Advancement of Nephrology, as it later became known. In November 17, 1993, all officers and councilors of ISN met in Boston to discuss the purpose and program of the new commission. A number of problematic issues were recognized during the meeting: the differing strengths, weaknesses, and needs of various regions; the difficulty of reaching practitioners in the field, often far removed from developed centers; the need to include and draw support from national/regional societies; and the need to assess local resources and practices before determining programs.

COMGAN was officially formed in 1995 with Barry Brenner and John Dirks serving as co-chairs. When Barry Brenner stepped down in 1999, John Dirks remained as sole chair and will continue to serve in this role until December 2005. A budget of US $137,000 was allocated by ISN to support the new commission and its programs. From its beginning in 1995, ISN COMGAN established a number of specific goals, most of which have remained remarkably constant: (I) to assist in strengthening...
patient care, research, and education; (2) to provide regional postgraduate courses; (3) to solicit and establish institutional partnerships; (4) to create a leadership council of representatives from developing countries; and (5) to strengthen the programs of national societies [6]. Very quickly the Continuing Medical Education (CME) courses became the principal mechanism for achieving these goals.

It was agreed that five regional subcommittees should be formed to oversee and encourage ISN COMGAN activities within each region, and each one would be given US $15,000 in support. They would include Asia (Kiyoshi Kurokawa and Visith Sitprija), Africa (Claude Amiel and Rashad Barsoum), Russia (Barry Brenner and John Dirks), Eastern and Central Europe (Roscoe Robinson and Franciszek Kokot), and South America (Gerhard Malnic and Saulo Klahr). Each subcommittee had members who were, as much as possible, recruited from the region they represented. Many current ISN Councilors began as members of regional subcommittees, where the organizational structure provided opportunities for nephrologists from the emerging world to develop leadership skills and exercise them in the broader international arena.

The culture of COMGAN, as envisioned by its creators, has been consistent during its first decade. It is deliberately and firmly politically neutral, international, and global. It is at the forefront of basic and clinical science, employing a network of leading authorities in the field to achieve global outreach in education and training. It maintains an ethos of cooperation and equality in its partnerships with regional and national societies. Above all, it is humanitarian, and everything COMGAN attempts and achieves flows from this.

In 1998, an article by Jan Weening, Barry Brenner, John Dirks, and Robert Schrier, which summarized the activities of ISN to date, appeared in *Kidney International* [7]. In April 2000, John Dirks wrote a “Blueprint for the Next Five Years” [8], which was approved by the Executive Committee of the ISN. It has been largely implemented since that time. In 2000 and 2001, John Dirks formed a number of advisory committees to ensure that the teaching of the various subspecialties in nephrology remained state-of-the-art. In addition to the already existing Informatics Commission (established in 1997), he created the Education Subcommittee (Michael Field and Asghar Rastegar) to develop nephrology training guidelines that would create a realistic minimum standard for the developing world. The COMGAN Research Committee (Giuseppe Remuzzi) was formed in 2001 after the Executive Committee meeting in Toronto, Ontario, and shortly thereafter ISN formally adopted the mission of prevention.

The Hemodialysis Advisory Committee (Nathan Levin) was established late in 2000. Its role is to advise and update COMGAN on hemodialysis and its complications, suggest speakers for CME meetings, develop consensus conferences on quality of dialysis, and to make available education and training material which will lead to improved quality of dialysis. The committee is now looking at ways to study the general problems of providing affordable hemodialysis and peritoneal dialysis in the developing world.

Other advisory subcommittees and their current chairs are Renal Pathology (Agnes B. Fogo, United States), Peritoneal Dialysis (Sarah Prichard, Canada), Indigenous Peoples (David Pugsley, Australia), Renal Registries (Francesco Paolo Schena, Italy), and Tropi

## The CME Program

During the early years, COMGAN established a method of operating in developing countries that has proved both unique and effective. The three-step approach includes (7) identifying the educational and clinical needs of developing countries; (2) addressing those
needs through organization and/or support for CMEs, fellowship programs, and library enhancement programs; and (3) initiating screening and surveillance programs as a means of prevention.

The first approach to a developing country with few or even no local nephrologists is in the form of a site visit. An important goal is meeting local nephrologists and/or primary care physicians, hospital administrators, and members of the Department of Health, partly to identify a local leader(s) who will become the liaison person for further COMGAN activities and partly to assess the level of nephrology care and the training and the education needs. Some of COMGAN’s regional leaders and most promising fellows, particularly in Africa, were recruited in this way. Early on, the number of site visits each year outnumbered those made by the CMEs (Fig. 2).

Another practice unique to ISN COMGAN is the development of ongoing relationships within each country. The Society does not simply partner in a CME and then move on to another part of the world. Developing and maintaining lasting relationships between COMGAN and the local nephrologists is an integral part of its activity and this is done very promptly and proactively. Typically, a CME will be organized every year, or every 2 or 3 years, and ISN COMGAN provides several top-ranked teaching faculty to assist the more numerous local faculty.

The site visit is typically followed by a modest and ISN-subsidized CME. COMGAN assists with organizing and then gradually encourages the local community to assume more responsibility. Except in the very poorest countries, COMGAN often partners with local, regional, or national nephrology societies to put on CME courses. Typically, accommodation and meeting costs are covered locally. COMGAN covers the travel costs of visiting faculty who donate their expertise and their time.

This enables nephrologists from the developing world to raise the level of care they can provide as a result of learning better methods of clinical care. Further, it brings them into the world community of nephrology and encourages more young doctors to develop skills in this area. The increased membership in ISN from within the developing world is testament to the effectiveness of the COMGAN method.

A portrayal of the scope of COMGAN CME meetings is shown in Figure 3.

### Latin America

COMGAN has sponsored or partnered 56 meetings and site visits in Latin America during the past decade and has contributed significantly to the development of nephrology. Close ties with national societies have been established. COMGAN has been particularly active in Brazil, Mexico, Argentina, and Chile, from whence a number of outstanding local leaders have emerged. In some countries within this region there was very little access to updated medical information before COMGAN became active. COMGAN is now almost routinely asked to offer advice and expertise by many Latin American countries as they organize their meetings, and in fact, shares responsibility for the topics and themes that take front stage. Overall, COMGAN has helped to shape the prevention and detection strategies within some of these countries. In addition, ISN COMGAN has helped to generate research programs in both Bolivia (where there is also a fruitful Bolivia-Italy Model Sister Center) and Mexico. It has also offered expertise to help with the design and maintenance of local centers of excellence.

The ISN’s largest biennial partnered meeting is with the Brazilian Society of Nephrology. Over 2000 physicians, nurses, and allied renal professionals meet for a 4-day scientific meeting. This is a rigorous and dynamic scientific and clinical meeting with a special Brazilian flavor. In recent years, COMGAN has sponsored symposia in Salvador de Bahai, Porto Alegre, Natal, and Brasilia. The ISN has also participated in regional meetings in San Paulo, and will do so again in September 2005. Outstanding leaders such as Nestor Schor, Emmanuel Burdmann, Miguel Riella, Gerhard Malnic, and Roberto Zatz have contributed much to the ISN.

COMGAN supports three different and generally large meetings in Mexico, those organized by the Mexican Institute of Nephrological Research (IMIN), the Mexican Society of Nephrology, and the annual Mexico City Postgraduate Course. In 2001, COMGAN sponsored the first nephrology research meeting in Mexico, organized by Guillermo Garcia Garcia, Alfonzo Manzano, and Gregorio Obrador. Its primary purpose was to determine why there is a scarcity of scientific production in nephrology and to suggest initiatives to improve the situation. All coordinators of nephrology residency training were invited, along with anyone involved in, or administering over, nephrology research in Mexico. Subsequently, in 2004, Ricardo Correa-Rotter developed a potentially...
far-reaching project entitled “Development and Validation of an Educational Program for Diagnosis and Prevention of Diabetic Nephropathy Directed to General and Family Practitioners Working in the Public Health System.” It has received funding from Mexico’s National Council of Science and Technology and has academic sponsorship from ISN COMGAN.

Cuba is another Latin American country with which COMGAN has been active, starting with site visits in 1998 and 1999, and then partnering in CMEs in 2000, 2003, and 2005. The first CME provided state-of-the-art courses, provision of journals, and help with developing computer network. Shortly thereafter, the first-ever article of a Cuban nephrologist’s research was accepted for publication by *Kidney International*. COMGAN also arranged to have 48 dialysis machines from Toronto sent for use in Cuba. The major Nefrologia 2005 Prevention Course for Central America and the Caribbean, held in Cuba in May 2005, boasted 500 registrants from more than 20 countries.

In November 2003, 90 nephrologists gathered at Ensenada, in Baja, California, to discuss the epidemic of chronic kidney disease in minority populations and emerging nations. David Pugsley, Larry Agodoa, Jamie Hererra, and Keith Norris organized the meeting. Among the causes of chronic kidney disease, diabetic nephropathy is the most common and the fastest growing and, within these ethnic groups hypertension appears both common cause and a serious consequence of renal disease. One of the main problems in Latin America is the lack of available resources. Less than half of the cases of end-stage renal failure are accepted for renal replacement therapy. There was general agreement that increasing emphasis needed to be placed on disease prevention.
Furthermore, the fact that existing programs in the developed countries has not achieved the hoped-for successes suggests that some rethinking or realignment of priorities will have to take place. The contribution that underlying problems such as low birth weight and low nephron number might take to the progression of renal disease in such diverse renal conditions as post-streptococcal nephritis and hemolytic uremic syndrome was discussed. While there was recognition that much has been achieved by the vigorous promotion of strategies developed by ISN COMGAN, much work remains to be done.

Africa

Given the reality that there is not enough money for health care in Africa, the goal to promote education, training, and prevention strategies at all levels is absolutely vital. The first ISN-sponsored course in Africa was held in Cairo in February, 1987, and Egypt along with South Africa has remained a key region for COMGAN in Africa. At that first meeting, 13 African countries were represented and there were 10 speakers from the developed world [9]. Under the aegis of ISN COMGAN, 51 site visits and CME courses have been held there since 1995. Many of them have taken place over the past 2 years, as COMGAN has sharply ramped up its activities under the leadership of Sarala Naicker. Under her chairmanship, the Africa Subcommittee has grown to 20 members, the majority from African nations. During 2003, nine CMEs were held in Africa, and in 2004 five meetings attracted an average of nearly 400 registrants each, amazing statistics for a continent that has a real shortage of nephrologists. ISN COMGAN has established close ties with both the Egyptian Society of nephrology and the South African Renal Association and has partnered in a number of large and successful CME courses in both countries. The Soweto Project, under the guidance of Ivor Katz, has been a particularly fruitful in elevating the level of teaching and prevention in South Africa. The next 5 years should show a number of prevention programs in other countries in Africa.

In addition to its CME activities, COMGAN sponsored site visits during 2004 to Nairobi (Kenya), Dar Es Salaam (Tanzania), Kampala (Uganda), Togo and Benin, and Dakar (Senegal). Site visits have also been made to Kigali (Rwanda), Benin and Togo, and Sudan in the first half of 2005. As a result of the visit to Kigali, a renal unit is now being planned there. More site visits are planned for Angola, Malawi, Zambia, Mozambique, Botswana, Namibia, Madagascar, and Mozambique over the next 12 months. Many of these are countries where ISN has had no real presence before, and where there may be few or even no nephrologists. The recent site visits to Rwanda, Tanzania, Uganda, and Kenya confirmed that the most pressing need is for better training in both nephrology and pathology, followed by more access to affordable dialysis. The ISN presence in Africa is gradually encouraging the development of the physicians who will lead the field of nephrology over the next decade; Ebun Bamgboye in Nigeria, Linda Ezekiel in Tanzania, Ahmed Twahir in Kenya, and Boucar Diouf in Senegal, who was instrumental in founding a West African Association of Nephrology in March 2005.

Russia CIS

COMGAN began its official outreach in June 1995, with a visit to Moscow. Since that time there have been 22 additional CME meetings in Russia, the Ukraine, and Belarus. The original meeting was to have major consequences for nephrology in Russia. During the Soviet era there were few opportunities for exchanges with the nephrologists of the Soviet Union and surprisingly little was known of each other’s activities. Nearly 300 nephrologists from Russia and neighboring countries attended the initial 1995 meeting. About a dozen of the world’s best nephrologists from the developed world covered the full spectrum of current nephrology, from transplantation to immune nephritis to technical aspects of dialysis. A simultaneous course was held for nurses and technicians. Slides in Russian and English of all the sessions were made in advance. After this successful meeting of nephrologists from St. Petersburg to Vladivostok, and Moscow to Tbilisi, the speakers took a night train to St. Petersburg and repeated the course. Again the attendance was close to 300 people. The ISN group then flew to Tartu and repeated the course a third time in the university city of Estonia, with the same enthusiastic response from Baltic nephrologists. The tour was both exciting and invigorating and left an indelible mark on all those who participated.

These inaugural meetings were the forefront of biannual meetings in Moscow and St. Petersburg and have led to subsequent meetings in cities such as Kazan, Novosibirsk, Kaunas, Yekaterinburg, and Minsk. The ISN is grateful to Fred Finkelstein, Ellin Lieberman, Art Cohen, and their Russian counterparts, including Natalia Tomilina, Konstantin Gurevich, Andrey Nazarov, and others who have provided a decade of leadership in the region. The outcome has been the establishment of a national society, the development of new dialysis centers, the introduction of peritoneal dialysis and renal transplantation, renal pathology, acute renal failure, and electrolyte and acid-base workshops.

Similar events have taken place in Minsk, Belarus, and the Ukraine, led by Andrey Cybulsky of McGill University. Short courses have been carried out in Kiev, Donetsk, Odessa, Dnepropetrovsk, Kharkov, and Zaporizhya, where the local nephrologists were too poor.
to travel. ISN fellowships have been awarded to seven young nephrologists in the Ukraine and four in Belarus.

ISN has made a real difference Russia assisted greatly by the leadership of Natalia Tomilina, co-chair of the COMGAN Russia Subcommittee. Since the first visit of COMGAN in 1995, the ISN course “Nephrology Update” has been organized every second year and has become a kind of CME for Russian nephrologists. But the importance of ISN COMGAN activity for the nephrology community is not limited to the educational program. The contacts with COMGAN helped to revive the activities of Russian nephrologists after perestroika and the reforms, resulting in the organization of the Russian Dialysis Society and the Creative Association of Pediatric Nephrologists. The resulting local meetings of nephrology have been of great importance for the development of nephrology in Russia. According to Dr. Tomilina, “your contribution in the development of nephrology in Russia is difficult to overestimate” [10].

Partly as a result of Russia’s renewed contact with international nephrologists, there has been a desire within the country to bring training and research in line with the rest of the world. New regulations by the Russian Ministry of Health stipulate that nephrology training should now include 1 year of internal medicine followed by 2 years of nephrology training. While this will coexist with the old system for the time being, it is a definitely a major step in the right direction.

Nephrology practice in Russia has been difficult because of the massive recession and low priority given to medicine in the formative years of the democratic republics. Improvement is now taking place. The Moscow Update attracts attendees from areas such as east Siberia, Chechnya, the north of Russia, Kazakhstan, Belarus, Georgia, the Ukraine, and even the Far East. The annual St. Petersburg meeting also draws widely. The challenge is to provide CMEs that target the practice reaches current guidelines, while in others it varies widely. The result has been locally organized and corporately supported meetings in areas like Ekatherinburg, Khabarovsk, Kazan, Omsk, Novosibirsk, Krasnodar, Khanty-Mansyisk, and Samara.

**Eastern Europe**

The development of nephrology in the former Warsaw Pact countries over the past decade has been impressive under the able leadership of Eberhard Ritz, chair of the Eastern Europe Subcommittee for ISN COMGAN. Regular participation in over 50 CME meetings has occurred in every country, including Romania, Slovakia, Poland, Croatia, Slovenia, Bosnia and Herzegovina, Hungary, and the Czech Republic. A special hallmark has been the Budapest School, an annual meeting now in its twelfth year. About 60 to 100 nephrologists, particularly younger trainees, have received each year an intensive course in contemporary basic, clinical and technical issues relating to kidney disease. The participants are largely drawn from the neighboring countries of Bulgaria, Croatia, Estonia, Hungary, Kosovo, Poland, Romania, Russia, and Slovenia. Laszlo Rosivall has played the key leadership role along with Professor Ritz and others.

A postgraduate training course organized by ISN (Eberhard Ritz), European Renal Association (ERA) (Andrzej Wiecek) and the Institute for Postgraduate Medical Education in collaboration with the Czech Society Nephrology (Vladimir Teplan) and held each January for the past 5 years in Prague (Czech Republic). This event has been a wellspring for educating younger trainees and investigating current research issues in nephrology.

In Romania, led by Adrian Covic, and co-sponsored by ISN and ERA-European Dialysis and Transplantation Association (EDTA), several “Renal Failure Academy” meetings have been held, again aimed at younger nephrologists from Eastern European countries. In addition, the three Baltic Sea countries of Estonia, Latvia, and Lithuania meet biannually in a regional meeting co-organized by the ISN (Eberhard Ritz) and ERA (Andrzej Wiecek) in collaboration with the local Baltic societies. The level of clinical nephrology has substantially progressed in these regions not to the least because of these activities.

All of these regional courses help to address the two major problems that persist in Eastern Europe, namely, the lack of postgraduate courses in the region, and the inability of nephrologists to attend international conferences either because of financial circumstance or visa problems. The fragmented nature of Eastern Europe presents a unique problem for training and education. In some countries, such as Poland, the Czech Republic, Turkey, and Hungary, the level of nephrology practice reaches current guidelines, while in others it varies widely. The challenge is to provide CMEs that target the particular audience. Regional meetings have proved both effective and popular for this.

ISN has worked closely with the Balkan Cities Association of Nephrology, Dialysis, Transplantation and Artificial Organs (BANTAO) in the Balkan countries to create regional meetings. Between 2000 and 2004 there were three “Update in Nephrology” meetings, one in February 2000, a second in June 2002, and the third in October 2004. The meetings were held in Belgrade and attended by approximately 120 physicians mostly from Serbia and Montenegro, but also from Macedonia, Serbian Republic, Bosnia and Herzegovina, and by Council Members of BANTAO.

During the same period, Serbian doctors were invited to and participated in COMGAN-supported meetings in Romania, Hungary, and the Czech Republic. The CMEs
have significantly improved local nephrology after 10 years of isolation, and they have also helped to establish scientific collaboration in the region.

The ISN has also been very actively involved in nephrology in Turkey. The Turkish Society of Nephrology (TSN) was launched in 1970, and in 1978, the ERA/EDTA met in Istanbul. In 1997, an ISN group visited the meeting of the TSN in Istanbul after an initial meeting in Moscow. It was an outstanding cast of speakers, including Craig Tischer, Richard Glassock, Eberhard Ritz, Robert Schrier, Norbert Lameire, and John Dirks, and was very well received. The close relationship with Turkish nephrologists led to a collective membership in ISN by every single member of the TSN.

Professor Ekrem Erek, President of the TSN from 1995 to 2000, and the current President, Kamil Serdengecti, have guided the expansion of nephrology in Turkey in every area. They established an excellent renal registry in 1990 and the number of dialysis units has grown to 473 [11]. Nearly 27,000 patients per year receive hemodialysis and peritoneal dialysis. About 550 patients per year receive transplants in 22 different centers and about 66% involve live donors.

Since 2000, 1000 general physicians have joined 200 Turkish nephrologists and 400 nurses annually at meetings in places like Istanbul, Izmir, Antalya, and Cappadocia. The growth in such meetings is not only in attendance, but more significantly, in scientific contributions. Testament to this growth is the amount of first-class clinical research being generated by Turkish nephrologists. They are now among the leaders in submitting abstracts to the ISN and ERA meetings. There is still a need for more basic research in Turkey, as in most low and middle income countries; however, in its decade of association with ISN, Turkish nephrology has grown steadily in both activity and reputation.

During this same period, two earthquakes in the Istanbul area occurred near Izmet (1999) and Bingol (2003). At the Bingol earthquake, the by-then experienced TSN Disaster Relief Task Force, led by Mehmet Sever, activated on the field rapid rehydration of patients with crush injury, and by doing so prevented acute renal failure in 13 of 17 patients. The Turkish nephrologists are now experts in this type of disaster and have made a real contribution to the earthquake response problem.

Middle East

The ISN has seen in action Arab nephrologists at regional meetings such as the Arab Society of Nephrology and Renal Transplantation (ASNRT) and relevant meetings in Tunisia, Egypt, Lebanon, Saudi Arabia, Qatar, Oman, Bahrain, and Yemen. Over the past decade, the ISN through COMGAN has sponsored and participated in 26 CME meetings and site visits in 13 countries in the Middle East. There has been a major advance in the teaching of nephrology and medicine as a whole in this region over the past decade.

The three updates in Dubai, United Arab Emirates, in 1999, 2001, and 2004 averaged 500 registrants from all over the Middle East and from North and East Africa and South Asia. Dubai is an extraordinary, modern city well suited for offering postgraduate courses in the region. There have been many advances in the teaching of nephrology and medicine as a whole in this region. Most striking has been the development of outstanding clinical publications in the more affluent countries such as Saudi Arabia and the Gulf states. In 2001, a detailed site visit to the centers in Riyadh and Jeddah was undertaken by Jan Weening, Mohammed Sayegh, Karl Leunissen, and John Dirks. Particularly impressive was the Saudi Center for Organ Transplantation with its superb database and listing of all renal replacement therapy patients, directed at renal transplantation. Faisal Shaheen and Abdulla Al Khader have been strong and committed leaders for the ISN. In nearby Iran, ISN COMGAN has participated in a number of CME courses beginning with a site visit in 1996 by Barry Brenner and John Dirks. Asghar Rastegar has led the ongoing CME efforts within a well-developed nephrology community.

Asia

COMGAN has partnered or sponsored 81 CME meetings and site visits in Asia during the past decade. As in many regions where COMGAN is active, there is a large discrepancy in the quality and availability of care for those with renal disease.

COMGAN is working to close that gap with the help of longtime leaders like Visith Sitprija.

COMGAN has long had a very close relationship with India and Indian nephrologists. The first COMGAN supported CME was held in Chandigarh in 1995. ISN has hosted meetings in many of the major centers of India, including Calicut, Chennai, Calcutta, Jaipur, Lucknow, New Delhi, Cochin, Bangalore, Patna, Visakhapatnam, Mangalore, and Varanasi. Mumbai was the site of the first COMGAN Consensus Conference, held in 2000 and attended by 650 registrants. Consensus conferences are geared to the topics identified by the national society and involve presentations by internal and external experts with in-depth discussions leading to national recommendations for the future. Supported by Baxter Health Care, the themes of the Mumbai conference were water quality, adequacy of dialysis, and anemia. In the past decade, a total of 15 CMEs have been held in India, many of them organized by the capable Kirpal Chugh who has long been an ISN leader among Indian nephrologists, along with M. Krishna Mani, Chakko Jacob, and Georgi Abraham.
One of the most impressive projects now underway is M.K. Mani’s village screening project in India. Although not directly funded by the ISN, it has been encouraged, visited, and reported on frequently by COMGAN members. In his dedication and determination to make a difference despite the odds M.K. Mani represents the very best aspects of the COMGAN culture of humanitarianism.

In March 2005, John Dirks and Jan Weening attended conferences in Chennai and Delhi. The scientific topics included in the Delhi Congress were directly related to the issues of prevention of chronic kidney disease, the magnitude of chronic kidney disease in India and the issues related to the possible prevention strategies of chronic kidney disease from the Indian point of view. A meeting of the steering committee (chaired by Arjay Singh) was held to discuss the screening and early evaluation of kidney disease (SEEK) project that is just getting underway. It will be carried out under the aegis of the ISN and Brigham and Women’s Hospital/Harvard Medical School.

In 1982, President Gabriel Richet, accompanied by Priscilla Kincaid Smith and Neal S. Bricker made the ISN’s first sponsored visit to China [12]. That was the beginning of a dialogue that has continued and grown for over 20 years. Over the past decade nephrologists like Haiyan Wang, Hequn Zou, Philip Li, Yipu Chen, and Shanyan Lin have become active both in COMGAN committees and research projects. One of the most important meetings of 2004 was the ISN Conference on Prevention of Progression of Renal Disease held in Hong Kong June 29 to July 1, with 1269 participants from 39 countries. A Consensus Workshop on the Prevention of Progression of Renal Disease was held with a number of international meetings due to restrictions on travel and the low level of their income.

CME courses are regularly held in Thailand, Bangladesh, Indonesia, and Pakistan and have resulted not only in the strengthening of their national societies but also in a much more international perspective on the level of patient care, and equally important, of the need for prevention.

The achievements of COMGAN are represented by Table 1 and the scope of its global outreach by Figure 4.

THE COMGAN RESEARCH SUBCOMMITTEE AND THE MISSION OF PREVENTION

One of the problems in approaching the issue of prevention in the developing world is lack of data. It is given that rates of renal disease are vastly underreported both because patients cannot afford to seek treatment, and because when they do, insufficient records are kept. There are no central registries to provide a broad picture of incidence. Partly to address the problem, the ISN COMGAN Research Subcommittee was established in 2000 with Giuseppe Remuzzi as Chair and Bill Keane (United States), Anita Aperia (Sweden), Dick de Zeeuw (The Netherlands), and Jaime Hererra (Mexico) as members. Since then the committee has grown to include 21 members from 11 countries. The aim of this committee is to provide unique opportunities for research in emerging countries in which Western expertise could be applied to local problems. One of the major challenges for renal

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<th>Table 1. The Commission for the Global Advancement of Nephrology (COMGAN) achievements</th>
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<td>Continuing nephrology education meetings and site visits</td>
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<td>Successfully developed specialty courses (e.g., pathology, hemodialysis)</td>
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<td>Strengthened nephrology specialty worldwide</td>
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<td>Increased number of meetings from 7 in 1995 to 52 in 2004</td>
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<td>Increased annual attendance to more than 15,000 physicians in low- and middle-income</td>
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<td>Developed the world’s largest medical subspecialty medical education program</td>
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<td>Strengthened relationships with existing regional and national societies</td>
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<td>Encouraged the development of nephrology societies worldwide</td>
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<td>Improved the medical practice of many physicians in developing countries</td>
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<td>Improved contributions by local physicians</td>
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<td>Stimulated fellowship applications</td>
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<td>Improved renal replacement therapy</td>
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<td>Linked national with local health authorities</td>
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<td>Stimulated research studies</td>
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<td>Enabled International Society of Nephrology (ISN) COMGAN to build closer ties with international agencies</td>
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There is now a high standard of medical knowledge. The local nephrologists are keen to have COMGAN visits continue as they have great difficulty attending international meetings due to restrictions on travel and the low level of their income.

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Fig. 4. International Society of Nephrology (ISN) Commission for the Global Advancement of Nephrology (COMGAN) Continuing Medical Education (CME) and site visits from 1995 to 2005.

medicine in emerging countries is how to define strategies that would allow screening of the subjects potentially at risk. Over the past several years the committee has moved the general program of prevention in emerging countries into operative draft projects targeting specific needs. A number of screening and intervention projects have been planned. These prevention programs have a consistent approach, yet are flexible enough to accommodate the local needs of a given country or region. Each project is consistent with the general mission and aims of ISN COMGAN prevention programs.

This endeavor will make it possible to design population-oriented preventive measures that will gradually limit the need for dialysis and transplantation. Existing programs in Australia, Bolivia, and India have suggested that low-cost programs can be developed which will reduce the burden disease in developing countries. The 1995 to 2000 initiative among Australian Aboriginals, for instance, indicates the effectiveness of this approach. After an average of 3.4 years of follow-up with angiotensin-converting enzyme inhibitor treatment, the incidence of end-stage renal disease was reduced by 63% and nonrenal deaths by 50%.

Furthermore, the ISN has developed a proposal for the detection and management of chronic kidney disease, hypertension, diabetes and cardiovascular disease in developing countries (KHDC) [14]. Its aims are to help local physicians and health care workers establish their own prevention programs and to increase government and public awareness of the social and financial costs of these diseases. The KHDC agenda consists of two phases—detection and management. One of the important anticipated outcomes of the program will be the creation of a global database for kidney disease.

Programs are currently being organized in Moldova, China, Philippines, Bolivia, and Nepal. Requests for educational/prevention programs have come from many other countries, including Paraguay, Morocco, Lithuania, Belarus, the Ukraine, Saudi Arabia, Cuba, and India. The program in China, where the incidence and prevalence of chronic renal failure, its costs and patient outcomes are not well known, will consist of a pilot mass screening (30,000 people) in the town of Wanzai. It will be a community-based, prospective, observational, stratified mass screening, which will mainly focus on chronic kidney diseases with screening for obesity, hypertension, diabetes, and dyslipidemia. Participants who screen positive for renal diseases, hypertension, and diabetes will enter the intervention/treatment phase of the program. Those with high blood pressure and/or diabetes and/or albumin-uric renal diseases will be enrolled in a formal research prevention program [15].

The COMGAN Research Committee is approaching national and local health authorities and local
coordinators to carry out the programs, while the ISN is seeking funding and lower cost medicines (Fig. 5).

Renal disease accounts for over 1 million deaths a year worldwide. The lack of expertise and equipment in low-income countries means that people who develop kidney disease die of uremia. Even where treatment is available, the cost is usually prohibitive, making prevention the best, and usually only, hope for these populations.

These realities led ISN COMGAN, in 2002, to declare it would undertake as its mission the global prevention and regression of chronic renal disease. Early recognition of chronic kidney disease and the prevention of its development through education are essential to avoid a global health catastrophe. This fundamental need is really at the heart of all the ISN initiatives, in both the developing and the developed world. Since adopting this mission, the number of meetings devoted all or partially to prevention has grown steadily, culminating in 32 in 2004.

During the last decade the dialysis population has been growing at an average of 7% a year and there are approximately 1.49 million people undergoing regular treatment. This is expected to rise to 2.5 million by 2010 [16]. Ninety percent of dialysis patients live in the developed world, which accounts for only 20% of the world’s population.

The ISN COMGAN mission of prevention includes a basic approach that is repeated throughout the developing world: (1) improving education of nephrologists, primary care doctors and other health professionals; (2) training which focuses on the areas of epidemiology, clinical pharmacology, and clinical trials; (3) recognition of microalbuminuria and renal insufficiency as a marker for cardiovascular disease as well as kidney disease; (4) activating research projects on early screening for renal disease; and (5) raising public awareness about kidney disease in the context of cardiovascular disease and diabetes.

In March 2004, a special conference “Prevention of Renal Diseases in the Emerging World: Toward Global Health Equity” was held in Bellagio, Italy. This is the most important prevention meeting undertaken by ISN COMGAN, placing prevention, education, and equity at the forefront of the ISN’s work. It brought together 23 experts from the World Health Organization, the developed countries, and the developing world to discuss recently obtained insights in the pathogenetic significance of chronic renal disease to ischemic vascular injury in particular in relation to hypertensive and diabetes-related systemic cardiovascular disease (Fig. 6).

Epidemiologic analyses presented at the Bellagio Conference revealed the growing worldwide inequity in renal replacement therapy for the millions of patients with end-stage renal disease and the need for early detection and prevention in order to avert the global threat of pandemic vascular disease. Multiple interventions and designing programs for early detection, made possible by urinary albumin screening, blood pressure and renal function measurement in populations at risk, followed by effective treatment in a clinical research are all important.
Recent United States and European studies have shown that drugs that lower albuminuria improve both renal and cardiac prognosis as well as reducing the risk of developing diabetes. Instituting screening programs for targeted populations is a cost effective, and in the long run is cost saving.

Since the Bellagio Conference, the ISN has held a number of regional and national prevention meetings, the large Hong Kong meeting of June 2004 which resulted in a consensus statement, an international symposium on albuminuria in New York in May 2004, and a prevention meeting in Amsterdam in November 2004. The focus there was on the countries of the European Union and speakers included many ISN leaders such as Giuseppe Remuzzi, Barry Brenner, Paul de Jong, Eberhard Ritz, John Dirks, Dick de Zeeuw, Wendy Hoy, Meguid El Nahas, Hans-Henrik Parving, and Francesco Locatelli.

The ISN subsequently issued a “Call to Action” asking national health bodies worldwide to consider the urgent implementation of proactive albuminuria screening. Such action, allowing for the early detection of renal damage, followed by treatment to prevent further deterioration of the renal function, will reduce the number of patients suffering from kidney failure, heart failure, and diabetes (in both the short- and long-term) and their associated costs.

In November 2005, in Chile, ISN COMGAN will hold a major strategic meeting on identification and prevalence of end-stage renal disease. Representatives from 30 Latin American countries will develop an overall plan for the next decade.

Table 2. International Society of Nephrology (ISN) guidelines for postgraduate training by nephrologists

<table>
<thead>
<tr>
<th>Areas in which trainees should gain expertise in diagnosis and management</th>
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<tbody>
<tr>
<td>Acute renal failure</td>
</tr>
<tr>
<td>Fluid/electrolyte/acid-base disorders</td>
</tr>
<tr>
<td>Renal parenchymal diseases</td>
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<tr>
<td>Hypertension and hypertensive renal disease</td>
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<tr>
<td>Chronic renal failure (pre-end-stage renal disease)</td>
</tr>
<tr>
<td>Acute peritoneal dialysis</td>
</tr>
<tr>
<td>Hemodialysis</td>
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<tr>
<td>Continuous ambulatory peritoneal dialysis</td>
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<tr>
<td>Transplant workup</td>
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<tr>
<td>Posttransplant patient</td>
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<tr>
<td>Early management</td>
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<tr>
<td>Long-term management</td>
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<tr>
<td>Nutrition in patients with renal disease and patients with end-stage renal disease</td>
</tr>
<tr>
<td>Urinary tract stone disease</td>
</tr>
<tr>
<td>Complicated urinary tract infection</td>
</tr>
</tbody>
</table>

Developed by Commission for the Global Advancement of Nephrology (COMGAN) Education Committee and approved by the ISN Council. Duration of general medicine and nephrology program is a minimum of 4 years, with an optimal of 6 years. The number of years devoted to nephrology training is a minimum of years, with 3 years being optimal.

EDUCATION AND THE FELLOWSHIP PROGRAM

The COMGAN Advisory Committee on Education was formed in 2001. In order to complement and extend the CME courses, this committee has developed a set of guidelines for postgraduate training of nephrologists which is aimed at both developed and developing countries (Table 2).
The Fellowship Program was established in 1982, under the guidance of Robert Schrier and has grown to become one of the ISN’s most important and effective outreach programs. The committee responsible for assessing and awarding the fellowships also included Jan Weening and Rashad Barsoum. In 1995, it was expanded to include John Dirks and Barry Brenner to ensure confluence with COMGAN projects in the developing world. The purpose of the program was to ensure that physicians from the developing world who received the fellowships would then return to their home country to practice, teach, and do research.

By 2004, 370 nephrologists had received fellowships in 19 host countries. An estimated 80% have returned home. The regional breakdown of fellows is 61% of these are involved in teaching, 47% in research, and 67% in patient care. About 50 fellowships are awarded each year, and the annual number has increased in every region on the world. The awarding of fellowships is done on a competitive basis through a peer-reviewed application process (Fig. 7).

Under the capable leadership of current Secretary General Rashad Barsoum, the Fellowship Program has helped to establish and maintain the ISN worldwide as indicated by responses to a recent questionnaire in which 56% of respondents said they were still involved with their host institute, 34% participate in ISN activities, while 49% continue to receive Kidney International [17].

The Global Fellowship Clubs, another initiative of Rashad Barsoum, were launched in 2003 with the aim of establishing a worldwide network made up of all past ISN fellows. Past fellows from each country or region are encouraged to meet at regular intervals for symposia and guest lectures to exchange information, share cases, and perhaps set up joint initiatives within their home countries. Since most fellows return to their own country after completing their training, there is a growing pool of talent within the developing world.

The Visiting Senior Scholar program was established in 1991 to send experts from the developing world to teach and assess the teaching methods in developing countries. Typically, the ISN sponsors experts in nephrology to spend 3 to 6 months at an institution in the developing world to enhance that country’s knowledge of nephrology. The focus is on “hands-on” activities that can improve patient care or establish new clinical programs as well as research programs and laboratory techniques.

SISTER CENTERS AND THE MODEL SISTER CENTER PROGRAM

The Renal Sister Center Program was introduced by then President, Robert Schrier, in 1996 has seen 150 sister linkages established. Some have been highly effective in exchanging and sharing faculty, fellows and students, as well as laboratory and clinical supplies and equipment. They also cooperate in clinical research projects and educational courses. Because there is no financial commitment by the ISN for these relationships, there is a great variability in their level of activity, depending on the individual level of commitment.

The program was expanded in 2000 to develop Model Sister Centers. The ISN made available US $5000 per year for 3 years for each sister center. The goals of the Model Sister Center Program are (1) to enhance clinical and teaching programs; (2) to exchange faculty and trainees with sister centers; (3) to begin research; (4) to develop a nucleus of nephrologists for the next generation; and (5) to set examples of excellence for the region.

The current Model Sister Centers include (1) Chenai, India (Georgi Abraham) and Toronto, Canada (Edward Cole); (2) Guatemala City, Guatemala (Randall Lou) and Salt Lake City, Utah (Richard Siegler); (3) Kaunas, Lithuania (Vytautos Katauskis) and Gent, Belgium (Norbert Lameire); (4) La Paz, Bolivia (Jorge Ortiz Miranda) and Bergamo, Italy (Noberto Perico); (5) Antwerp, Belgium (Marc De Broe) and Yerevan, Armenia (Ara Babloyan); and (6) London, United Kingdom (David Goldsmith) and Iasi, Romania (Adrian Covic).

There have been fruitful sister center relationships in the past between Bolivia and Italy, Pakistan and Australia, and Cuba and Spain.

The newest Model Sister Center was established in 2005 between Salt Lake City and Guatemala City. The Guatemalan Sister, FUNDANIER, is a foundation for children with kidney disease whose mission is to treat Guatemalan children with chronic kidney disease. In addition, the foundation is dedicated to research and to the education of families, pediatric residents, and general pediatricians, who are taught about the burden of kidney diseases and early identification and prevention strategies for chronic kidney disease.

LIBRARY ENHANCEMENT PROGRAM

The dissemination of knowledge is one of the main missions of the ISN. Providing educational tools to libraries
that would otherwise not have access to important and current literature is therefore a major goal. Site visits to new countries reveal that medical libraries may have only a few, often quite dated, texts and often no journals at all.

The Library Enhancement Program was conceived and launched by Craig Tisher, Treasurer of the ISN in 1992. The decision was made to distribute 100 free copies of Kidney International to libraries in developing countries. Another publisher agreed to send copies of new books to each those same libraries. This was the beginning of the Library Enhancement Program, which has grown to become an important part of the ISN outreach. It has enhanced the quality of literature and knowledge available in the rather poorly stocked libraries of many developing countries.

The ISN currently provides Kidney International and other publications and textbooks to nearly 200 institutions. Besides Kidney International, current nephrology textbooks, other journals, and scientific resources, are also donated as they become available. While the focus has been primarily on nephrology, materials relating to other medical disciplines have also been provided. Another resource which is offered by the ISN at no charge to libraries with an Internet connection is the Robert Schrier Atlas of Diseases of the Kidney.

INTERNATIONAL LINKAGES AND WORLD TRENDS

ISN COMGAN has always had an inclusive culture. Its basic philosophy has reflected an understanding of the need to work with others in regional and national societies as well as in other specialties in order to more effectively carry out its outreach mandate. Close ties have been established and maintained with renal societies in virtually every country and region in which the ISN is active. Indeed, it has encouraged the formation of new regional and national societies in the developing world, such as the recently West African Society of Nephrology. COMGAN has also used these relationships to leverage its own abilities to participate globally with the limited funds it has available for education and training. In addition, ISN has ties with such larger societies as ERA, Sociedade Latino-Americana de Nefrologia e Hipertensão (SLANH), American Society of Nephrology (ASN), and undertakes some joint projects with them.

The linkages are not limited to national societies, but have grown to include many of the world’s major international health organizations such as the World Bank, World Health Organization, the Rockefeller Foundation, the World Heart Federation, the International Diabetes Federation (IDF), Pan American Health Organization (PAHO), the International Foundation of Kidney Foundations (IFKF), The Transplant Society, and the International Pediatric Nephrology Association (IPNA). COMGAN has been involved in joint projects with all these organizations. The goal in partnering with all these organizations is to collaborate and partner in the overall mission of prevention of cardiovascular disease and diabetes and their complications.

In November 2001, John Dirks met with World Bank officials to discuss areas of common interest. Several collaborations and meetings have resulted from this. John Dirks and Giuseppe Remuzzi have completed a paper for a joint World Bank/World Health Organization/National Institutes of Health publication as part of the Disease Control Priorities Project (DCPP2) entitled “Diseases of the genitourinary system,” which recommended that developing countries be encouraged and assisted in raising public awareness and developing programs for prevention, and improving education and training, including establishing selected centers of excellence.

COMGAN’s first official meeting with the World Health Organization occurred in May 2002 in Geneva, when Giuseppe Remuzzi and World Health Organization officials confirmed that they shared a similar culture and vision in terms of their desire to address and implement public health issues to a broad international audience, particularly in middle-income and developing countries. There have been a number of meetings since with goal of placing kidney disease on the World Health Organization radar screen and on developing a collaborative relationship with the World Health Organization.

In 2003, the ISN, through the offices of Robert Atkins, joined forces with the IDF in a global campaign to heighten the understanding of the negative impact of diabetes on the kidney. The two organizations published a report entitled “Diabetes and Kidney Disease: Time to Act” [18] (largely written by Robert Atkins, Eberhard Ritz, and Giuseppe Remuzzi) which focuses on one of the most prevalent and costly long-term complications of diabetes, diabetic nephropathy. The objectives of the publication are to raise the awareness and recommend courses of action to prevent or delay this complication of diabetes.

ISN COMGAN has established a close working relationship with the International Society of Hypertension (ISH). John Dirks and Mickey Alderman, President of the ISH have held talks on areas of mutual interest and collaboration, and the ISH has sent speakers to several COMGAN prevention courses. A further collaboration is “Hypertension and the Kidney,” a Satellite Symposium which will be held after the ISN 2005 World Congress of Nephrology in Perth, Australia. A second Bellagio Conference is also being planned in December of 2005 to develop an integrated cardiovascular, diabetes, kidney disease prevention strategy.
In 2004, ISN COMGAN began discussions with the World Heart Federation. In principle the World Heart Federation would like to collaborate as they feel the ISN experience in the training of physicians in low- and middle-income countries is particularly impressive.

ISN COMGAN has maintained a close relationship with IPNA since 2003. President Jan Weening and John Dirks met with Director Matthias Brandis and the IPNA Council in March 2004 to present ISN programs and to discuss mutual cooperation and potential joint ventures. As a result of the meeting Dr Brandis, Secretary General of IPNA, stated its intent to undertake participation in the ISN Fellowship and Training program. Robert Mak and Patrick Niaudet have been appointed to IPNA’s Education Committee to interact with ISN COMGAN.

ISN has also undertaken discussions with The Transplantation Society. John Dirks and Jan Weening were invited to represent ISN at the forum on the live kidney donor held in Amsterdam in April 2004. Subsequently, John Dirks and Tom Reiser met with leaders of the Society during the International Congress of The Transplantation Society in Vienna in September 2004 as part of the “Forum on Global Partnerships in Transplantation.” In 2005, John Dirks was invited to participate in The Transplantation Society committee that is developing a proposal for the creation of a global alliance for transplantation. This will be an important partnership to enhance transplant development as the optimal choice of renal replacement therapy.

Since its recent founding, ISN has worked closely with IFKF. Regular discussions have taken place with the past-president Joel Kopple and the current President, Warwick Prime. An IFKF-ISN liaison committee has been established which meets to coordinate activities of mutual interest. One result has been the joint IFKF-ISN proposal for the establishment of a World Kidney Day, a project currently in process.

RESOURCES AND ADMINISTRATION

In 2004, approximately 25% of the ISN total budget was spent on outreach programs. That includes all CME costs, the Sister Centers, the Research and other subcommittees, the Fellowship Program and the costs of running the Toronto office of COMGAN. Approximately 55% of this goes to the Fellowship Program. The COMGAN office in Toronto functions by working closely and on a timely basis with the subcommittees, their chairpersons, and regional and national societies, as well as those who have relevant questions. The chairman has been fortunate in having superb managers in Beatrice Spiteri and Sheila Robinson.

While the need and demand for outreach programs has always far exceeded the financial capabilities of the ISN, the Society uses its close relationships with national, regional, and international societies to leverage what funds it can afford. In the case of CME courses, the local organizers, usually with the help of pharmaceutical companies and medical suppliers, cover local costs, including venue, accommodation, and publicity. Local and regional companies recognize the added value of ISN participation in a meeting and are generally eager to be involved. COMGAN typically sponsors economy travel for two to five international speakers, depending on the size of the meeting. No honorariums are offered, so the speakers are essentially volunteering their time. In spite of this there is an extremely high acceptance rate by invited speakers.

Since the ISN hired MIC Management in Brussels, Belgium, to administer its affairs, there has been more emphasis on fund-raising than ever before. Under the overall direction of Tom Reiser, US $225,000 was raised from the corporate sector for 2004. COMGAN, which has been and has been directly involved in fundraising, solicited in collaboration with the Brussels office a further unrestricted educational grant of US $150,000 for the prevention mission from Merck in 2003. Undoubtedly, this will increase over the next few years.

THE FUTURE CHALLENGE

During the last decade, ISN COMGAN has been active in 83 countries, partnering and sponsoring CME courses, facilitating fellowships to enable young physicians to study in the developed world, offering journals and printed materials to hospitals and medical university libraries, strengthening and encouraging national societies, putting prevention on the front burner, and establishing guidelines for low-cost screening and interventional studies. It has also stimulated a tremendous amount of research and publications. These capacity building programs have resulted in the establishment of a network of nephrologists from the developing and developed world capable of enormous outreach. Moreover, COMGAN has developed local leaders who will be the future of nephrology in their regions and will contribute to the creation of centers of excellence within the developing world over the next 10 years. This may be the most important and lasting legacy from the first decade of COMGAN (Fig. 8).

With the completion of John Dirks term, the ISN has announced a revised structure based on a cabinet model structured around three committees: the CME program (chaired by Norbert Lameire), Renal Sister Centers (chaired by Rashad Barsoumi) and the Fellowship and Visiting Scholars program (chaired by John Freehally). COMGAN in the future will be built around these three areas, much as it has been during its first decade. The Renal Sisters Program, however, will be given an expanded role as the backbone of the
capacity building programs insofar as many of the other programs will be concentrated in and flow from these selected centers. The Research Committee will receive more resources to carry out its work.

The challenge for the ISN is to maintain an integrated approach to global outreach. The real work of improving the practice of nephrology has just begun, and the opportunities to do more will open up over the next decade. There are a number of areas that are particularly important. Deepening and expanding its relationship with the World Health Organization, the World Bank, and other international health and subspecialty organizations will be vital, as there is a real convergence between ISN and the missions of these organizations. Other joint activities and undertakings with international medical societies and National Global Outreach would help to tackle chronic kidney disease, diabetes, and cardiovascular disease in a more cohesive and therefore effective manner. Declaration of a World Kidney Day would be a significant achievement.

Some of the more pressing needs include (1) creation of up to 10 sufficiently funded centers of excellence for teaching and research within the developing world to take over screening and intervention projects for diabetes, cardiovascular, and kidney diseases and become a focus for clinical training; (2) greatly increase the scope of ISN COMGAN prevention programs with research studies and resources and the establishment of a kidney disease data center, which would assist in meeting this goal; (3) although the ISN has always recommended transplantation as the optimal choice for end-stage renal disease (ESRD) it should also recommend dialysis for those with acute renal failure and for those with a potential for transplantation; (4) the Library Enhancement Program needs to be built up, and to be augmented with the educational website “Gateway” and the new clinical journal, *Nature: Clinical Practice Nephrology*; (5) the ISN needs to provide assistance with Internet access (e.g., computers) in selected areas such as sister centers, and to assist in implementing email and internet educational activities in developing countries; (6) develop integrated local nephrology education in medical schools curricula in the emerging world; (7) successfully influence decision makers in government and national and international agencies; (8) raise public awareness about chronic diseases and the need for prevention; (9) develop a well researched and thorough approach to fundraising from granting agencies and the corporate sector; (10) create a climate of volunteerism amongst those who have benefited from ISN programs; and (11) be more proactive in training other health care professionals to assist the renal team.

In spite of COMGAN’s reach, there are still many regions where the exposure to nephrology training and practice has been extremely limited (i.e., Central Asian Republics, Central Africa). Expanding into these countries is another important goal for the future. The role
of the Research Committee will grow in importance, especially as regards the mission of prevention. The flexible model for reasonably priced screening and intervention studies has now been created. The challenge will be to achieve the funding necessary to carry them out.

A real opportunity exists for the ISN to lead other subspecialty societies toward a more integrated and effective role in affecting global health. A decade of activities through COMGAN and other ISN resources has established its reputation as a world leader among medical societies for education and prevention of chronic disease. The ISN leadership should call medical specialty groups together to ensure a greater medical contribution to the developing world. As well, the ISN has developed a unique sense of purpose and has proactively pursued its comprehensive agenda for development in the field of kidney disease. It can achieve an inclusive and integrated outreach program of even broader scope and greater resources. Fortunately, the current international political climate is becoming more responsive to such efforts. The ISN is well positioned to build on new opportunities and provide world leadership over the next decade.

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