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<th>ICOFoundation</th>
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<th>2008 World Ophthalmology Congress*</th>
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<tbody>
<tr>
<td>Hong Kong, China Congress attracted 13,400 registrants from 105 countries.</td>
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<th>Ophthalmic Education and Training</th>
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<td>Medical student lectures and teaching images available on the Internet.</td>
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<th>Ophthalmology Program Directors Courses</th>
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<td>Courses presented in Brazil, Slovenia and Ethiopia.</td>
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<th>Ophthalmic Knowledge Assessments</th>
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<td>Assessments conducted for 2,049 candidates at 93 test centers in 61 countries.</td>
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<th>Ophthalmology Fellowships</th>
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<td>Awarded 54 Fellowships to ophthalmologists from 25 developing countries.</td>
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<th>Ophthalmology Training and Eye Care Centers</th>
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<td>Training and Eye Care Centers advanced in Nigeria, China and Slovenia.</td>
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<th>Eye and Vision Care Guidelines</th>
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<td>Produced Ocular HIV/AIDS Related Disease guidelines.</td>
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<th>World Ophthalmology Roundtable on Leadership Development (WORLD)</th>
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<td>Multinational WORLD meetings convened in South Africa and Nigeria.</td>
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<th>Eye and Vision Research</th>
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<td>Applied research initiated in Shunyi County, China.</td>
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Greater than ever before, the needs and opportunities for eye care throughout the world stem from population growth and aging, advances in ophthalmic science and the vital role of vision in quality of life.

**Great and Growing Need for Eye Care.** Worldwide, 161 million people are severely visually impaired due to eye disease and of these, 37 million are blind (Ref. 1 Resnikoff S, et al. Global Data on Visual Impairment in the Year 2002. Bull. World Health Organization 2004: 82(11), 844–851). The burden of visual impairment and blindness is greatest in the least developed regions of the world and the burden is greater, in all regions, among women than men. More than 1.4 million children are blind, but visual impairment and blindness are more prevalent among adults 50 years of age and older. In addition, an estimated 153 million people have severe impairment of vision, including 5 million who are blind, due to uncorrected refractive error.

Adding to this tragic burden, the world’s population is projected to increase in number and, even more significantly, advance in age. Between 2000 and 2030 in the United States, for example, the number of people age 65 years and older will increase from 35 million to more than 71 million (Ref. 2 Lee P. Into the Looking Glass: Factors and Opportunities to Reshape Eye Care in the Next 25 Years. Ophthalmol 2007; 14(1):1–2). With each decade of increased age over 40, the prevalence of vision loss and blindness increases three-fold (Ref. 3 Taylor HR. Eye Care: Dollars and Sense. Am J Ophthalmol 2007; 143:1–8).

**Advances in Ophthalmic Science.** At least 75% of disease-related vision loss and nearly 100% of visual impairment due to refractive error are avoidable—either preventable or treatable with currently available knowledge and biotechnology (Ref. 4 Global Initiative for the Elimination of Avoidable Blindness. World Health Organization/PBL/97.61). Intensive efforts to control onchocerciasis with vector elimination and treatment of 40 million people in 16 countries have greatly decreased the occurrence of dreaded “River Blindness.” Similarly, public health measures and treatment with single-dose azithromycin have reduced primary infection and recurrence of trachoma in endemic regions of Africa. (Ref. 5 West SK, et al. Single-Dose Azithromycin Prevents Trichiasis Recurrence Following Surgery. Arch Ophthalmol 2006; 124: 309–314).

Looking ahead, scientific discovery, technological advance and clinical trials document increasingly effective medical and surgical means to prevent vision loss caused by cataract, glaucoma, childhood eye disease, diabetic retinopathy, age-related macular degeneration and a host of other conditions.

**Vision-related Quality of Life.** In the brain of each of us, nearly one-third of the cerebral cortex—the wrinkled surface layer of 20 billion neurons responsible for language, consciousness and reasoning—is devoted to vision (Ref. 6 Nyberg KA. An Early Start for the Thinking Brain. Yale Medicine, Winter 2007, 10). Cortical cells joined through neural paths to the intricacies of the eye form the visual system that is the primary sense we rely on in our daily lives. Vision contributes to learning, mobility, perception and the quality of life.

The world today presents extraordinary challenges in the context of increasing economic, environmental and geopolitical interdependency. More than at any time in the history of civilization, the well-being of each individual is linked to that of every other. The tragic reality of extensive and avoidable visual impairment and blindness throughout the world compels a global initiative to realize the opportunities for measures to promote the best possible vision for every person.

—Bradley R. Straatsma, M.D., J.D.  
President, ICO Foundation
The International Council of Ophthalmology Foundation (ICOFoundation, www.icofoundation.org) was established in 2002 to support ophthalmic education, advocate quality eye care, and advance scientific ophthalmology through support of International Council of Ophthalmology programs.

Following a yearlong planning process in 2007, the ICOFoundation Officers and Directors approved a strategic plan entitled Envision 2008–2010. Commencing with analysis of activities conducted in 2007, this forward-looking multiyear strategic plan projected ICOFoundation goals, support programs, financial resources and organizational development to advance ophthalmic education and eye care in regions of greatest need.

Implementing the strategic plan in 2008, the ICOFoundation expanded the donor base, increased support for ongoing programs and initiated support for new programs including:

- Dissemination on the Internet of presentations at the 2008 World Ophthalmology Congress on the ICO open access website (www.icoph.org);
- Distribution by the International Council of Ophthalmology and American Academy of Ophthalmology (AAO) of the AAO Basic and Clinical Science Course to 200 resident training programs in economically disadvantaged, low-income countries;
- Initiation of a Network of Catholic Eye Hospitals in Nigeria to provide sustainable population-based eye care; and
- Commencement of Ophthalmology Subspeciality Fellowships, one year in duration, at the ICO/Alcon Ophthalmology Training Center, University Eye Hospital, Ljubljana, Slovenia.

Further implementing Envision 2008–2010 with the planned succession of leadership, Bradley R. Straatsma, M.D., J.D. completed his term as Founding President of the ICOFoundation on December 31, 2008. Dr. Straatsma, who continues as a Director, strongly endorsed the 2009 ICOFoundation Leadership:

- Hilel Lewis, M.D., President
- Alfred Sommer, M.D., M.H.S., Vice President
- Bruce E. Spivey, M.D., Secretary-Treasurer

ICOFoundation Officers 2009. President Hilel Lewis (right) and Vice President Alfred Sommer (left.)
Tracing its origin to 1857, when 150 ophthalmologists from 24 countries convened at Brussels for the first International Congress of Ophthalmology, the International Council of Ophthalmology (ICO; www.icoph.org) moved vigorously in 2008 to consolidate organizational structure, strengthen collaborations, initiate standards for functional vision and expand ophthalmic education through the 2008 World Ophthalmology Congress® and global programs.

**Organizational Consolidation.** Organizational structure was consolidated in 2008 by uniting the ICO and International Federation of Ophthalmological Societies under the single name, International Council of Ophthalmology. Members of the former International Federation became members of the International Council of Ophthalmology and members of the ICO became trustees of the International Council of Ophthalmology.

Uniquely representative of world ophthalmology, the ICO, registered as a nonprofit organization in Switzerland, is composed of the national ophthalmology societies of over 100 countries and more than 25 multinational subspecialty ophthalmology societies. In aggregate, the ICO brings together ophthalmologists worldwide.

**World Alliance for Sight.** Emphasizing the unity of world ophthalmology, the ICO—functioning as the World Alliance for Sight—strengthened collaborations with multinational and national ophthalmology organizations by joint organization of World Ophthalmology Congresses® in Hong Kong, China (2008), Berlin, Germany (2010), Abu Dhabi, United Arab Emirates (2012), and Tokyo, Japan (2014).
Organized by the International Council of Ophthalmology, the 2008 World Ophthalmology Congress® in Hong Kong, China on June 28–July 2, 2008, combined the XXXI International Congress of Ophthalmology, XXIII Congress of the Asia Pacific Academy of Ophthalmology, the XIII Congress of the Chinese Ophthalmological Society, and the XX Hong Kong Ophthalmological Symposium. Described by Congress President, Dr. Dennis S. C. Lam (China), as the “Olympics of Ophthalmology”, the Congress attracted more than 13,400 registrants from 105 countries. More than 1,100 speakers took part in the first World Ophthalmology Education Colloquium; Subspecialty Day Programs on cataract, refractive surgery, glaucoma and retina; and 319 scientific sessions concerned with every aspect of ophthalmic science and practice.

Throughout the Congress, the culture of China enriched the scientific themes. At the President’s Dinner, for example, famed artist, Chiu Ng Yuet Lau demonstrated Chinese artistry and donated a masterpiece for auction to benefit the ICO Foundation. Proceeds from this auction are being used to fund ICO International Fellowships for young ophthalmologists from developing countries of Asia.

Extending benefits of the Congress, 125 scientific presentations were posted on the ICO website for open access viewing at www.ico.scientificabstracts.org.

The 2010 World Ophthalmology Congress® will return to Europe. With Dr. Gerhard K. Lang (Germany) as President, the Congress will be hosted by the German Ophthalmological Society as well as the German Academy of Ophthalmology and convene in Berlin, Germany on June 5–9, 2010.

The 2012 World Ophthalmology Congress will be hosted by the Middle East African Council of Ophthalmology (MEACO). The first World Ophthalmology Congress in the Middle East and Africa will convene in Abu Dhabi, United Arab Emirates on February 16–20, 2012.

With actions as closely coordinated as two strands in the helix of DNA, the ICO and ICOFoundation work to advance Ophthalmic Education and Training, Ophthalmic Knowledge Assessments, Ophthalmology Fellowship Training, Ophthalmology Training and Eye Care Centers, Eye and Vision Care Guidelines, Advocacy for Preservation of Vision, and Research in Ophthalmology and Vision.
Fundamental to preservation and restoration of vision worldwide, ophthalmic education and training advanced in 2008 by:

- Ophthalmology Curricula
- Ophthalmology Education Resources
- Ophthalmology Resident Program Directors Courses
- World Ophthalmology Residency Development (WORD) Forum

**Ophthalmology Curricula**

Focusing on the question of “What to teach?”, a multinational committee, appointed by the ICO and chaired by Dr. Mark O. M. Tso (United States), and specific task forces focused on curricula for Ophthalmology Medical Student Education, Ophthalmology Resident-Specialist Education, Ophthalmology Continuing Education, and Para-Ophthalmic Vision Specialist Education. Published in Klinische Monatsblätter für Augenheilkunde in 2006 and currently posted in open access on the Internet, curricula undergo regular periodic revision.

**Ophthalmology Medical Student Education.** Eye diseases such as cataract, glaucoma, diabetic retinopathy and age-related macular degeneration are increasingly prevalent and of growing importance in the general scope of medical practice. Consequently, the ICO and the ICO Foundation recommend ophthalmology education for medical students through a universally applicable curriculum. With revisions by an ICO multinational committee led by Dr. Susan Lightman (United Kingdom), this curriculum presents a core of essential knowledge, additional content appropriate for specific geographic regions, and measures for objective assessment of the student’s knowledge and skill. ([www.icoph.org/pdf/icocurricmed.pdf](http://www.icoph.org/pdf/icocurricmed.pdf)).

This medical student curriculum is augmented by an ICO handbook for medical students, illustrated lectures and teaching images that are a valuable resource for teaching medical students. Materials provided by Dr. Richard K. Parrish II (United States), Dr. Susan Lightman and the American Academy of Ophthalmology are available without charge on the Internet ([www.icoph.org/med/resources.html](http://www.icoph.org/med/resources.html)).

**Ophthalmology Resident-Specialist Education.** For critically important resident—specialty education, the ICO multinational committee is led by Dr. Andrew G. Lee (United States). Culminating work to determine the “need to know” for ophthalmologists throughout the world, the multilevel “Principles and Guidelines of a Curriculum for Education of the Ophthalmic Specialist” is presented on the Internet ([www.icoph.org/pdf/icocurricres.pdf](http://www.icoph.org/pdf/icocurricres.pdf)).

As a part of regular review, an additional curriculum module was developed in 2007–2008. This module on Teaching Community Eye Health emphasizes the importance of providing eye care for all members of a community.

**Ophthalmology Continuing Education.** A multinational committee of ophthalmologists formerly led by Dr. Zbigniew Zagorski (Poland) and currently chaired by Dr. Juan Verdaguer (Chile) coordinates curriculum activity and program action regarding ophthalmology continuing education. This program recognizes the need for continuing enhancement of knowledge, refinement of professional skills and training for utilization of advanced technology. Continuing education may take many forms that vary with learning style of the individual, prevalence of disease in the geographic area and resources available in the healthcare system. In basic form, the continuing education curriculum is posted on the Internet ([www.icoph.org/pdf/icocurriccme.pdf](http://www.icoph.org/pdf/icocurriccme.pdf)).
Para-Ophthalmic Vision Specialist Education.

Ophthalmic patient care is provided within a broad range of eye and healthcare programs. For efficacy and efficiency, the ophthalmologist is in continuous communication with para-ophthalmic vision specialists and physicians in related medical specialties.

Addressing para-ophthalmic vision specialist education, Dr. William E. Astle (Canada) leads a multinational ICO committee committed to the education of community based para-ophthalmic personnel, hospital based para-ophthalmic personnel, orthoptists and ophthalmic technicians. This program, developed by this team of educators, is presented on the Internet (www.icoph.org/pdf/icocurricpara.pdf).

Ophthalmology Education Resources

Announced in June 2008, the ICO and American Academy of Ophthalmology (AAO) are collaborating to provide ophthalmologists in developing nations free access to the AAO Ophthalmic News and Education (O.N.E.) Network. The Network utilizes advanced Internet capabilities to provide ophthalmologists with information and resources necessary to support them in their professional education and practice. The ICO and AAO jointly established an International Advisory Panel to provide advice and work to make the O.N.E. Network increasingly useful to ophthalmologists in developing countries worldwide. Strongly supported by Dr. H. Dunbar Hoskins, Jr., AAO Executive Vice President, and Dr. Bruce E. Spivey, ICO President, access to O.N.E. by ophthalmologists in developing nations will benefit both physicians and their patients.

In 2008, as a further resource for ophthalmology education, the ICO and AAO jointly sent the AAO Basic and Clinical Science Course (BSCS) to 200 ophthalmology residency training programs in 61 economically disadvantaged developing countries. Distribution at no cost to the recipient programs provides the 13 volume BSCS as a core educational component for residents in training. With ICO, ICOFoundation and AAO support, the AAO BSCS will be sent to 200 additional ophthalmology residency programs in economically disadvantaged developing countries in 2009.

Ophthalmology Resident Program Directors Courses

“How to teach?” is the question addressed by the ICO Task Force on Coordination and Education of Program Directors of Ophthalmology Residencies led by Dr. Karl C. Golnik (United States). In addition to assessing broad aspects and future directions for education of resident program directors, the Task Force concentrated on the Ophthalmology Resident Program Directors Courses. These courses focus on methods of instruction, assessment of skills, changing resident behavior when indicated, and measuring competence. Conducted by the ICO and the ICOFoundation, program director courses provide valuable information to participants and
Program Directors Course at Florianopolis, Brazil in September 2008. Attended by more than 40 Brazilian Program Directors and Department Chairs.

strengthen coordination among ophthalmology organizations by endorsement from the American Academy of Ophthalmology, Association of University Professors of Ophthalmology (United States), regional multinational ophthalmology societies and national ophthalmology organizations in the host country.

Conducted in diverse geographic regions of the world since 2004, Program Directors Courses during 2008 were convened in Latin America, Eastern Europe and Sub-Saharan Africa.

**Brazil.** At Florianopolis, Brazil on September 1–2, 2008, Brazil’s second Ophthalmology Program Directors Course was led by Dr. Karl C. Golnik (United States) as ICO Program Chair, Dr. Zelia Corrêa (United States and Brazil) as Program Chair, and Dr. Peter Quiros (United States) as Program Co-Chair. Following the course introduction by Dr. Paulo Augusto Mello (Brazil) and Dr. Corrêa, more than 40 participants evaluated curriculum development, instruction methods, assessment methods, professionalism and interpersonal skills. Discussion at this second program directors meeting in Brazil addressed program director collaboration and means of promoting future program interaction. The course benefited from sponsorship by the ICO and ICOFoundation, Pan-American Association of Ophthalmology, Pan-American Ophthalmological Foundation and Brazilian Council of Ophthalmology. Additional endorsement was received from the American Academy of Ophthalmology, Association of University Professors of Ophthalmology (United States) and Pan-American Council of University Professors of Ophthalmology.

**Slovenia.** At Portoroz, Slovenia on September 29–30, 2008, the ICO and ICOFoundation Program Directors Course was led by Dr. Marko Hawlina (Slovenia), Chair, and Dr. Karl C. Golnik, Co-Chair. This course was formally endorsed by four major multinational ophthalmology organizations in Europe: European Society of Ophthalmology, European Board of Ophthalmology, European Community University Professors of Ophthalmology and European Vision and Eye Research Society. Thirty attendees represented ophthalmology training programs in 14 countries: Belgium, Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Rumania, Russia, Ukraine, United Kingdom and Slovenia.
Ethiopia. The ICO and ICOFoundation convened the Program Directors Course in Addis Ababa, Ethiopia on December 5–6, 2008. With Dr. Amir Bedi (Ethiopia), Chair, and Dr. Karl C. Golnik, Co-Chair, the course was hosted by the Ethiopian Ophthalmology Society and made possible by a grant to the ICOFoundation from Allergan, Inc. More than 50 Ophthalmology Resident Program Director from 16 countries participated in group lectures, small group discussions and informal society interactions. Countries represented by the registrants were Angola, Cameroon, Ethiopia, Ghana, Guinea, Kenya, Malawi, Nigeria, Rwanda, South Africa, Sudan, Tanzania, Uganda, United Arab Emirates, Zambia and Zimbabwe.

China, Colombia and Indonesia in 2009. Continuing the educational programs for Ophthalmology Resident Program Directors in 2009, courses are planned to take place in China, Colombia and Indonesia.
Established in 2008, the ICO Task Force on Emerging Technologies for Teaching and Learning, chaired by Dr. Eduardo Mayorga (Argentina), is exploring Internet options and technological advances applicable to global education. As an antecedent, WORD, the World Ophthalmology Residency Development Forum, evolved from the Resident Program Directors Courses conducted in nine locations since 2004. Initiated by Dr. Eduardo Mayorga (Argentina) and Dr. Gabriela Palis (Argentina) as an interactive website for use prior to and following the Program Directors Course in Buenos Aires, Argentina, the WORD Forum has evolved into a new interactive website for global communication among Ophthalmology Program Directors.

Currently available in English and Spanish, WORD provides a forum for program directors and monthly e-mail newsletter that highlights new resources for teaching ophthalmology residents. WORD is available at www.icoword.org.

### World Ophthalmology Residency Development (WORD) Forum

- **2004 Mexico City, Mexico**
  - Chair: Dr. Enrique Graue-Wiechers (Mexico)
  - Participants: Program Directors of Mexico.

- **2006 Lima, Peru**
  - Chair: Dr. Jose Antonio Roca (Peru)
  - Participants: Program Directors of Peru, Bolivia and Ecuador.

- **2007 Cairo, Egypt**
  - Chair: Dr. Fathi El Sahn (Egypt)
  - Participants: Program Directors of Egypt, Algeria, Bahrain, Iraq, Jordan, Kuwait, Lebanon, Libya, Pakistan, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, Yemen and United Arab Emirates.

- **2007 Lahore, Pakistan**
  - Chair: Dr. M. Daud Kahn (Pakistan)
  - Participants: Program Directors of Pakistan, Afghanistan, Bangladesh, China, India and Maldives.

- **2008 Buenos Aires, Argentina**
  - Chair: Dr. Ricardo A. Dodds (Argentina)
  - Participants: Program Directors of Argentina, Chile, Paraguay, Peru and Uruguay.

- **2008 Brasilia, Brazil**
  - Chair: Dr. Paulo A. Mello (Brazil)
  - Participants: Resident Program Directors of Brazil.

- **2008 Florianopolis, Brazil**
  - Chair: Dr. Karl C. Golnik (United States)
  - Participants: Resident Program Directors of Brazil.

- **2008 Portoroz, Slovenia**
  - Chair: Dr. Marko Hawlina (Slovenia)
  - Participants: Program Directors of Belgium, Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Rumania, Russia, Ukraine, United Kingdom and Slovenia.

- **2008 Addis Ababa, Ethiopia**
  - Chair: Dr. Amir Bedi (Ethiopia)
  - Participants: Program Directors of Angola, Cameroon, Ethiopia, Ghana, Guinea, Kenya, Malawi, Nigeria, Rwanda, South Africa, Sudan, Tanzania, Uganda, United Arab Emirates, Zambia and Zimbabwe.
The ICO Ophthalmic Knowledge Assessments are formal written examinations that present questions prepared by a multinational committee of examiners. Examinations are set at the same standard as the highest board, college and qualifying examinations in the world.

Assessment questions are translated into French, German, Mandarin, Portuguese, Russian, Spanish and Turkish. At the time of examination, the English version is presented along with the alternate language so that comparisons can be made by the candidate.

Successful passage of both the ICO Basic Science and Clinical Sciences Assessments is recognized by a certificate that is universally acknowledged to show that the holder has achieved a high standard of theoretical knowledge. In Turkey and a number of other countries, the assessments are part of the national examination for ophthalmology certification.

Dr. Watson, leader of the ICO Assessments since 1994 when the first ICO Basic Science Assessment was taken by a small group of candidates in seven countries, elected to step down as Chair of the ICO Assessments in 2008. Dr. Watson's scholarly commitment to education, scrupulous attention to security of the examination process and overall leadership of this global activity have earned the highest respect from all of ophthalmology.

Dr. David Taylor, FRCOphth, D.S.C. (Med) (United Kingdom) commenced appointment as Chair of the ICO Assessments during 2008. Looking ahead, Dr. Taylor plans that the ICO Assessments will reflect recent additions to the ICO curriculum related to Community and Public Health, Embryology, and an expansion of Physiology.
With an increasing number of candidates each year, the ICO Assessments achieved a self-sustaining financial status in 2000. Since then, a differential fee structure was introduced to keep the fees as low as possible for candidates from economically disadvantaged nations. The ICO Foundation augments this flexibility by providing support funds to assist candidates unable to compete for the certificate because of economic factors and to encourage regional initiative for use of the Ophthalmic Knowledge Assessments. In 2007, for example, the Pan-American Council of University Professors of Ophthalmology acted to encourage use of the ICO Assessments throughout Latin America.

Since the Basic Science Assessment was inaugurated in 1994 and the Clinical Sciences Assessment was initiated in 1998, 15,433 candidates have voluntarily applied for and taken the Assessments. In recent years, the annual Assessments took place at multiple sites in countries throughout the world on April 6, 2006, April 12, 2007 and April 10, 2008 in countries that range alphabetically from Afghanistan to Zimbabwe.
Ophthalmic Fellowship Training

The ICO International Fellowship Program inaugurated in 2001 under leadership of Dr. Balder P. Gloor (Switzerland) and led since June 2006 by Dr. Veit-Peter Gabel (Germany) offers three months of advanced training at leading ophthalmology departments. Fellowships are awarded to young ophthalmologists from developing countries who are preferably in a teaching position, preferably hold the Ophthalmic Knowledge Assessments Certificate and are committed to return to their country of origin after the fellowship.

Fellowships are offered in Comprehensive Ophthalmology and in subspecialty areas. Fellows are taught the latest methods of diagnosis and therapy, and are given the opportunity to improve practical skills and broaden their ophthalmological knowledge.

More than 120 institutions have agreed to accept ICO Fellows and identified the characteristics of their programs on the Internet. Candidates apply to a host institution via the Internet, goals of the fellowship are established and language issues affecting communication are considered. Following evaluation of all information, ICO Fellowships are awarded. To control costs, all parts of the ICO Fellowship application, review, award process and follow-up report are conducted online (www.icoph.org/fellow; (Ref 8. Gabel V-P, Steger M, Gloor B. Eight years of IFOS/ICO fellowships for ophthalmologists from developing countries. Graefes Arch Clin Exp Ophthalmol 2008; 246:939–981).

With support from the ICO, ICOFoundation, International Ophthalmological Foundation and other sources, 347 ICO Fellowships were awarded in 2001–2008. Fellows from 70 countries of origin benefited greatly from training institutions in 29 countries. Reports filed at the conclusion of each fellowship attest to the cordiality of international relationships and the extraordinary value of the knowledge and skills acquired during the fellowship.

Many ICO Fellows wish for and would certainly benefit from a longer period of fellowship training. Recognizing this need and desire, the ICO Fellowship Committee introduced the ICO Two-stage Fellowship Program on a limited basis, imposed by budget considerations, in 2008. This Two-stage (“Sandwich”) Fellowship provides two stages of training. Essentially, the fellow completes three months of fellowship training, returns to his/her country of origin for a predetermined period of ophthalmic professional work and comes back to the same advanced center for an additional three months of fellowship training.

<table>
<thead>
<tr>
<th>Year</th>
<th>Fellowship Awards</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>9</td>
</tr>
<tr>
<td>2002</td>
<td>42</td>
</tr>
<tr>
<td>2003</td>
<td>37</td>
</tr>
<tr>
<td>2004</td>
<td>42</td>
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<tr>
<td>2005</td>
<td>48</td>
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<tr>
<td>2006</td>
<td>57</td>
</tr>
<tr>
<td>2007</td>
<td>58</td>
</tr>
<tr>
<td>2008</td>
<td>54</td>
</tr>
<tr>
<td>Total</td>
<td>347</td>
</tr>
</tbody>
</table>
ICO Fellowships 2008

From Iraq to Mahatme Eye Bank Hospital, Nagpur, India.

Under supervision of Dr. Vikas Mahatme, Dr. Abdul Razzak Al.Mukhtar (Iraq) trained in cataract surgery.

“I was involved in all clinical activities, performed 60 cases of phacoemulsification with my own hands and can now do phacoemulsification surgery independently.”

Dr. Abdul Razzak Al.Mukhtar, Iraq

From Argentina to Pitié-Salpêtrière Hospital, Paris, France.

Under supervision of Dr. Bahram Bodaghi, Dr. Lilian Karina Julián (Argentina) trained in uveitis and ocular inflammation.

“I learned different treatment approaches in pediatric uveitis and in other types of ocular inflammation. This was a great opportunity in my career.”

Dr. Lilian Karina Julián, Argentina

From Russia to New York Eye and Ear Infirmary, New York, United States.

Under supervision of Dr. Robert Ritch, Dr. Nadezhda Gvozdyuk (Russia) trained in glaucoma.

“I learned different types of laser and surgical treatment and wrote a manuscript.”

Dr. Nadezhda Gvozdyuk, Russia

“I learned different treatment approaches in pediatric uveitis and in other types of ocular inflammation. This was a great opportunity in my career.”

Dr. Lilian Karina Julián, Argentina
From Uganda to the Retina Foundation, Ahmedabad, India.

“I acquired lifelong skills that I am currently sharing with my fellow eye workers at Benedictine Eye Hospital, Tororo, Uganda.”

Dr. Ben Dan Bwonya, Uganda

Under supervision of Dr. Pran Nath Nagpal and Dr. Manish Nagpal, Dr. Ben Dan Bwonya trained in medical and surgical retina.

From India to Helsinki University Eye Hospital, Helsinki, Finland.

“I learned new techniques of operations and laser procedures; for example, deep sclerostomy, goniopuncture and diode cyclophotocoagulation.”

Dr. Chetan Swarup, India

Under supervision of Dr. Tero Kivelä, Dr. Paula Summanen and Dr. Palvi Puska, Dr. Chetan Swarup trained in glaucoma and medical retina.


<table>
<thead>
<tr>
<th>Country of Origin of Fellows</th>
<th>Country of Training of Fellows</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>Libya</td>
</tr>
<tr>
<td>Argentina</td>
<td>Lithuania</td>
</tr>
<tr>
<td>Armenia</td>
<td>Malawi</td>
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<tr>
<td>Azerbaijan</td>
<td>Malaysia</td>
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<tr>
<td>Bangladesh</td>
<td>Maledivia</td>
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<tr>
<td>Bosnia</td>
<td>Mexico</td>
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<tr>
<td>Botswana</td>
<td>Moldova</td>
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<td>Brazil</td>
<td>Mongolia</td>
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<td>Bulgaria</td>
<td>Nepal</td>
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<td>Burma</td>
<td>Nigeria</td>
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<td>Burundi</td>
<td>Pakistan</td>
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<td>Cameroon</td>
<td>Palestine</td>
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<td>Chile</td>
<td>Paraguay</td>
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<tr>
<td>P.R. China</td>
<td>Peru</td>
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<tr>
<td>Colombia</td>
<td>Philippines</td>
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<tr>
<td>Congo-Kinshasa</td>
<td>Poland</td>
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<tr>
<td>Costa Rica</td>
<td>Romania</td>
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<tr>
<td>Czech Republic</td>
<td>Russia</td>
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<tr>
<td>Egypt</td>
<td>Serbia</td>
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<tr>
<td>Ethiopia</td>
<td>Sudan</td>
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<tr>
<td>Georgia</td>
<td>Syria</td>
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<td>Ghana</td>
<td>Taiwan</td>
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<td>Hungary</td>
<td>Tanzania</td>
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<tr>
<td>India</td>
<td>Thailand</td>
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<td>Indonesia</td>
<td>Tunisia</td>
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<td>Iran</td>
<td>Turkey</td>
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<td>Iraq</td>
<td>Uganda</td>
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<td>Israel</td>
<td>Ukraine</td>
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<td>Jordan</td>
<td>Venezuela</td>
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<td>Kazakhstan</td>
<td>Vietnam</td>
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<td>Kenya</td>
<td>Zambia</td>
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<tr>
<td>Kosovo</td>
<td>Zimbabwe</td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td></td>
</tr>
</tbody>
</table>

Under supervision of Dr. Tero Kivelä, Dr. Paula Summanen and Dr. Palvi Puska, Dr. Chetan Swarup trained in glaucoma and medical retina.
To decrease avoidable visual impairment and blindness, the ICO and ICOFoundation are working with other ophthalmic, public service and industry organizations to build ophthalmology training and eye care centers in Nigeria, China and Slovenia.

**Nigeria**

With a population of 146 million, Nigeria is Africa’s most populous nation. It also has one of the highest prevalence rates of blindness; an estimated 2 million blind and 5 million with disease-related visual impairment or uncorrected refractive error. (Ref. 9 Ajayi BGK. Primary Eye Care in Western Nigeria. In Primary Health Care in Western Nigeria 1977–2007. Awojobi OA Editor, 2007, 119–121).

**Broadband Internet Education.** The ICO and ICOFoundation funded equipment for broadband Internet access at six regional Resident-Specialist Training Centers in Nigeria. With encouragement by the Ophthalmological Society of Nigeria, all six centers initiated high speed, broadband Internet access for medical and ophthalmic education in 2007. Internet access at these training centers opens the path for a wealth of current biomedical information and technology.

**University College Hospital, Ibadan.** Since 2006, University College Hospital, Ibadan, has undergone progressive development as a regional center for training of ophthalmologists and for population-based eye care. With support from Vision 2020, the Carl Zeiss Project, the Alcon Foundation, ICOFoundation and other sources, ophthalmologists have received specialized training in corneal—anterior segment disease, cataract surgery and retinal surgery.

**Network of Catholic Eye Hospitals, Ibadan District.** In 2008, Dr. Benedictus G.K. Ajayi (Nigeria), Medical Director of Catholic Eye Hospitals, organized a Network of Catholic Eye Hospitals and Clinics in the Ibadan District to provide sustainable population-based eye care to 2 million people in rural areas adjacent to Ibadan, regardless of ability to pay. Supported by the Catholic Church, a three year grant from the Lavelle Fund for the Blind to the ICOFoundation, and donations from international and Nigerian sources, the Network is aided by consultants from Lions Aravind Institute of Community Ophthalmology, Madurai, India.

The four Eye Hospitals and Clinics in the network provide primary and secondary eye care, including cataract surgery as well as community outreach to medically isolated people in the service area. Through Agreement with University College Hospital, Ibadan, patients requiring specialized eye care are referred to subspecialists at University College Hospital and receive eye care regardless of the patient’s ability to pay. Still currently in a formative stage, the Network of Catholic Eye Hospitals has the potential of serving as a model for regional eye care throughout Nigeria.
China

The ICO and ICOFoundation combined with Eli Lilly & Company to establish the Peking University Eli Lilly Diabetic Eye Disease Center in Beijing, China, in May 2007. With formal approval by Peking University, direction by Dr. Zhi-Zhong Ma (China), Executive Vice President of Peking University Eye Center, and leadership by Dr. Mark O. M. Tso (United States), Honorary Director of Peking University Eye Center, the Diabetic Eye Disease Center is working to prevent and treat diabetic eye disease by coordinated diabetic medical care and ophthalmic care, community outreach and diabetes-related education.

Peking University Eye Center. Centered at Peking University Eye Center and aided by consultants representing Lions Aravind Institute of Community Ophthalmology, Madurai, India, the Eli Lilly Diabetic Eye Disease Center implemented a strategic plan in 2007–2008. Educational material raised public awareness and aided patients with diabetes, urban outreach provided care to 5,000 adult diabetics through the Third Teaching Hospital of Peking University, Beijing, and rural outreach offered care to 7,000 adults through 30 screening camps in Shunyi County.

Network of Eye Hospitals in China. Building on this programmatic experience, the Peking University Eli Lilly Diabetic Eye Disease Center, with support from the ICOFoundation, is working to reach a larger segment of the rural population of China by establishing a National Network of Provincial Eye Hospitals in China. This network is designed to provide sustainable and population-based eye care to a segment of the vast population of China in a program that is culturally sensitive and medically effective. To evaluate effectiveness and sustainability, a health services research program is planned for 2009–2012.

Slovenia.

To advance the quality of ophthalmic education and eye care in developing countries, ophthalmologists fully trained in subspecialties such as anterior ocular segment disease and surgery, glaucoma, oculoplastic surgery, retinal disease and surgery, and pediatric ophthalmology and strabismus are needed. Full qualifications in these and other ophthalmic subspecialties require fellowship training of one year or longer duration in a carefully structured program at an advanced ophthalmology center.

Recognizing the need for subspecialty training in upwardly mobile nations and regions, the Alcon Foundation awarded a grant to the ICOFoundation for an initial ICO/Alcon Ophthalmology Training Center.

University Eye Hospital, Ljubljana, Slovenia.

Following a competitive review of applications by an international committee, the ICO/Alcon Ophthalmology Training Center was established under leadership of Dr. Marko Hawlina and Dr. Brigita Drnovšek-Olup at University Eye Hospital in Ljubljana, Slovenia. Established for more than 115 years and completely refurbished in 2001, University Eye Hospital, Ljubljana, Slovenia, has an outstanding faculty, facilities and procedures for aiding ophthalmologists to acquire subspecialty knowledge and skills.
To initiate this international program, the ICO/Alcon Ophthalmology Training Center at University Eye Hospital in Ljubljana, Slovenia, is inviting applications for the new subspecialty training program. Commencing in 2009, the program will offer two fellowships, one year in duration, each year for training at the post-specialist level in cataract, oculoplastic or vitreoretinal surgery. A travel and expense stipend will be granted to the institution sending the applicant, to be used in full for support of the applicant during the training period.

Dr. Marko Hawlina, Director of the ICO/Alcon Ophthalmology Training Center states that “we would like to host young specialists from teaching hospitals in Eastern Europe, not older than 40, who have had initial experience in surgery and who plan to practice in a public teaching hospital.” The program is looking for ophthalmologists who will be in a position to teach and transmit information to residents and colleagues upon returning to their home countries.

Institutions interested in recommending a fellowship candidate and candidates applying for the training program are invited to provide an online application by e-mail (marko.hawlina@mf.uni-lj.si).
With new medical knowledge derived from thousands of sources worldwide and technology advancing continuously, assimilation of knowledge and technology into best medical practice is a continuing challenge.

For global use, the ICO Eye and Vision Care Guidelines are updated continuously to define what constitutes appropriate eye care and to promote a universal high standard of quality. A multinational committee of internationally recognized experts, with Dr. Richard L. Abbott (United States) as chair, is responsible for development of clinical guidelines. The committee adapts for worldwide use the American Academy of Ophthalmology Preferred Practice Patterns®, Royal Australian and New Zealand College of Ophthalmologists Clinical Practice Guidelines for Specialists and similar practice recommendations by other professional organizations.

When formulated, the guidelines are placed on the Internet for comment and global peer review.

By this process, the ICO has formed eye and vision care guidelines for management of 20 major ophthalmic entities that are updated regularly and available by open access on the Internet (www.icoph.org/pdf/icoclinicalguidelines.pdf).

As a major advance, the ICO international clinical guideline for Ocular HIV/AIDS Related Disease (Initial and Follow-up Evaluation) was completed in 2008. This activity was led by Dr. Emmett Cunningham (United States) and Dr. Rubens Belfort (Brazil) with the participation of consultants from areas of high HIV/AIDS prevalence.

**Guidelines in China.** During a series of meetings with leaders of the Chinese Ophthalmological Society in 2005–2008, the ICO Eye and Vision Care Guidelines were adapted by the Chinese Ophthalmological Society and distributed throughout China. In 2008, plans were made for presentation of these guidelines to the nation’s Public Health Ministry for inclusion as a part of the Board examination process for specialists in ophthalmology. Other nations are considering similar programs to review and adapt the ICO Eye and Vision Care Guidelines for use within the respective countries.

Experience with clinical practice guidelines documents the need for extensive communication, discussion and extended professional interaction to build awareness and encourage use in ophthalmic practice. Supported by the ICOFoundation, the ICO Eye and Vision Care Guidelines Committee participates in national and international congresses to encourage use of Eye Care Guidelines as a means of achieving a progressively higher standard of eye care worldwide.

**International Eye and Vision Care Guidelines**

**ICO Guidelines for 20 eye and vision care conditions include:**

- Cataract
- Diabetic Retinopathy
- Eye Disease in Leprosy
- Glaucoma
- Keratitis
- Macular Degeneration
- Ocular HIV/AIDS Related Diseases
- Trachoma
In 2008, advocacy for preservation and restoration of vision advanced through actions by the World Health Assembly, increased public awareness of blindness prevention, and programs of the ICO World Ophthalmology Roundtable on Leadership Development (WORLD).

**World Health Assembly.** During the Sixty-first World Health Assembly in 2008, development of an action plan for the prevention of avoidable blindness and visual impairment was proposed by the Saudi Arabian delegation and supported by other nations. The WHO Secretariat agreed to prepare a draft action plan for the global prevention of avoidable blindness and visual impairment for consideration at the 124th Session of the WHO Executive Board. Implementation of the resolution initiated at the Sixty-first World Health Assembly brings greater attention to programs for prevention of blindness and visual impairment worldwide.

**Worldwide Visual Impairment.** Led by Dr. Hugh R. Taylor (Australia), advocacy by the ICO complements the World Health Organization actions by drawing public awareness to the extent and causes of visual impairment. Worldwide, 161 million people are severely visually impaired due to eye disease and 37 million of these are blind.1 Added to this are 153 million people with severe visual impairment due to uncorrected refractive error. Causes of disease-related blindness as a percentage of total blindness vary by region and country. However, cataract continues to be the leading disease responsible for worldwide visual impairment and blindness. Cataract is the cause of moderate—severe disability in 53.8 million people worldwide. Of these, 1.6 million people are in high-income countries and 52.2 million people are in low—moderate income countries; thus, 97% of cataract-related disability is in low—moderate income countries (www.who.int).

### Causes of Worldwide Blindness

<table>
<thead>
<tr>
<th>Percentage of total blindness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cataract</td>
</tr>
<tr>
<td>Glaucoma</td>
</tr>
<tr>
<td>Age-related Macular Degeneration</td>
</tr>
<tr>
<td>Corneal Opacities</td>
</tr>
<tr>
<td>Diabetic Retinopathy</td>
</tr>
<tr>
<td>Childhood Blindness</td>
</tr>
<tr>
<td>Trachoma</td>
</tr>
<tr>
<td>Onchocerciasis</td>
</tr>
<tr>
<td>Other Causes</td>
</tr>
</tbody>
</table>

### Global Estimate of Visual Impairment by WHO Region (Millions) 2002

<table>
<thead>
<tr>
<th>Region</th>
<th>African Region</th>
<th>Region of the Americas</th>
<th>Eastern Mediterranean Region</th>
<th>European Region</th>
<th>South-East Asia Region</th>
<th>Western Pacific Region</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>672.2</td>
<td>852.6</td>
<td>502.8</td>
<td>877.9</td>
<td>1,590.80</td>
<td>1,717.50</td>
<td>6,213.90</td>
</tr>
<tr>
<td># of blind people</td>
<td>6.8</td>
<td>2.4</td>
<td>4</td>
<td>2.7</td>
<td>11.6</td>
<td>9.3</td>
<td>36.9</td>
</tr>
<tr>
<td>% of total blind</td>
<td>18%</td>
<td>6%</td>
<td>11%</td>
<td>7%</td>
<td>32%</td>
<td>25%</td>
<td>100%</td>
</tr>
<tr>
<td># with low vision</td>
<td>20</td>
<td>13.1</td>
<td>12.4</td>
<td>12.8</td>
<td>33.5</td>
<td>32.5</td>
<td>124.3</td>
</tr>
<tr>
<td># with visual impairment</td>
<td>26.8</td>
<td>15.5</td>
<td>16.5</td>
<td>15.5</td>
<td>45.1</td>
<td>41.8</td>
<td>161.2</td>
</tr>
</tbody>
</table>

World Ophthalmology Roundtable on Leadership Development (WORLD)

Initiated in 2007, ICO World Ophthalmology Roundtable on Leadership Development (WORLD) works to build present and future ophthalmology leaders by encouraging community and regional programs to enhance ophthalmology training, increase public support for eye care and promote national and regional ophthalmology societies.

In March 2008, the ICO/Middle East African Council of Ophthalmology (MEACO) Advisory Leadership Group for Sub-Saharan Africa convened at Drakensberg, South Africa. Led by Dr. Bruce E. Spivey (United States), ICO President, and Dr. Abdulaziz AlRajhi (Saudi Arabia), MEACO President, the meeting benefited from support by the ICOFoundation and Ophthalmological Society of South Africa. Dr. Hannah Faal (Gambia) presented the keynote address on “The Realities of Leadership in Africa”. Workshops on National Advocacy, Effective Leadership in Africa and Educating Educators stimulated the 24 representatives from 15 Sub-Saharan nations to focus on leadership development.

In October 2008, the ICO/MEACO Advisory Leadership for Sub-Saharan Africa met in Lagos, Nigeria, with support from the ICOFoundation and Ophthalmological Society of Nigeria, for discussion of the theme, “From Vision to Practice.” Participants from 7 countries attended workshops on Effective Leadership in Africa, Team Building and Managing People, and Developing Sustainable Ophthalmology Group Practices. Reflecting progress of the WORLD Program, representatives of the Sub-Saharan African nations agreed to take greater responsibility for the direction and management of group activities, development of additional leaders within the region and cooperation to advance eye care in Sub-Saharan Africa.
The ICO Research Committee, with Dr. Alfred Sommer (United States) as chair, reassessed the Research Committee report entitled “A Research Agenda for Global Blindness Prevention.” This committee report and plan for applied vision research has been endorsed by the Blindness and Disabilities Prevention Program of the World Health Organization and is presented in its entirety on the Internet (www.icoph.org/research).

In 2007, the ICO and ICOFoundation commenced support for applied research with establishment of the Peking University Eli Lilly Diabetic Eye Disease Center at Peking University Eye Center, Beijing, China. The faculty of Peking University, ICOFoundation representatives and Lions Aravind Institute of Community Ophthalmology, India, consultants developed a strategic plan for awareness creation, community outreach, delivery of quality diabetic retinopathy services, formation of academic training programs, and development of performance metrics to monitor programs.

Implementation in 2007–2008 addressed each of these strategies and included creation of educational materials (posters, pamphlets and media presentations); urban outreach to 5,000 adult diabetics through the Third Teaching Hospital of Peking University, Beijing; rural outreach to 7,000 adults through 30 screening camps in Shunyi County; protocols for quality diabetic retinopathy treatment; academic training programs; and quarterly reports to monitor programs.

Building on this programmatic experience, the Peking University Eli Lilly Diabetic Eye Disease Center, with support from the ICOFoundation, is working to reach a larger segment of the rural population of China by establishing a National Network of Provincial Eye Hospitals and by planning a research project to evaluate Enhanced Screening for Diabetic Eye Disease in Rural China.

The goal of applied research led by the Peking University Eli Lilly Diabetic Eye Disease Center is to decrease avoidable visual impairment and blindness due to diabetic eye disease in the vast rural population of China.
With profound sadness, the ICOFoundation Board of Directors acknowledges the death of Professor Yasuo Tano in Osaka, Japan on January 31, 2009. Professor Tano, a Founding Member of the ICOFoundation Board of Directors, was a worldwide leader of ophthalmology, a greatly admired colleague and a highly respected friend.

At the time of his death, Professor Tano was President of the Asia-Pacific Academy of Ophthalmology, Treasurer of the International Council of Ophthalmology, Immediate Past President of the Japanese Ophthalmological Society and Chairman of the Department of Ophthalmology at Osaka University.
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William Felch, Executive Director, United States

“The ICO is becoming the World Alliance for Sight.”
Bruce E. Spivey, M.D., President

International Council of Ophthalmology Trustees and Advisory Committee Members at Hong Kong, China in June 2008.
The ICOFoundation works to support worldwide programs of the International Council of Ophthalmology

- Ophthalmic Education and Training
- Ophthalmic Knowledge Assessments
- Ophthalmology Fellowship Training
- Ophthalmology Training and Eye Care Centers
- Eye and Vision Care Guidelines
- Advocacy for Preservation of Vision
- Research in Ophthalmology and Vision

Contributions to:
Bruce E. Spivey, M.D.
Secretary-Treasurer
ICOFoundation
945 Green Street
San Francisco, CA 94133

International Council of Ophthalmology Foundation
www.icofoundation.org

International Council of Ophthalmology
www.icoph.org
The ICOFoundation Honor Roll gratefully recognizes grants, gifts and pledges from organizations, foundations, corporations and individuals in the period from January 1, 2003 through December 31, 2008.

The ICOFoundation extends a special thank you to donors responsible for grants, gifts and pledges in 2008. The generosity of these visionary entities and philanthropic individuals enabled the ICOFoundation to support new and continuing International Council of Ophthalmology programs that preserve and restore vision for people throughout the world.

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