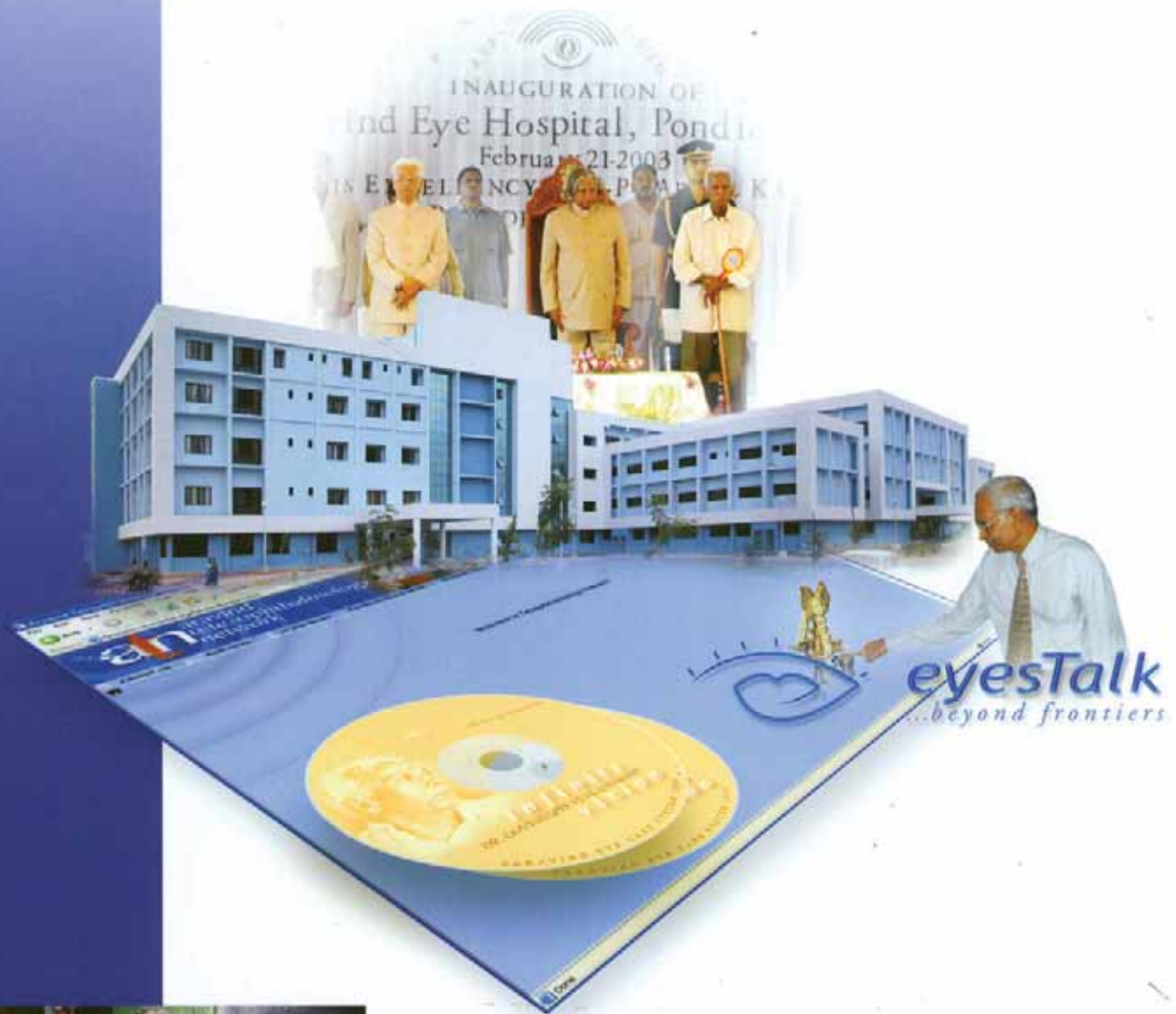


Aravind Eye Care System



2003 Activities Report

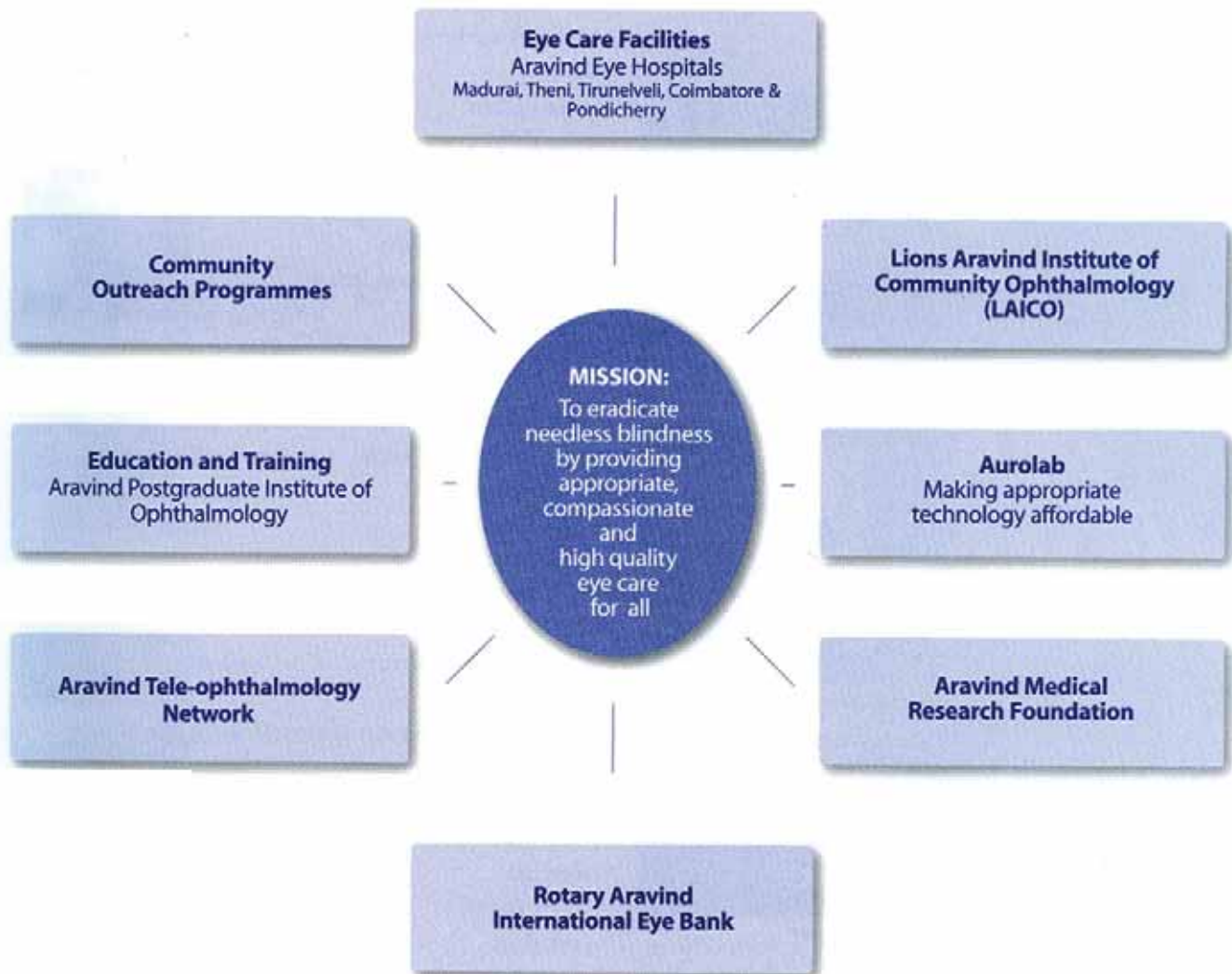


On a height he stood that looked towards greater heights.
Our early approaches to the Infinite
Are sunrise splendours on a marvellous verge
While lingers yet unseen the glorious sun.
What now we see is a shadow of what must come.
The earth's uplook to a remote unknown
Is a preface only of the epic climb
Of human soul from its flat earthly state
To the discovery of a greater self
And the far gleam of an eternal Light.

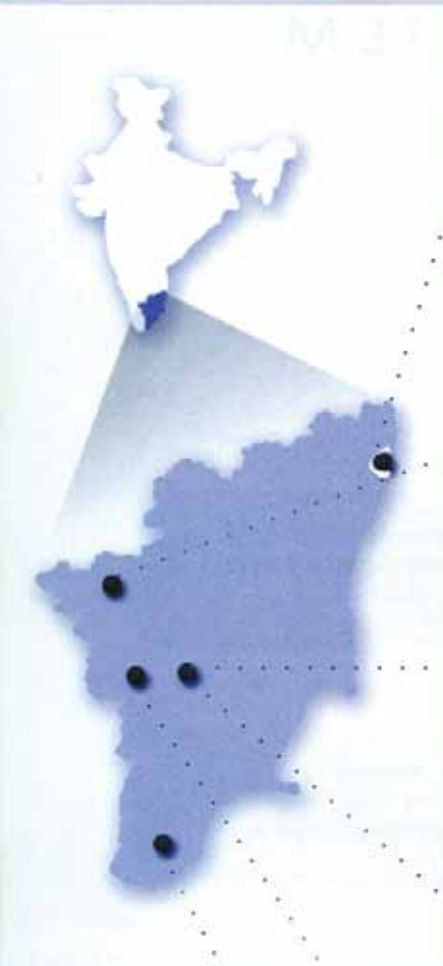
- *Savitri, Sri Aurobindo Book One, Canto Four*



ARAVIND EYE CARE SYSTEM



Aravind Eye Care System



Aravind-Pondicherry 2003



Aravind-Coimbatore 1997



LAICO 1996



Aravind-Madurai 1976



Aravind-Theni 1985



Aravind-Tirunelveli 1988

Eye Care Facilities

Aravind Eye Hospitals

Paying & Free Sections

Aravind-Madurai

Aravind-Theni

Aravind-Tirunelveli

Aravind-Coimbatore

Aravind-Pondicherry

Specialty Clinics

Retina Vitreous

Cataract & General Ophthalmology

Cornea

Pediatric Ophthalmology,

Strabismus & Contact Lens

Glaucoma

Uvea

Orbit & Oculoplasty

Neuro-Ophthalmology

Vision Rehabilitation Centre



Support Facilities

Ocular Microbiology Laboratory

Biochemistry Laboratory

Radiology Department

Instruments Maintenance

Laboratory

Patient Counselling Services

Audio-Visual Department

Aravind Library & Information Centre

Aravind Communications Division



Community Outreach

Free Eye Camps
School Eye Health Screening
Community Based Rehabilitation Programme
Refraction Camps
Diabetic Retinopathy Detection & Awareness Camps
Children's Eye Care Camps

Education and Training

Aravind Postgraduate Institute of Ophthalmology
Lions Aravind Institute of Community Ophthalmology (LAICO)
Postgraduate Courses in Ophthalmology
Fellowship Programmes
Short-term Training Programmes
Continuing Medical Education Programmes
Paramedical Courses

Eye Bank

Rotary Aravind International Eye Bank
Donor Screening
Collection, Evaluation, Preservation and Distribution of Corneas
Training in Eye Banking
Training in Corneal Transplants

Consultancy and Capacity Building

Lions Aravind Institute of Community Ophthalmology (LAICO)
Capacity Building for Eye Hospitals
Management Courses in Health Care
Task-oriented Training Courses
Custom Designed Courses

Research

Aravind Medical Research Foundation
Population-based Epidemiologic Surveys
Health Systems Research
Hospital and Community-based Randomised Clinical Trials
Ophthalmic Research Laboratory
- Molecular Genetics,
- Immunology
Microvirology
- Stem Cell Research

Development of Cost Effective Technology

Aurolab
Intraocular Lens Division
Suture Needle Division
Pharmaceutical Division
Spectacle Lens Division
Hearing Aid Division

Aravind Tele-ophthalmology Network (ATN)

ATN aims at:
Imparting Training and Education in Ophthalmology at a global level
Providing Online Patient Consultations
Developing affordable tele-ophthalmology solutions suitable for any eye care programmes
Becoming an Information Resource Centre in the field of Ophthalmology



Community Outreach



Education & Training



Eye Bank



Consultancy & Capacity Building



Research



Development of Cost Effective Technology



Aravind Tele-Ophthalmology Network

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*Compiled, edited, designed and published by
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The Year 2003

கண்ணிற்கு ஒளி கொடுத்தீர்

கண்ணிற்கு ஒளி கொடுத்தீர்,
இயற்கை அழகு மனதில் புகுந்தது!
உள்ளம் மகிழ்ந்தது, அறிவு வளர்ந்தது
நற்செய்கை செய்ய நம்பிக்கை வந்தது
கண்ணொளி தந்த கர்ம வீரரே வாழ்க!
இறைவன் அருளால் இயற்கையின்
மகிழ்ச்சி

வெள்ளமாய்வுந்தது
பெருகட்டும் உங்கள் வாழ்வில் இன்பம்.

*(பாண்டிச்சேரி அறிவித்த கண்
மருந்தலயத்தை திறப்பு விழாவின்
போது நமது குடியரசு தலைவர்
டாக்டர் அப்துல் கலாம் அவர்கள்
எழுதி வாசித்த கவிதை)*

You gave light to blind eyes and
Nature's beauty entered the soul,
The Mind blossomed,
And a faith was born
Believing in service to mankind.
O bringer of light
Hero of action—
Long may you live!

*(Poem dedicated to Dr. V, written and recited
by President Dr. A.P.J. Abdul Kalam at the
inauguration)*

A DREAM COMES TRUE: THE INAUGURATION OF ARAVIND-PONDICHERRY

2003 at Aravind has been a year of continued growth and consolidation. The first highlight was the opening of Aravind's fifth hospital at Pondicherry on the 125th Birth Anniversary of The Mother by the President of India, His Excellency Dr. A.P.J. Abdul Kalam, a long time friend and supporter of Aravind's work. This 750 bedded eye hospital, the world's largest in terms of capacity and ground area, was built in a record-breaking 15 months and the relics of Sri Aurobindo were installed in its meditation hall on the 18th of August.





Dr. P. Namperumalsamy and Dr. P. Vijayalakshmi with Dr. G.V. Rao, Director Orbis India and His Excellency Thiru. P.S. Ramamohan Rao – The Governor of Tamil Nadu at the Inauguration of the Aravind-ORBIS Project for training in Paediatric Ophthalmology



Dr. M.S. Swaminathan with Dr. G. Venkataswamy, Dr. R.D. Ravindran, Dr. Thiruvengatakrishnan and Dr. Venkatesh



Prof. C.K. Prahalad and Mrs. Prahalad with Dr. Aravind and Dr. Haripriya during their visit to Aravind in February.

For our children: The ORBIS-Aravind partnership

Aravind is increasingly aligning its activities with those of the global initiative Vision 2020 – The Right to Sight. The issue of childhood blindness and eye care for children has been declared as one of the global priorities in eye care. Addressing this, Orbis International and Aravind have come together to initiate a project aimed at capacity building in the field of pediatric eye care. This joint initiative will help Aravind offer a series of training programmes aimed at ophthalmologists, anesthetists, pediatric nurses and community workers to develop their capacity in pediatric eye care. Aravind will also be involved in the establishment and development of pediatric eye care centres in other eye hospitals. This project was launched by the Governor of Tamil Nadu, His Excellency Thiru P.S. Ramamohan Rao.

Bridging the digital divide

'n-logue', a company promoting rural internet connectivity and M.S. Swaminathan Research Foundation have made enormous strides in bridging the digital divide by setting up Information centers in several villages around Chennai and Pondicherry.

Dr. G. Venkataswamy who continues to dream of a developed India and believes the answer lies in uplifting the villages has met Professor Swaminathan on several occasions. The two visionaries are mutual admirers and have now brought their organizations together in a new partnership which has the M.S. Swaminathan Research Foundation working with Aravind to make eye care accessible to the villagers through its technology. Aravind has now trained the field staff of MSSRF and the rural internet kiosk operators of n-logue to recognize and refer patients with eye diseases and has also provided relevant information on eye care in Tamil to be hosted on their website.

Finally face-to-face: CK Prahalad at Aravind

As one of today's most influential thinkers on corporate strategy, CK Prahalad has challenged several traditional business models and argued for new ways of approaching service delivery in developing economies. His ground-breaking work has helped create an important awareness of the exciting opportunities that exist in serving the bottom of the pyramid, and the all round advantages inherent in connecting the poor and the rich across the world through a market organized around the concept of sustainable growth and development.

For years now, Prahalad has used the example of the Aravind Eye Care System to illustrate one of his deepest and most revolutionary beliefs: that it is possible to combine low cost, good quality, sustainability and profitability to serve the vast numbers of people who make up the world's poor.

After years of long-distance mutual admiration and respect, the meeting between Prahalad and Aravind happened when he visited Madurai in February giving both sides a first time opportunity to draw face to face inspiration and ideas from each other.



Dr. P. Namperumalsamy with Mr. Vijay Singh Mankotta, Minister for Tourism and Civil Aviation, Government of Himachal Pradesh at the CII Meeting



Mrs. M.P. Birla visiting Aravind-Pondicherry



Mr. Puthiappan, Mr. Sathyamoorthy with other Aurolab staff with the cataract surgery kits packed and ready for shipping to Afghanistan



Dr. Balakrishnan (circled) delivering his talk at the United Nations Headquarters, New York, USA

The Calcutta Connection: Mrs.M.P. Birla visits Aravind

The collaborative venture M.P. Birla Eye Hospital, Calcutta continues to grow and within a span of two years is now working to its full capacity. Mrs. M.P. Birla, Mr. Lodha and Mr. Daga visited Aravind-Pondicherry to review the collaboration and to plan the construction of the new facility which will become the permanent base for the hospital.

Celebrating community spirit: Sponsor's day

Right from its very early years the community has always been a pillar of support for Aravind's various activities. The most tangible manifestation of this has been the unique partnership between Aravind and its community sponsors for the running of eye camps. For the first time a meeting of all the camp sponsors across all the hospitals was organised in Pondicherry as a two day event. Over 300 sponsors representing 160 different organizations attended.

All in one: The new cataract kit at Aurolab

Aurolab in its continuous quest to reduce the cost of eye care in developing countries especially in Africa and Latin America, came out with the innovative idea of making a complete cataract kit available on the market. This kit contains all preoperative and postoperative supplies required for cataract surgery and has been optimized for five surgeries. It not only brings down the cost of all consumables of cataract surgery to about US \$12 but also significantly reduces the procurement time as it offers a one-stop-service for cataract supplies.

Aurolab in the big apple: An invitation from the UN

Recognising the vital role that Aurolab plays in making new technologies in ophthalmic supplies accessible to developing nations, the United Nations Development Programme (UNDP) invited Dr. P. Balakrishnan, Managing Director of Aurolab, to make a presentation at the United Nations Headquarters, New York. Mr. Venketesa Kannan and Dr. P. Balakrishnan participated in the "Thirteenth session of the High-level Committee on the Review of Technical Cooperation among Developing Countries" held from May 27-30 at the United Nations in New York. They made a presentation on "Pharmaceuticals and Health Services" at the Thematic Discussion on "Enhancing the role of the private sector in promoting south-south cooperation, including triangular cooperation" at the United Nations on May 28.



Infinite Vision: The Story of Dr. V & Aravind on Film

Another ambitious project started and brought to completion this year was "Infinite Vision" a documentary film on the extraordinary life of Dr. Venkataswamy and the evolution of the Aravind Eye Care System. The 35-minute film explores the unique perspective and practices of a humble man who dreamed of combining spiritual aspirations and service to humanity with the best of modern-day management systems and technology, and who then went on to live that dream with unprecedented results. The film is now being screened for diverse audiences across the world and aims to inform, interest but above all- *inspire* people with the many messages Dr.V and Aravind have to share.

Rotary Award for Excellence

In this year Dr. R. Ramakrishnan was awarded the prestigious Rotary award for Excellence by Rotary International in recognition of his significant achievements and valuable contributions in the field of Health Services. The award was presented to him on 22nd June in Quilon, Kerala and stands testimony to the tireless efforts of his team to deliver high quality, affordable eye care in that region of Southern India.

People Matters: Central Office, HR & AUROUTSAV

As Aravind continues to grow there has been a continuous introspection on how to reorganize ourselves and build an organisation that will continue to support such diverse activities and stimulate growth. As part of this organization building process, Aravind is moving towards the creation of a Central office with a focus on empowerment and development of all its units. Several activities have been initiated towards this during the year. Aravind's strength lies in its people both from within and outside the system. The ongoing process of building a dedicated and highly skilled team is getting better structured by pooling the knowledge and process into the newly developing Human Resource Department. This fledgling department started on the right foot with Auroutsav, a week focused on showcasing staff creativity and encouraging teamwork and group participation. Auroutsav not only brought out latent creativity and talents in the hospital staff but also very effectively broke down the hierarchal and departmental barriers and brought people closer. This was celebrated at all the locations and every single employee in the organisation participated in various competitive events.



The Infinite Vision team: Ms.Meg Lueker, Ms.Pavithra Krishnan and Ms.Ayla Gustafson



Dr. R. Ramakrishnan receiving the Rotary award for Excellence

If you can't see, then you don't have to. If you can't come to those who'll come to you, each year they bring light to millions of lives. Their actions are remarkable, but the spirit that drives them is one of a kind.

Infinite Vision is the story of Dr. V, the legendary eye surgeon, their family, India who made it his mission to restore sight to the blind and whose work has resulted in one of the world's most extraordinary models of service delivery.

This film traces the inspiring life journey of a visionary dedicated to serving humanity, outlines the evolution of the Aravind model of eye care and offers glimpses into the spirituality that has guided him for over 50 years in service for sight.

"In the world of blindness he has performed a miracle". - Ron Swickard for the film

www.aravind.org
 Aravind Eye Care System
 6 March 2003
 © Aravind Eye Hospital, 2003

An eye close with 11 beds. A country with 12 million blind and one doctor dedicated to a beautiful dream.

For copies of Infinite Vision CD/DVD, write to infinitevision@aravind.org or contact Aravind Communications, Aravind Eye Hospital, 1, Anna Nagar, Madurai 625020; Phone: 0452-5356100



ouroutsav
at Arvind Eye Hospitals—
Madurai, Pondicherry, Tirunelveli and Coimbatore

UPDATE ON DIABETIC RETINOPATHY INITIATIVES

World Health Organization estimates that 2% of Indians are diabetic and projects that the number of diabetics will triple to 57.5 million by 2025. However, recent studies in India already estimated an even higher prevalence, between 5-10%. Around a quarter of these diabetics may develop diabetic retinopathy and half of them may need intensive follow-up, laser treatment, vitreous surgery or low vision aid rehabilitation. It is against this background that Aravind has launched a major initiative in collaboration with Lions Clubs International, World Diabetes Foundation & Mission Reach (Govt. of India) to combat blindness due to diabetic retinopathy.



Lions International Vice President Clement F. Kusiak and Ln. Lady Jeanne Kusiak during their visit to LAICO

Lions Aravind Diabetic Retinopathy Project

The Lions Diabetic Retinopathy Project is being implemented in Madurai, Theni and Coimbatore districts of Tamilnadu covering a population of 7.5 million. The 5 year project which will come to an end in December 2004 will contribute to preventing and reducing blindness resulting from diabetes through awareness creation, screening, tertiary care and training. In 2003, under the community initiatives, 7959 people were screened in the 34 exclusive diabetic retinopathy camps detecting 2629 diabetics and amongst them 504 with diabetic retinopathy. Appropriate treatment was provided to those with diabetic retinopathy. The general awareness creation activity through guest lectures and seminars covered over 10,000 people from the industries, banks, colleges, Lions clubs, Rotary clubs, etc. Special training programmes were carried out for the medical professionals and Government health. In addition 71 general practitioners underwent training in the diagnosis diabetic retinopathy and 42 ophthalmologists were trained in indirect Ophthalmoscopy and laser treatment.



Dr. P. Namperumalsamy, Mr. Shokyu Nakamura, Managing Director, and Mr. Calvin Lee, Senior Sales Manager of TOPCON South Asia Pvt. Ltd., Singapore and Mr. Ravi Mehra, Eye Tech Industries, Mumbai at the TIFAC-COREs Meet

TIFAC-CORE In Diabetic Retinopathy

To realize the dream of a developed India by 2020 a revolutionary initiative called Mission REACH (Relevance and Excellence in ACHieving new heights in educational Institutions) was launched by the Govt. of India. At the heart of Mission REACH is TIFAC-CORE (Technology Information, Forecasting & Assessment Council—Centre Of Relevance and



Ln. N.A.K. Gopalakrishnaraja, Dr. P. Namperumalsamy, Dr. G. Venkataswamy, Ln. V.R. Chinna Arunachalam and Ln. Dr. P. Piramanayagam at the Diabetic Awareness Seminar



Dr. Loganathan-RMC Chairman, Dr. Neeraj Saxena-TIFAC, Dr. V.R. Muthukaruppan, Dr. Aravind, Dr. P. Namperumalsamy, Mr. R.D. Thulasiraj and Mr. Vijayakumar



Diabetic & Diabetic Retinopathy Screening camp at Sankaran Kovil on 03.12.03



Dr. R. Ramakrishnan with Dr. Anil Kapur, Vice President WDF, and Dr. P. Namperumalsamy at the Diabetic Retinopathy Exhibition at Sankaran Kovil



Dr. R. Ramakrishnan, Chief Medical Officer, Aravind-Tirunelveli Dr. Anil Kapur-Vice President WDF and Dr. P. Namperumalsamy



Dr. P. Namperumalsamy and Dr. R. Kim with Dr. Deepak Bhatnagar, Advisor, Mission REACH, Dr. Neeraj Saxena, Co-ordinator, TIFAC

Excellence). Aravind, Madurai was designated as one such TIFAC-CORE centre in Diabetic Retinopathy in February 2003. The vision of this centre is to excel in the field of Diabetic Retinopathy and become a world leader in patient care, research and training.

Towards this the center is now equipped with state-of-the-art equipment for diagnostic, therapeutic and research activities. The notable equipment additions were the **Optical Coherence Tomography** unit, **Flow Cytometry** and **Confocal Microscope**. Two new courses were launched to train ophthalmologists in the field of diabetic retinopathy—a long term fellowship course in “Diabetic Retinopathy & Medical Retina” and a short-term certificate course in “Diabetic Retinopathy”. A “Certificate Course in Fundus Fluorescein Angiography and Ultrasonography” will be launched soon for ophthalmic technicians. Several research projects have been initiated.

WDF Aravind Diabetic Retinopathy Project

The World Diabetes Foundation gave a significant grant to Aravind to make further inroads in the management of Diabetic Retinopathy. This grant in addition to enhancing diabetic retinopathy services in southern districts of Tamil Nadu will also support the development of technology and infrastructure to provide remote consultation for management of diabetic retinopathy. This will happen through a reading and grading centre which will receive fundus images from remote locations and immediately send back a report with recommendations for treatment. This will be done using satellite connectivity being provided by the Indian Space Research Organization.

On the outreach front, 5497 people were screened of whom 2623 were identified as diabetics and 366 had diabetic retinopathy. Four exhibitions were conducted which had a total of about 4000 visitors. Several seminars were conducted for medical officers of PHCs, health workers, medical shop owners, to develop a strong referral network.

ARAVIND TELE-OPHTHALMOLOGY NETWORK (ATN) LAUNCHING 'eyesTalk'

THE YEAR 2003



Aravind launched Tele-ophthalmology services to bridge the geographic gap between specialists and a patient needing the specialist's services. This started by linking Aravind hospitals at Madurai and Coimbatore with support given by Orbis. The generous support from Acumen Fund helped to expand this network to cover four of Aravind's hospitals and has allowed us to take this process to new heights. It is now poised to open the services to other hospitals as well. To enable this, Aravind has launched a software – "eyesTalk – beyond frontiers" both to make such remote consultations efficient and well documented. This web-based free software was released by His Excellency Thiru Ramamohan Rao, the Governor of Tamilnadu in August.

Today real time case consultations are carried out across the Aravind system by the ophthalmologists thus allowing patients to have the experts' inputs without having to travel. Apart from this, Grand Rounds, Journal Club and regular class sessions are carried out and this has helped Aravind to maintain the quality of education imparted across the system. This facility also allows Aravind ophthalmologists to interact with faculty from reputed institutions around the world like the Wilmer Eye Institute and Cornell University, USA.

...to bridge the geographic gap between specialists and a patient needing the specialist's services.

REMOTE REFERRAL & MOBILE CONSULTATIONS

Indian Space Research Organisation (ISRO) approved Aravind's request for satellite based connectivity between the base hospitals at Madurai and Theni and a mobile van fitted with VSAT. This will make Aravind Eye Hospital at Theni, now a secondary care hospital, into a virtual, tertiary care facility for diagnosis. The mobile ophthalmic van supported by World Diabetes Foundation (WDF) with VSAT connectivity provided by ISRO will extend such remote consultations to eye camps and at other locations where the expertise is not locally available.

READING & GRADING CENTRE

With the support of WDF a comprehensive Reading and Grading Centre of fundus images is being set up at Aravind, Madurai. As part of this, a software is being developed that simplify and partially automate the reading and grading of digital fundus images received from the remote centres and mobile units.



His Excellency Thiru. Ramamohan Rao, The Governor of Tamil Nadu inaugurating 'eyesTalk'



His Excellency Thiru. Ramamohan Rao, The Governor of Tamil Nadu with Dr. P. Namperumalsamy



Dr. P. Chandramohan, District Collector, Madurai lighting the lamp



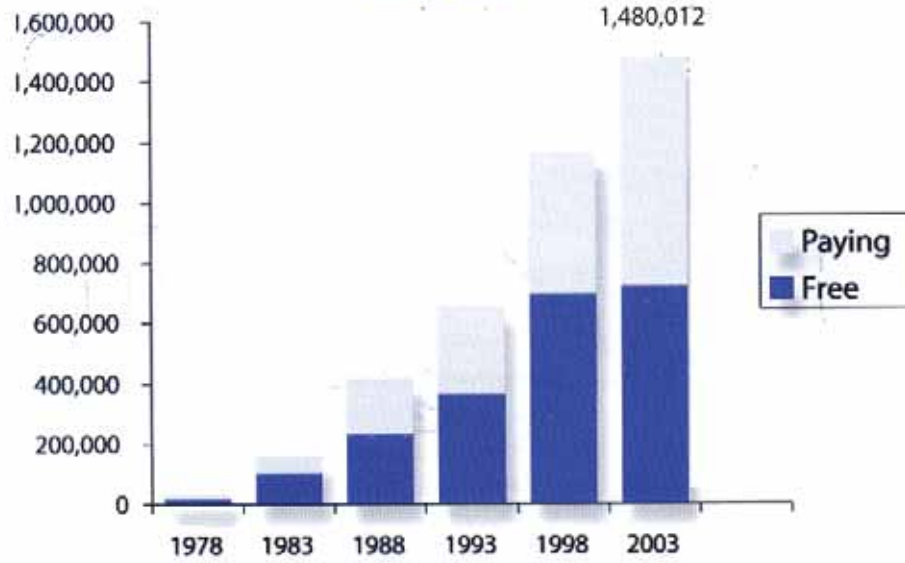
Dr. Kim explaining 'eyesTalk' to Aravind doctors.

Statistics 2003

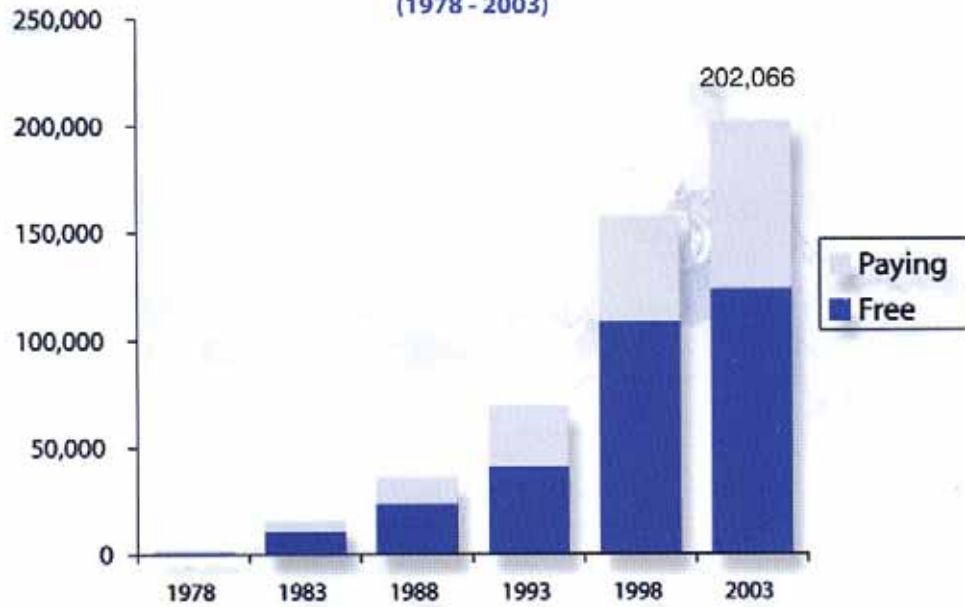
	Madurai	Tirunelveli	Theni	Coimbatore	Pondicherry	Total
Out Patients						
Paying	288,709	147,900	45,043	211,672	65,667	758,991
Free (at Base hospital)	127,286	50,949	18,894	81,645	21,216	299,990
Free (at Screening Eye Camps)	146,640	66,030	19,685	135,873	20,366	388,594
Surgeries						
Paying	37,377	14,097	2,224	19,024	5,765	78,487
Free (Direct and Camp admissions)	60,273	18,403	5,711	32,658	6,534	123,579 ✓
Total Out-Patient Visits	588,590	264,879	90,104	429,190	107,249	1,447,575
Total Surgeries	97,650	32,500	7,935	51,682	12,299	202,066
Screening Eye Camps	379	268	63	386	62	1,158

Surgeries	Madurai	Tirunelveli	Theni	Coimbatore	Pondicherry	Total
Extra Capsular Cataract Extraction	1075	267	62	836	185	2,425
Ecce with IOL Implantation	28,358	4,607	6,448	8,276	978	48,667
Ecce with Phaco	11,760	16,133	377	7,117	2,340	37,727
Small Incision Cataract Surgery	29,696	2,693	0	23,478	5,463	61,330
Trab. & Combined Procedures	1,868	874	34	968	124	3,868
Retinal Detachment	649	34	0	322	17	1,022
Vitreous Surgery	504	19	0	467	19	1,009
Membranectomy	48	2	0	21	2	73
Squint Correction	559	92	0	281	20	952
Keratoplasty	322	34	0	161	17	534
Pterygium	386	107	13	413	54	973
Ocular Injuries	362	116	31	389	67	965
Orbitotomy	49	0	0	10	0	59
Ptosis	307	14	0	96	1	418
Lid & Socket Reconstruction	455	0	0	166	0	621
Lacrimal Surgeries	1,862	807	145	620	186	3,620
Other Orbit & Oculoplasty Surgeries	826	407	8	16	161	1,418
Others	6,255	418	205	1,835	914	9,627
Laser Procedures						
Laser Photocoagulation	6,885	3,503	160	3,652	1,005	15,205
Nd.Yag Iridectomy	1,778	1,085	76	212	293	3,444
Nd.Yag Capsulectomy	2,210	1,288	376	1,936	453	6,263
Lasik Refractive Surgery	1,436	0	0	410	0	1,846
Total	97,650	32,500	7,935	51,682	12,299	2,02,066 ✓

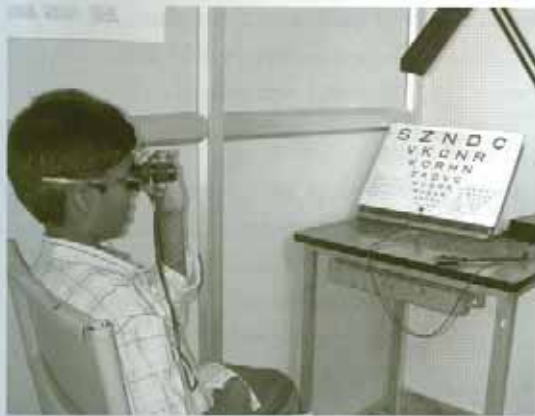
TOTAL OUT PATIENT VISITS: 16,123,511 (1978 - 2003)



TOTAL SURGERIES: 1,996,225 (1978 - 2003)



2003



Community Outreach Programmes

An integral part of Aravind is its community outreach programmes which provide different strategies for taking eye care service to the doorstep of the community. They provide curative, preventive and rehabilitative care to the community along with awareness programmes to improve service delivery to the community.



FREE EYE CAMPS

In the year 2003, a total of 1158 screening camps were conducted by the Aravind Eye Hospitals and a total of 388,594 patients were screened. 81,357 of them underwent surgery.

In the last few years Aravind has been conducting speciality camps for specific patient groups, and under this category conducts:

Eye Screening Camps for School Children

During the year 2003, 76696 children in 68 schools were screened for eye defects and 4025 children were given glasses to correct their refractive errors.

Refraction Camps

Joining hands with industries, transport companies, banks and government bodies, Aravind conducts refraction camps for their employees. Thousands of patients attending these camps benefit from the on-the-spot dispensation of quality prescription glasses almost immediately at a fraction of the cost they would otherwise incur. In 2003, a total of 111 refraction camps were conducted, where 25,485 employees were screened.

Diabetic Retinopathy Screening Camps

Through these camps 7736 people were screened of whom 3097 were identified as diabetic and 413 with diabetic retinopathy. In addition to these camps four exhibitions were conducted to create an awareness among the public about Diabetic Retinopathy. Several seminars were also conducted for medical officers of Primary Health Centres, medical shop owners and other health workers to develop a strong referral network.

EYE SCREENING FOR SCHOOL CHILDREN

	MDU	Theni	TVL	CBE	Total
Schools covered	18	6	35	9	68
Teachers trained	177	66	55	16	314
Students screened	29646	9125	20182	17743	76696
Students with defects	1560	676	1069	720	4025



Dr. Kalpana Narendran training the government school teachers at the Community Outreach programme

Sponsors'

Day



11&12
October 2003



ARAVIND
PONDICHERRY

SPONSORS DAY AT ARAVIND

Camp sponsors play a major role in Aravind's outreach work. They are Aravind's link to the communities, and working towards a common goal of eliminating needless blindness. This bond between Aravind and its sponsoring organisations and individuals has grown with the years. In the past each Aravind Eye Hospital arranged for an annual meeting with the sponsors to plan future camps and discuss methods to improve their efficiency. In 2003, it was planned that the sponsors from all five hospitals would hold a joint meeting, and Aravind-Pondicherry was chosen as the venue.

320 members from 161 different organizations came to participate in the two day meet which commenced at Aravind-Pondicherry on 11th October. On the first day Sri Vijay Poddar, Trustee, Sri Aurobindo Ashram, gave them a brief introduction to Sri Aurobindo and the Mother's teachings and spoke about Sri Aurobindo Ashram. The sponsors were then taken on a tour of the Ashram and Matrimandir in Auroville. The next day Mr. V. Rajendran welcomed the participants and Mr.R.Meenakshi Sundaram spoke about the reasons for celebrating sponsors' day. The Chairman spoke of his experiences with the various camps since he started the hospital and Dr. Natchiar spoke about the growth in Aravind's outreach work since its inception 27 years ago and also screened a video. On the whole it was a very refreshing and productive experience for both the sponsors and organisers.



Camp Statistics 2003



Sponsor	Camps	Out-Patients	Cat.&IOL	Others	Total
1 Lions Clubs	363	128438	26720	725	27445
2 Rotary Clubs	73	29913	7645	174	7819
3 Vivekananda Kendra	52	11461	2315	70	2385
4 Sri Sathya Sai Orgns. (BSSSSO)	11	3635	358	4	358
5 Religious Organisations	86	29547	6371	151	6522
6 Jaycees	3	1372	316	4	320
7 Banks	16	5138	644	22	666
8 Mills & Factories	19	12589	3072	83	3155
9 DBCS	68	17628	5733	171	5904
10 Educational Institutions	49	16345	3080	82	3162
11 Hospitals	77	16545	2688	104	2792
12 Trusts	47	14485	2786	56	2842
13 Youth & Fans Association	20	5709	1063	36	1099
14 Other Voluntary Organisations	129	48293	6606	215	6821
15 Others	145	47496	9779	288	10067
TOTAL	1158	388594	79172	2185	81357 ✓



Education and Training

The multi-faceted training programmes offered at Aravind Eye Care System, has provided support for ophthalmologists and eye care service providers around the globe.



IOL Trainees with Dr. Haripriya, Dr. Minu Mathen and Dr. G. Natchiar



Dr. Marcus Ludwig from Germany receiving the certificate for IOL Training from Dr. P. Namperumalsamy



Dr. Mahesh Agarwal receiving the certificate for glaucoma training from Dr. Krishnadas

ARAVIND POSTGRADUATE INSTITUTE OF OPHTHALMOLOGY

POSTGRADUATE TRAINING IN OPHTHALMOLOGY

In affiliation with,

—Dr. MGR Medical University, Chennai

Diploma in Ophthalmology (DO)

Eight candidates underwent the training course.

MS in Ophthalmology (MS)

Four candidates underwent the training course.

—National Board of Examinations, New Delhi

Diplomate of the National Board (Dip. NB)

Eleven candidates underwent the training course.

FELLOWSHIP PROGRAMMES

The fellowship programmes are designed to enable ophthalmologists to enhance their professional skills through advanced training in specific areas of their choice.

SHORT-TERM COURSES FOR PRACTISING OPHTHALMOLOGISTS

IOL Microsurgery Training Programme

During 2003, a total of fifty one ophthalmologists were trained at Aravind-Madurai, Aravind-Coimbatore and Aravind-Tirunelveli.

Lasers in Diabetic Retinopathy Management

The two courses including 'Training in Indirect Ophthalmoscopy' and 'Lasers in Management of Diabetic Retinopathy' are now being offered with support from the Lions SightFirst Programme as a combined course at Aravind-Madurai and Aravind-Coimbatore. Forty-two ophthalmologists were trained in the year 2003. July onward, with support from TIFAC-CORE, 3 more candidates were trained.

Diagnosis and Management of Glaucoma

The Aravind-Zeiss Centre of Excellence in Glaucoma, at Aravind-Tirunelveli and Aravind-Madurai trained sixteen candidates in 2003.

Visiting Residents

Ophthalmology Residents from various universities in the US come to Aravind during the final year as part of their residency in Ophthalmology. In the year 2003, residents from the following institutions were at Aravind: Wilmer Eye Institute, Baltimore; Kresge Eye Institute, Detroit; Massachusetts Eye & Ear Infirmary, Boston; St. Vincents, New York and Cornell University, New York.

SPECIALTY TRAINING

Medical Officers from Aravind visit leading institutions and eye care centres in the US to undergo specialised training and to gain exposure to the latest developments in their respective disciplines.



Dr.Sathyan with Dr.Paul Palmberg



Dr.Venkatesh with Dr.Bradford J.Shingleton and Mr.Stig R.Leschly



Dr.Lalitha with Dr. K. Wilhelmus

DR. P. SATHYAN, Chief of Glaucoma Services at Aravind-Coimbatore spent three weeks at Bascom Palmer Eye Institute at Miami with leading glaucoma specialists Dr. Paul Palmberg, Dr. Doug Anderson, Dr. Richard Parrish, Dr. Richard Lee and Dr. Don Budenz. From them he learnt a lot in visual fields and shunt surgery techniques.

He attended the American Glaucoma Society meeting held at San Francisco from March 6th to 9th and exhibited a poster in the ASCRS Conference. He visited New York Eye & Ear Infirmary and discussed with eminent glaucoma surgeons Dr. Robert Ritch and Dr. Jeffery Leibman and also with corneal surgeon Dr. David Ritterband. He was in Wilmer eye Institute with eminent glaucoma specialists Dr. Harry Quigley, Dr. David Freidman, Dr. Cambell and Dr. Nathan. At Greater Baltimore Medical Centers he learnt a lot of surgical techniques from Dr. Alan L. Robin.

DR. VENKATESH, Senior Medical Consultant at Aravind-Pondicherry spent time with eminent glaucoma surgeons Dr. Robert Ritch and Dr. Jeffrey M. Liebmann and corneal surgeons Dr. David C. Ritterband and Dr. John A. Seedor in the New York Eye and Ear Infirmary. He met Ms. Natalie D. Hahn, Senior Adviser, UN Fund and spoke about LAICO and Aurolab's work. He also spent a day with David H. Abrahamson, an eminent ocular oncologist in Cornell University.

He presented a paper in the anaesthesia section of ASCRS in San Francisco. At Berkeley, he had the opportunity to attend the management classes in the University with the help of Dr. Sandra Dratler and Dr. Kristina Raube. He also spent a week in some of the Kaiser Hospitals in the bay area with Dr. David Gritz. He discussed the Aravind activities with Timothy J. Batchelder, Physician in Chief of Richmond Hospital. He spent a day with John P. Whitcher, observing the activities of Proctor foundation and attended grand rounds in UCSF. He then had the opportunity to meet Dr. David Chang an eminent high volume cataract surgeon in the bay area.

In Boston he spent a week with Dr. Bradford J. Shingleton, an eminent glaucoma and cataract surgeon of Ophthalmic Consultants of Boston. He also met Mr. Stig R. Leschly, Professor in Harvard Business School and talked to him about the activities of Aravind.

DR. LALITHA, Microbiologist at Aravind-Madurai presented a paper on 'Protection against infection during cataract surgery with special emphasis on developing countries doing high volume cataract surgery' at the invitation of the International Forum of Ophthalmology conducted at the American Academy of Ophthalmology (Anaheim, USA). It was part of a symposium on "Controversies & Conundrums in Ophthalmology". A very lively discussion ensued and it was proposed that a module on basic sterilization and technique be made. The whole week at the AAO was a fruitful and rewarding experience as she was able to learn about the latest developments in ophthalmology and also meet people and promote new relationships. She spent 10 days at the Cullen Eye Institute at the Baylor College of Medicine, Houston, Texas and visited Dr. Kirk Wilhelmus, the Cornea Consultant. He along with colleague Dr. Dan Jones who is also the Chairman and Dean of

EDUCATION & TRAINING

the medical school, have done a lot of work in infectious keratitis. At the ocular microbiology lab she observed the latest methods in diagnosis and research in Fungal keratitis and other infectious diseases of the eye.

DR. NARENDRAN, Chief Medical Officer, Aravind Coimbatore was in the US for three months to observe the clinical, surgical and other support facilities in the field of ocular oncology to help start a full fledged department of ocular oncology at Aravind Coimbatore. He was at Robert M. Ellsworth ophthalmic oncology center, New York Presbyterian Hospital – Weill Cornell Medical College, New York, with stalwarts like Dr. David H Abramson. He was also with Dr. Thomas C. Lee at New York Presbyterian Hospital Cornell University New York with whom Aravind Coimbatore proposes to have regular teleconsultations every week. He also observed Dr. Paul Finger in his private practice and in surgery at New York Eye and Ear Infirmary. At the end of his trip he attended the American Academy of Ophthalmology meeting at Anaheim.



Dr. Narendran with Dr. Paul Finger

DR. MOHIDEEN ABDUL KADER, Glaucoma Medical Officer from Aravind–Tirunelveli, went for a six week visit to USA to observe the clinical and surgical facilities, learn the recent advances, observe training and research. At the American Academy of Ophthalmology (AAO) 2003 Annual meeting he had good exposure to recent advances in glaucoma. He attended several instruction courses such as NVG, Disc Stereoscopic Optic Disc evaluation and also attended a special lecture on OCT by David Huang and associates. He attended a symposium on the structural & functional changes in Glaucoma organized by Carl-Zeiss.



Dr. Mohideen Abdul Kader with Dr. Alan Robin

At Stanford University School of Medicine he had the opportunity to observe eminent glaucoma surgeon Dr. Kuldev Singh for 15 days at Blake Wilbur Clinic. He also met Peter Edlberg leading Cataract and Glaucoma surgeon. He attended 'Current concept in ophthalmology' organized by John Hopkins School of Medicine. At Wilmer Eye Institute, he spent two weeks observing Dr. Harry A. Quigly and his associates. He also had the rare opportunity to visit one of the finest research laboratory of Harry Quigly and his work on retinal ganglion cells and amacrine cells on Glaucoma. He spent a week observing Dr. Alan L. Robin's work and visited Greater Baltimore Medical Center (GBMC) with him. He held discussions regarding a proposed prospective study on the effect of topical Glaucoma drops on the conjunctiva and its cytology.

Lions Aravind Institute of Community Ophthalmology (LAICO)

Driven by a mission to contribute to the prevention and control of global blindness, the institute trains health-related and managerial personnel in the development and implementation of efficient and sustainable eye care programmes. LAICO is Asia's first international training facility for blindness prevention workers from India and other parts of the world.



Mr.S.Saravanan, Mr.P.Rajendran, Mr.Pravin Aruldas and Dr.Maneksha, at GRAVIS Hospital, Rajasthan



Ms.K.M.Sasipriya, Mr.Gopal Pramanik, President, Mr.Bhakta, Secretary - SDSS, Dr.Thiruvengata krishnan, Mr.Ganesh Babu and Ms.Rum Jhum,

I. CONSULTANCY FOR CAPACITY BUILDING

LAICO currently partners with 155 eye hospitals located across India, SouthEast Asia, Latin America and Africa for eyecare capacity building. It works in collaboration with INGOs like Lions International, Sight Savers International, CBM International, IEF, Orbis, WHO and Seva Foundation.

Workshop on Management and Planning Support for Establishing Effective Eye Hospitals

April 7-12, 2003

The aim of the workshop was to facilitate the participating organizations or hospitals in setting out to build an effective eye hospital in its design, equipping and staffing, reflecting eye care needs in the service area and organizational vision. The workshop helped to train a batch of 14 participants representing 5 different organizations, identified by Sight Savers International. The participants were from:

1. Modele Bastar Integrated Rural Development Society (BIRDS), Bastar District, Chattisgarh
2. LEpra India, Regional Office, Bhubaneswar, Orissa
3. Sambhav Social Service Organisation, Gwalior, MP
4. Sunderban Social Development Centre, Polerhat, West Bengal
5. Gramin Vikas Vigyan Samiti, Jodhpur, Rajasthan

The programme schedule focused on arriving at the proposed outcomes in planning for building, human resources, equipment, instruments, furniture, systems and procedures in clinical, administrative, and supportive services, resource mobilization and implementation schedule in financially viable and sustainable manner right from the beginning. Needs assessment visits to the proposed project sites by the LAICO faculty team helped them analytically come to consensus in planning during group work with the respective hospitals. The workshop imbibed a sense of confidence in the participants in starting the new project.

Needs Assessment Visits

As part of the Management and Planning support for establishing Effective Eye Hospitals program, the LAICO team members Dr. Maneksha, Mr.P.Rajendran, Mr. S. Saravanan and architect Mr.Pravin Aruldas visited HBS Trust hospital on 16th & 17th of March. During the visit the team highlighted the opportunities for this hospital to provide quality eye care services to its needy population through recruiting the adequate number of trained staff for their eye care project, careful planning and by implementing outreach activities by creating awareness among the community.

This team also visited Gramin Vikas Vigyan Samiti (GRAVIS) organization on 18th & 19th of March. The main objective of this visit was to establish a relationship with the organization and gain a better understanding of their activities and also to assist in the development of eye hospital project.

As part of the Management and Planning Support Programme for Establishing Hospitals supported by Sight Savers International, Dr.Thiruvengatakrishnan, Mr.Ganesh

Babu, Ms.K.M.Sasipriya from Aravind Eye Care System and Mr.Ramesh Naidu, Architect, Auro Service, Pondicherry visited the following hospitals:

- Southern Health Improvement Samity (SHIS), Bhangar, South Parganas, West Bengal
- Sundarban Social Development Centre, Mandhir Bazar, South Parganas, West Bengal
- Lepra India, Bhubaneswar (& Sonepur), Orissa

The main objective of needs assessment visit is to establish a relationship with the organization and gain a better understanding of their activities and also to assist in the development of eye hospital project. The consultancy team members had a brief discussion with the director, secretary and health co-ordinator of the hospital.

The same team also visited Sambhav Social Service Organisation Gwalior, MP (20th & 22nd March 2003). On the 23rd and 24th they visited Modele Bastar Integrated Rural Development Society (BIRDS), Jagdalpur, Chattisgarh for needs assessment under the Sight Savers International, India project for Management & Planning Support for Establishing Effective Eye Hospitals. This time Mr.R.Meenakshi Sundaram from Aravind also joined the team.

As part of LAICO consultancy a team of three, Dr.V.Narendran, Mr.Keerti Bhusan Pradhan and Mr.Muralikrishnan visited the following two eye hospitals to assess their needs from June 30 to July 5. This visit was supported by Sight Savers International, Mumbai.

The team made needs assessment visit to the following hospitals:

- Jeevan Jyothi Eye Hospital, Meghnagar, Jhabua, Madhya Pradesh,
- Rotary Charitable Eye Hospital, Dondaicha, Dhule, Maharashtra.

Both the hospitals are in remote parts of the country and a good majority of the population are tribals. It was impressive to see the commitment and efforts of those involved in the hospital in serving in those areas.



Dr.V.Narendran and Mr.Keerti Pradhan at Jeevan Jyothi Eye Hospital in Madhya Pradesh

Manpower and Management Development workshop

July 14-19

This workshop is designed to help existing eye hospitals perform better by identifying strategies for improving patient load, quality and financial viability. Fifteen participants



Mr.R.D.Thulasiraj, Ms.Dechen and Mr.Saravanan in discussion with the team in Chltrakoot



Participants of the Manpower and Management Development workshop with Dr. G. Venkataswamy, Mr. R.D.Thulasiraj and other LAICO faculty

from the following hospitals participated in the workshop sponsored by Sight Savers International, Mumbai:

- HBS Trust, Jodhpur, Rajasthan
- SHIS (Southern Health Improvement Samity), Bhangar, West Bengal
- Jeevan Jyoti Health Service Society, District Jhabua, Madhya Pradesh
- The Christian Fellowship Hospital, Rajnandgaon
- Rotary Bhuvan Charitable Trust, Dondaicha, Dhule District

CONSULTANCY VISITS

Alwar Eyecare Project of Shroff Charitable Eye Hospital

Delhi, February 3-9

Mr.R.Meenakshi Sundaram and Mr.Keerti Bhusan Pradhan went to Alwar in Rajasthan to provide onsite consultancy. Their aim was to strengthen the project management of Orbis - RMCH supported Childhood blindness Prevention Project of Shroff Charitable Eye Hospital. The project works in the district of Alwar.

The objectives of the visit were to strengthen the outreach programme, develop MIS and provide comprehensive eyecare services. They also trained the staff in clinical management and to develop a sustainable plan. During the visit they refined the existing working methods and suggested some new strategies.

Sadguru Netra Chikitsalaya Hospital, Chitrakoot

Mr.Saravanan and Mr. Thulasiraj were there to lead a five day strategic planning workshop from 27th June to 1st July 2003. Discussions were held with the trustees and staff, to enhance the quality of the hospital to make it a centre of excellence by 2010. The team was impressed with the remarkable changes found in the hospital since LAICO's intervention in the year 2000 in the different activities of the hospital such as the increase in IOL surgery, outreach activities and financial viability.



Participants of the course on Management Priorities in Eye Care Delivery at the Inaugural session

II. TRAINING

LAICO offers management training for all cadres of eye care personnel. Various courses were conducted throughout the year with the flagship courses being the Management Priorities in Eye Care Delivery intended for the Heads of Eye Hospitals and the Management Training for Eye Care Programme Managers which draws participants from various ministries as well as from INGOs.

MANAGEMENT TRAINING

Management Priorities in Eye Care Delivery

January 5 – 11

There were twenty-two participants for this workshop and seven of them were of various nationalities. Participants represented both government and voluntary eye hospitals from several countries in addition to India.

Prof.Fred Munson, Prof.G.Balasubramanian, Dr.G.N.Rao, Dr.Nirmalamurthi, Mr.D.Nagarajan and Ms.Cindy Harrison were here as guest faculty for this management course.



Mr.Keerti Pradhan at the Group discussion session of Management Training for Eye Care Programme Managers course

Management Training for Eye Care Programme Managers

March 3-14

There were twenty-three participants for this workshop representing government eye programmes, voluntary hospitals, and INGOs working in eye care. Participants were from 15 nations.

Dr. Sandra Dratler, University of California, USA, Dr.Nirmala Murthy, Bangalore and Dr.Steve D.Miller, USA, were the guest faculty for the Programme Managers Course.

Management Training and Systems Development for Hospital Administrators

A one-month training programme for personnel involved in management and administration of eye hospitals was introduced in the year 2000. This course is offered twice a year in March and October. In the courses held in 2003, nineteen candidates from India, Bangladesh, Democratic Republic of Congo, Ghana, Nigeria, and Myanmar, participated. This takes the total number of participants who have undergone this course to 75 of whom about 50% are from outside India.

TRAINING IN COMMUNITY OUTREACH WORK

Certificate Course on Community Outreach and Social Marketing of Eye Care Services

This course intends to provide knowledge and skills in planning, management of camps and outreach programmes for eyecare services. Besides this the course covers social marketing, health education and counselling as major modules. Two courses were held this year.

There were eight candidates in each of these courses. They represented India, Nepal, Bangladesh, Nigeria and Fiji Islands. So far, a total of 112 candidates from different parts of the world have undergone this training programme.



Mr.R.Meenakshi Sundaram with the Certificate Course on Community Outreach and Social Marketing of Eye Care Services participants



Participants of Management Training and Systems Development for Hospital Administrators with Mr.Nagarajan, Dr.P.Namperumalsamy, Dr.G.Venkataswamy, Dr.Steve Miller, Mr.R.D.Thulasiraj and other LAICO faculty

TRAINING IN INSTRUMENT MAINTENANCE

During the year, four regular courses were conducted as per schedule. These six week courses were conducted starting on the 1st of Feb., May, August and November. An integral part of these courses is the Instrument Maintenance Camp conducted in another city. At these camps ophthalmic instruments and equipment from several eye hospitals and ophthalmologists are brought to the central location. In these camps, typically several hundred items are repaired thereby helping the hospitals, and at the same time giving invaluable experience to the students and faculty of the course. During this year such camps were held at Tirunelveli, Coimbatore, Pondicherry and Erode. During this year, in these four courses and in the special course for training the Vietnamese group, a total of 33 students were trained. Of these 17 were from other countries- Nigeria, Bangladesh, Myanmar, Tanzania, Vietnam and Zambia.

Developing Instruments Maintenance Training Course at Vietnam

The Christoffel Blinden Mission (CBM), Bangkok office has requested Aravind to help establish an instruments maintenance training centre at Vietnam.

The first phase of the project, a special six-week basic course in instruments maintenance for three trainees from Vietnam, Mr.Nguyen Duy Khao, Dr.Nguyen Van Khang and Dr.Tran Si Phuoc. Miss Thenmalar and Miss Banu Rega were the co-ordinators for this course which was held between two of our regular courses during the period 16th June-26th July 2003.

In the second phase of the project these three trainees stayed for six more weeks serving as instructors in our regular (32nd) course held during the period 1st August to 11th September 2003. Mr. Saravana Kumar was the co-ordinator for the second phase of the project. During this phase a service camp was organized in Aravind Pondicherry to repair the instruments brought from other hospitals like ophthalmoscopes, streak retinoscopes, tonometers, BP apparatus, Keratometers, Slit lamps, Operating microscopes etc. Instructors and trainees from our hospital repaired the instruments free of charge.

During the third phase of the project Prof.Srinivasan, Mr.Poornachandran and Mr. Saravana Kumar have planned to visit Vietnam to establish a training centre there and to run the premier course there along with the three trainees who will be trained as instructors.



Dr.Walter-Gerhard Warble, Chief Technical Officer of Carl Zeiss Meditec Company, Germany with Aravind Ophthalmic Equipment and Instrument Maintenance staff



Dr.P.Namperumalsamy and Prof.Srinivasan with the Trainees from Vietnam and staff of Instrument Maintenance Department

TEACHING PROGRAMMES

In affiliation with Madurai Kamaraj University, LAICO offers the following management and skills development courses.

PG Diploma in Hospital Management Course: Fifteen students are undergoing this training.

PG Diploma in Optometry: Three students are undergoing this one year course.

PG Diploma in Ophthalmic Assistance: Two students are undergoing this training.

LAICO also offers three month certificate courses in optical dispensing and supervisory skills for the paramedics. Twenty eight students have so far undergone the optical dispensing course and fourteen have undergone the supervisory skills course.

WHO FELLOWSHIP in Community Based Essential Eye Care

April 7-11, 2003

Four participants from Bangladesh with WHO fellowship, Dr. Md. Abdur Rashid, Dr. Md. Shahab Uddin, Dr. Md. Abdul Khaleque and Dr. Syed Abul Kalam attended this training programme.

Workshop on Instruments Maintenance

April 21-May 2, Coimbatore Medical College, Coimbatore

Mrs.Rm.Susila, Aravind-Coimbatore participated in this ten day workshop organised by the Central Scientific Instruments Organisation (CSIO), Chennai. Dr. Kalpana Narendran participated as a special invitee and spoke on Instruments Maintenance Programme at Aravind.



Mr.Keerti Pradhan conducting Community Ophthalmology Training programme for Bangladesh Trainees with WHO fellowship



Dr. R.D. Ravindran and Mr.S.Suravanan with the ophthalmologists at BNSB-MEC (Base Hospital), Sirajganj, Bangladesh



Dr.Sandra Dratler, Ms.Kristi Raube, Univ. of California, USA came to Aravind to help develop a Masters in Hospital Administration proposal with LAICO staff.

OFFSITE TRAINING

In 2003 LAICO ventured beyond the boundaries of India to provide training. Repeated requests have been coming to conduct training in other countries. This year LAICO conducted three courses: two in Bangladesh sponsored by Sight Savers International and one in Tanzania. The courses in Bangladesh were for Sight Savers supported hospitals in cost containment and in community outreach work.

Cost containment study in Sight Savers Supported Hospitals

Bangladesh, September 27 - October 9

The Sight Savers International (SSI) supported eye hospitals in Bangladesh have been attempting to standardise the cost of eye care services and surgeries. They approached Aravind Eye Hospital/LAICO to conduct a cost containment study.

As a process a form designed by LAICO was sent to all the SSI partner hospitals to collect baseline information such as the workload, current charges to the patients/pricing, manpower, financial statements and other basic details. The details sent by the hospitals were analysed and four hospitals were identified for field visit. A two member team consisting of Dr.R.D.Ravindran, Chief Medical Officer, Aravind-Pondicherry and Mr.S.Saravanan, Management Faculty, LAICO along with program managers Ms.Z.Kanjee and Mr.Rafiqul from SSI visited the hospitals.

Following the hospital visits, a three day workshop on "Cost Containment and Sustainable Eye Care Delivery" was organised from 6th – 8th October at Institute of Child and Mother & Training Centre at Matuial, Bangladesh. The workshop was attended by 33 participants from 9 hospitals. In addition to the above team members Mr. Thulasiraj from Aravind/LAICO joined the workshop as resource person. In the workshop, factors affecting cost of cataract surgery were discussed in detail and then the participants were divided into two groups as clinical and non-clinical. The clinical team developed a standardised clinical protocol and the non-clinical team developed strategies to improve the effectiveness and efficiency of the hospital.

Discussions were then held with the Sight Savers team to reflect on the hospital visits, workshop and SSI programs. The LAICO team insisted on Sight Savers for monitoring and supporting the hospitals to establish medical records department in all hospitals and to ensure the follow-up of operated patients. It was suggested to Sight Savers to focus on a



Mr.R.D.Thulasiraj addressing the participants attending the workshop on cost containment and sustainable eye care delivery in Bangladesh

bridge course for the existing MLOPs (Mid level ophthalmic personnel) and a regular MLOP training for fresh persons and specialised MLOP training in other areas. The need for refresher training for the medical officers in eye care was emphasised. Sight Savers requested Aravind/LAICO to take up two hospitals in Bangladesh each year to help them improve the hospital management systems and procedures. The possibilities will be reviewed and taken forward.

The team also made a needs assessment visit to Islamia Eye Hospital in Dhaka as part of the capacity building project which is supported by Seva foundation, USA.

TRAINING FOR CAPACITY BUILDING OF EYE CARE PROGRAMME STAFF

Bangladesh, October 15-21

Mr.Keerti Bhusan Pradhan, Mr.R.Meenakshi Sundaram and Dr.Manoranjn Das were invited by Sight Savers International, Bangladesh country office to conduct a capacity building training programme for their partner eye care organisations staff. The training was on Community Outreach Management and Social Marketing of Eye Care Services. A total of 31 trainees from 9 partner organizations of SSI, Bangladesh and four programme Managers of SSI-Dhaka office participated.

Management Initiatives for Prevention of Blindness Programme at Moshi, Tanzania

Kilimanjaro Centre for Community Ophthalmology, Tanzania and Lions Aravind Institute of Community Ophthalmology, India had the opportunity to run a course between Dec.8-13, 2003 at Moshi, Tanzania, which is believed to be first of its kind in Africa, specifically aimed at helping those who manage eye care programmes to improve their management skills. Twelve participants came from 6 African countries and included people in charge of regional or national prevention of blindness programmes and country or programme directors of NGOs. Most were doctors, some ophthalmologists and some public health specialists. All were involved in Vision 2020 activities and all were experiencing a surprising similarity of problems. The course included some didactic lectures, case study problems, group discussions, games designed to teach specific management principles relevant to the implementation of eye care programmes, and reading handouts from various management journals and texts. At the end of the course, each participant left with a list of specific management issues he or she planned to address on return home. The key faculty in the course included Mr.R.D.Thulasiraj (LAICO), Mr.Muralikrishnan (LAICO), Dr.Paul Courtright (KCCO), Dr.Susan Lewallen (KCCO) and Dr.Ivo Kochur (WHO-Geneva).

IT support to KCMC, Kilimanjaro, Tanzania

The team from Eye Department at Kilimanjaro Christian Medical College (KCMC) Hospital, Moshi, Tanzania during their visit to LAICO in December 2002 expressed a keen interest to implement the hospital management software developed and used at Aravind Eye Hospitals. Mr.Ganesh Babu of Aravind-IT department spent a week at the KCMC hospital in June to assist in the implementation and train the users. On June 30th, Prof.Shao, Director of KCMC formally inaugurated the software by registering himself as



Mr.R.D.Thulasiraj and Mr.Murali Krishnan with the workshop participants at Moshi

the first patient followed by other delegates. He appreciated the support of LAICO towards implementing this system. The use of this has reduced the registration process and getting a medical record made from one hour to less than 5 minutes. This also led to reorganizing the workflow to make it more patients friendly and efficient. This led to the admissions and discharges being done at eye department itself using this software just as quickly as within 5 minutes.

In Spain and Portugal

Mr. R. D. Thulasiraj & Dr. S. Aravind went on a 10-day trip covering various places in Portugal and Spain. The purpose of this visit was to give an update on Aravind's work in Business Schools in Lisbon (Portugal), Malaga and Madrid (Spain) where they teach the Aravind case study written by Harvard Business School. The other purpose was to participate in the International Congress in Visual Health and Development organized by UNESCO Chair in Barcelona from June 6-8, 2003.

In all these places the Aravind model was presented and was well received by the students, practising managers, faculty and others. In Lisbon they met with Ms. Madhu Bhaduri, the Ambassador of India to Portugal and other members of the Indian embassy. The host in Spain was Dr. Julio Yanguela Rodilla who had arranged for several meetings to present Aravind's work. These meetings included the presentations to a hospital in Madrid where he works, Intermón Oxfam, the Secretary General at the Ministry of Economics, some members of the Parliament and the Princess of Spain (the sister of the Queen of Spain). The meeting with the Princess focused on a collaborative project in Bolivia which will be led by Julio. This is for establishing an eye hospital in a highly underserved population of one million.

The other meetings focused on the implication of health costs in developing countries in the face of the TRIPS agreement, which will come into effect from 2005. This agreement in its present form will curb the export of all generic pharmaceutical products that are still under patent. This could have a direct impact on the cost of eye care in developing countries, which do not have the capacity to produce their own pharmaceuticals. These meetings were essentially lobbying with policy makers and the public in order to strengthen the efforts of Oxfam in this regard.



Dr. Aravind at the International Congress in Visual Health and Development in Barcelona



Mr. Ganesh Bobu with Mrs. Ishke, Senior Nurses, Prof. Shao, Dr. Anthony Hall, Dr. Susan, Mr. Hans, Ms. Tejal, Ms. Molly and Ms. Damina at the Inauguration of Computerised registration system at KCMC hospital

China

Mr. S.Saravanan was invited as a resource person for the Hospital Administrators Workshop organized by Fred Hollows Foundation in Nanchang city, China from 11th – 12th December. The hospital administrators from county hospitals in Jiangxi Province and government officials participated.

Pediatric Eyecare Project- MIS Training

As a part of the ORBIS-Aravind Paediatric Eye Care Management Information Systems (MIS) project, a training course on the usage of MIS modules developed by LAICO, was conducted at Sadguru Netra Chikitsalaya (SNC), Chitrakoot from August 19-21 by Mr.Muralikrishnan along with Mr.Kamlesh Guha, Programme Manager, ORBIS, India. The training was attended by 20 participants including doctors, paramedics, project coordinators, project supervisors and all the field workers from SNC Hospital.

Community Eye Health Course - 2003

ICARE- L. V. Prasad Eye Institute

Hyderabad, May 5-6

Mr. R. D. Thulasiraj

- Teaching plan for planning and Management for eye care delivery

May 7-9

Mr. S. Saravanan

- Module on Planning and Management

Dr. Praveen Nirmalan

- Survey Methodologies

Training Programme for Auroville Health Workers

Aravind-Pondicherry

This training programme was organised to create awareness among the Auroville village people in the aspect of eye diseases, and to educate them about Cataract, Presbyopia, Hypermetropia, Squint, Corneal diseases and Retinal problems (Diabetic Retinopathy). About 30 health workers participated in this program.



Mr. Saravanan with the workshop participants in NanChang City, China

III. CONFERENCES ORGANISED

Workshop to develop the content for a Continuing Medical Education (CME) Curriculum for Paramedics

May 26 - 28, 2003

Aravind Eye Care System was given the task to do an Evaluation Study from the clinical point of view to measure the competencies of the Mid Level Ophthalmic Assistants (MLOPs) in the 33 SSI Partner hospitals in India. It was obvious through the Evaluation Study that there was immediate need to develop a common curriculum to train/upgrade the MLOPs to the latest techniques. At the request of SSI, Aravind Eye Hospital planned to conduct a Curriculum Development Workshop with all the partners of the Sight Savers International. The participants were Ophthalmologist, and Trustees of the SSI Partner Eye Hospitals. Dr.Usha explained the role of the Paramedics and stressed their vital role in reducing the workload of the Ophthalmologist. Mr.Saravanan presented the Evaluation Study done in SSI partners Eye hospitals. The participants were split into 3 groups representing Outpatient Department, Refraction and Ward.

Ms.Alice Crasto, Ms.Elizabeth Kurian, Ms.Pabitra Banerjee, Mr.Shrinivas Sawant, Sight Savers, Mumbai were here to attend the Curriculum Development Workshop.

ZFS Partners Meeting

Aravind-Pondicherry, August 22-23

The ZFS organizes two partners meeting in a year at one of the partner institutions on rotation. The second partners meeting for the year 2003 was held at AEH, Pondicherry on 22nd & 23rd August 2003. This meeting was attended by the representatives of the following partners of ZFS.

1. Mobility India, APD, and ADD India from Bangalore, LVPrasad Eye Institute, Hyderabad, CEDAR, Madurai, DAWN, Virudhunagar and Aravind Eye Care System

Networking between the ZFS partners was discussed in detail in this meeting.

Future Direction of Research at Aravind

September 17-18

Dr.Alan L Robin, John Hopkins University and University of Baltimore, Dr. Harry Quigley, Johns Hopkins University, Dr.Paul Kaufman, University of Winconsin, Dr.Rick



Participants of the Workshop to develop the content for Continuing Medical Education (CME) Curriculum for Paramedics



Future Direction of Research at Aravind Meet

Halprin, Alcon Labs, Dr.Mina Chung, University of Rochester, Dr.Wallace Alward, University of IOWA, Dr.Don Budenz, Bascom Palmer Eye Institute, Miami met with Aravind senior staff to discuss future directions of research at Aravind Eye Care System.

Workshop on curriculum Development for the Training of Paediatric Ophthalmic Personnel

(Organized by Aravind Eye care system, Sankara Nethralaya & Orbis International)
Aravind-Pondicherry, September 30

The prevalence of childhood blindness in India is five times that of the developed world. In terms of infrastructure and manpower to tackle the existing problem India has inadequate paediatric eye care centres and trained personnel to deal with the problem of childhood blindness. In order to develop and strengthen the team for paediatric eye care service delivery, ORBIS International initiated a training project in paediatric ophthalmology with Aravind Eye Hospital and Sankara Nethralaya, Chennai. Both the hospitals have planned to offer courses for Paediatric ophthalmologists, Orthoptists and Paediatric nurses. Aravind Eye Hospital will also conduct courses for community workers and paediatric counsellors. In order to standardize the curriculum between the organizations a joint workshop was organized by both Aravind and Sankara Nethralaya with the support of Orbis at Aravind Eye Hospital, Pondicherry. All the training curriculum was discussed in order and consensus arrived at.

Besides the Aravind staff, the key members who participated were Dr.Marilyn Miller, Chicago, USA, Dr.Pararajasekaram, World Health Organization, Geneva, Dr.Shamanna, LVEP, Hyderabad, Dr.Bhattu, St.Johns, Bangalore, Dr.Tony Fernandez, Little Flower Hospital, Cochin, Dr.Kamini, Audich, Ahmedabad, Dr.G.V.Rao, Orbis International, India, Mr.Kamalesh Guha, Orbis International, India, Dr.Surendran, Sankara Nethralaya, Dr.Meenakshi, Sankara Nethralaya, Dr.G.P.Gupta, Gandhi Eye Hospital, Delhi, Mrs.Gupta (Orthoptist), Gandhi Eye Hospital, Delhi.



Dr.P.Vijayalakshmi at the Workshop on curriculum Development for the Training of Paediatric Ophthalmic Personnel



Workshop Participants



At the meeting to develop guidelines for treatment of corneal ulcers



Development of Guidelines for treatment of corneal ulcers in primary, secondary & tertiary care levels in South East Asian Region.

A 3-day intense workshop (7th – 9th Dec 2003) was organized by Aravind Eye Hospital under the aegis of WHO, New Delhi to discuss the treatment strategies for corneal ulcers. Dr.Pararajasegaram, Dr.Madan Upadhyay from WHO, Dr.Jack Witcher, Dr.Steve McLeod USA; Dr.Jeevan Singh Titiyal AIIMS, New Delhi; Dr.Allen Foster, UK; Dr.K.Konyama, Thailand; Dr.Prashant Garg, L.V.Prasad Eye Institute Hyderabad; Prof.Saleh, Bangladesh and Dr.Sanduk Ruit, Nepal participated in the workshop.

The expert group finalized the framework and contents of the guideline manual and an action plan was developed. The finalized document will be published and disseminated among the South East Asian countries.

TRAINING PROGRAMMES FOR AECS STAFF

The 7 Habits of Highly Effective People

As part of Aravind's ongoing development process to promote and support career-long self and professional development of the employees, the Human Resources (HR) Team of Aravind Eye Care System (AECS) organised and conducted 21/2-day training program on **Principle-Centered Personal Leadership - "The 7 Habits of Highly Effective People"** for our Senior Leaders and Managers.

The program is based on the book "The 7 Habits of Highly Effective People" by Mr. Stephen R. Covey. The program presents a Holistic, Integrated, Principle-Centered approach for solving personal and professional problems of individuals. The program helps the individual to penetrate insight and reveals a step-by-step pathway for living, based on the principles of fairness, integrity, honesty, and human dignity which provide the individual with security to adapt to change, and the wisdom and power to take advantage of the opportunities that change creates.

The program was conducted by Ms. Cindy Harrison, Vice president Human Resources of Chelsea Community Hospital, USA, which was rewarded as No.1 in United States of America (USA) Hospitals. She is a certified trainer of the Franklin Covey Organization for the above program. In real sense, Mr. Stephen R. Covey himself through a series of videotapes conducted the program interestingly and Ms. Cindy facilitated the program.

More than 73 participants actively participated in the program. The program was conducted in two batches. For the first batch, the program was conducted at Pillar, Nagamalai Pudukottai, on January 11, 12 & 13, 2003 and for the second batch at LAICO, Madurai on January 17, 18 & 19, 2003.

As per the feedback evaluation from the participants after the program more than 97% of the participants felt that the program not only meets their expectations but also meets its objective of putting effort on practising what they have learned in the workshop.



Sr. Alice Mary, Sr. Vergese, Sr. Hema and Dr. Prajna participating in the 'Principle-Centered Personal Leadership - The 7 Habits of Highly Effective People' programme



Ms. Cindy Harrison conducting the training programme based on Stephen Covey's 'Principle-Centered Personal Leadership - The 7 Habits of Highly Effective People'

Personality Development Workshop for Administrative and Paramedic staff

November 5th and 6th, Aravind-Tirunelveli

The two day workshop was conducted by Mr.P.Selvakumar, Mr.J.Shenbagarajan, and Mr.P.Chandran, Education Officers from Central Board for Workers Education.

Around 30 staff members participated and benefited by this programme. The seminar consisted of classes and exercises on the topics of Personality Development, Interpersonal Relationship, Team work for Excellence, Art of Communication, etc.



Personality Development Workshop for Aravind-Tirunelveli staff



Mr.Ajit Mani with the participants



Mr.Sivanandham, Police Assistant Commissioner briefing the road safety measures

Capacity Building Training Programme on Log Frame Analysis (LFA) and Project Management

LAICO, September 5-6

This programme was conducted for Aravind Eye Care System staff. Twenty staff members from various units of Aravind Eye Care System attended the training programme. The training was offered by Mr.Ajit Mani, an International level consultant, who is the Director of Intervention India Pvt. Ltd. based in Bangalore.

Driver's Awareness Camp

LAICO, January 12

This camp was organised in connection with road safety week. Mr.S.G.Ramanathan, Transport Manager, Aravind-Madurai gave the welcome and introductory address.

Prof. V.Srinivasan

- Driver's culture and needs

Mr.K.Santhanakrishnan, Head of the Training Institute, Government Transport Corporation

- Efficient driver's management

Mr.S.S.Velmani, Madurai Transport Officer

- Tips for drivers

Mr.Sivanandham, Assistant Commissioner of Transport, Police Department

- Road rules

Mr.R.Tamilzharasan, Regional Manager, United India Insurance Company

- Insurance Plans

Dr.S.Mahesh Kumar, Aravind-Madurai

- Importance of First Aid

Mr.Gurusamy, Motor Vehicle Inspector gave the vote of thanks.

Fire Safety Training Program

On the 26th of June, the Human Resource Department had organised a Basic Fire Safety Training Program for the selected staff of AEH, Madurai, LAICO and Aurolab to gain practical experience about how to handle people and fire safety equipment in case of fire accidents.

This was an awareness program for Aravind employees. The program dealt with causes of fire, classification of fire, methods of fire fighting with and without Fire Extinguishers and employees' role in fire prevention (both in working place and at home), and practical usage of basic "First Aid" fire extinguishers. The program was conducted by Mr.A.K.Palani, Chief Executive and Mr.Arokia Louis of Usha Fire Safety Equipments(P)Ltd.

VISION 2020

With Mr.Thulasiraj being the Regional Chairperson for the IAPB and a part of the India Vision 2020 Forum Aravind continues to be in the forefront of advocacy activities for taking forward the India Vision 2020 initiative. It has been decided by the steering committee to set up the Vision 2020 India office at Madurai reflecting the confidence reposed in Aravind to give it a good start.

Workshop on Role of INGDOs for VISION 2020 in India

Hyderabad, January 27-28

Mr. R.D.Thulasiraj

- VISION 2020 in India

IAPB Meeting, INGDO's in Vision 2020

Hyderabad, January 29-30

Dr.P.Namperumalsamy

- Translating programme into action
- DR: Strategies to prevent blindness

IAPB-SEARegional Workshop

(organised by Prof. Rabiul Husain, FRCS,Chairman –IAPB South East Region)

Chittagong, Bangladesh, February 6-8

Dr.P.Vijayalakshmi as invited faculty gave lecture on

- Paediatric cataract & criology cataract
- Mr.R.D.Thulasiraj
- Challenges in paediatric eye care

VISION 2020 WORKSHOP

Nepal, July 11-13

Based on a detailed situation analysis study carried out in a structured manner, Nepal has developed a National plan of action to achieve the goals of "VISION 2020 – The Right to Sight" Recognizing this important development, the VISION 2020 workshop was designed to help translate the action plan into implementation strategies. During the three days of deliberations the major focus areas of discussion were on enhancing the service delivery to the Nepali population, development of human resources, development of infrastructure in the districts where there are no eye care facilities and development of infrastructure to address the other conditions like childhood blindness, low vision and refractive errors.



Dr. G. Venkataswamy in discussion with the workshop participants

Equal emphasis was given to address the issues related to developing a structure that will support and coordinate the implementation of the strategies of VISION 2020 and carry out monitoring.

The meeting was well attended by representatives from all eye care providers in Nepal, representatives of central NNJS, the teaching hospital and the Ministry of Health. The meeting was inaugurated by Honourable Minister for Education and Sports, Mr.Hari Bahadur Basnet and the meeting was coordinated by Prof.PC.Karmacharya. From the IAPB side Mr.R.D.Thulasiraj, Regional Chairman – IAPB and Dr.Suzanne Gilbert, Vice President, IAPB attended the meeting.

National Programme for Control of Blindness- VISION 2020

Rajiv Gandhi Institute of Medical Sciences
Bangalore, July 25-26

Mr.R.D.Thulasiraj attended this workshop organized by Karnataka State Blindness Society & Danish Assistance to the National programme for control of blindness.

National Level workshop on Curriculum and Norms for certification of the candidates & Accreditation of training centres for the training of Ophthalmic Technicians

(Mid Level Ophthalmic Personnel)
Aravind-Madurai, September 8-10

The crucial role and functions of Mid Level Ophthalmic Personnel (MLOP) in eye care for the successful achievement of the goals of the “Vision 2020 – The Right to Sight” initiative is being

increasingly appreciated. Several activities centering on development and strengthening of MLOPs have been underway in the recent period. Some of these activities relate to skill assessment and current utilization of MLOPs in the setting of our country. The survey was done by LAICO & Aravind Eye Hospital of 33 voluntary eye hospitals spread across 14 states was used to understand the skill level and use of MLOPs.

A workshop was organized in Madurai from 8th to 10th September by Aravind Eye Care System under the auspices of International Agency for Prevention of Blindness (IAPB) sponsored Vision 2020 workshop to reflect on this. Participants representing the institutions that are currently engaged in the training of MLOPs and representatives from the Government of India and IAPB were Dr.D.Bachani, Dr.Nelson Jesudasan, Dr.Asim Kumar Sil, Dr.Jeena Mascarenhas, Dr.Udhay Gajiwala, Dr.Babar Qureshi, Dr.Chandrasekar Shetty, Dr.H.K.Tewari and Dr.Arun Chatterjee. Dr.G.Natchiar, Mr.R.D.Thulasiraj, Dr.Usha Kim, Dr.Kalpana Narendran, Dr.Meenakshi and Dr.Veena of Aravind participated. The workshop started with the presentation of some survey findings on the current status of MLOPs in India. This covered their training, skill levels, how they are used, the total number available in the country, the training infrastructure, training output, etc. This was followed by a series of presentation and review of various training models in the country and in the USA. A detailed curriculum was drawn up after reviewing all available models and considering the job description of such an employee in a hospital setting.



Mr. R.D.Thulasiraj at the Launching ceremony at Vision 2020: The Right to Sight, Bhubaneswar, Orissa in the presence of the Chief Minister

Working group in VISION 2020: The Right to Sight in India

(organised by the Ministry of Health, New Delhi)

Pune, September 20-21

This was the last meeting of the working group to make specific recommendations on the implementation of the "Vision 2020 India Action Plan". The meeting covered specific recommendations relating to disease control strategies, human resource development and advocacy. The group also deliberated on the constitution of the Vision 2020 National Coordination Committee, which will oversee the implementation process. Mr. R.D. Thulasiraj participated in the deliberations of the meeting.

Joint meeting of the IAPB Exec. Comm., Task Force, V 2020 supporting members & partnership committee members

Hyderabad, September 26-27

As the Regional Chair of IAPB, Mr. Thulasiraj attended the meeting of IAPB's Executive Committee. He gave an update on the eye care activities in the South East Region covering the various initiatives in India, Nepal, Bangladesh and Indonesia and on some of the Regional activities.

Steering Committee Meeting

LV Prasad Institute, Hyderabad, September 28

The Steering committee of the Vision 2020 India Forum chaired by Mr. R.D. Thulasiraj met for the third time. The current status and the planned activities of the Forum were presented to representatives of the INGOs and the next steps were discussed.

Workshop on developing curriculum in Community Eye Health to be integrated into the PG Residency Programme

Hyderabad, October 10

Mr. R.D. Thulasiraj attended this workshop which was organized to design a curriculum in Community Eye Health for introduction in the Ophthalmology Residency Training Programmes. He presented the inputs that the residents of Aravind get in Community Eye Health. This workshop was sponsored by the IAPB through the grant for Vision 2020 Workshops.

Vision 2020: The Right to Sight Orissa Launch Workshop

Bhubaneswar, Orissa, October 11-12

Mr. Thulasiraj gave a talk on Vision 2020 World Initiative and Human Resource Development at the launch of the Vision 2020 initiative in the state of Orissa. The Chief Minister of Orissa launched the programme in the presence of the State Health Minister, Government Officials, representatives of the International NGOs and voluntary eye hospitals working in the state.

The 19th Congress of Asia-Pacific Academy of Ophthalmology 2003

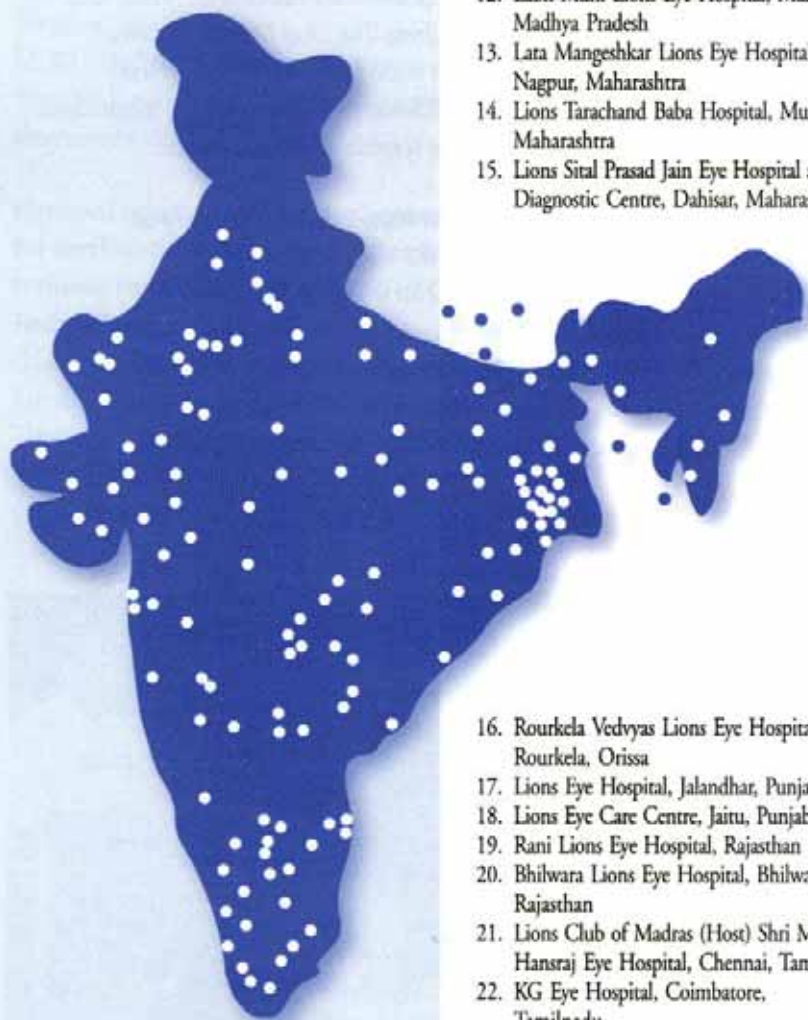
Bangkok, Thailand, 29th Nov – 3rd Dec

Mr. R. D. Thulasiraj chaired the IAPB session on 'Updates of Vision 2020 Working Groups'

In the Prevention of Blindness Session, he spoke on

- Human Resource Development for Eye Care in India

LAICO currently works with 155 eye hospitals across India, SouthEast Asia and Africa for capacity building.



Lions Eye Hospitals

1. Dr. Ranga Reddy Lions Eye Hospital, Secunderabad, Andhra Pradesh
2. Lions Eye Hospital, Hyderabad, Andhra Pradesh
3. Silchar Central Lions Eye Hospital, Silchar, Assam
4. Jorhat Lions Eye Hospital, Assam
5. Lions RK Memorial Eye Hospital, Dhanbad, Bihar
6. Gujarat Blind Relief and Health Assoc. Eye Hospital, Chikhodara, Gujarat
7. Lions Eye Hospital, Koppal, Karnataka
8. Lions Eye Hospital, Chintamani, Karnataka
9. Lions Eye Hospital, Jaora, Madhya Pradesh
10. Udayachal Charitable Eye Hospital, Rajnandgaon, Madhya Pradesh
11. Lions Eye Hospital, Sagar, Madhya Pradesh
12. Labh Muni Lions Eye Hospital, Mandasaur, Madhya Pradesh
13. Lata Mangeshkar Lions Eye Hospital, Nagpur, Maharashtra
14. Lions Tarachand Baba Hospital, Mumbai, Maharashtra
15. Lions Sital Prasad Jain Eye Hospital and Diagnostic Centre, Dahisar, Maharashtra
16. Rourkela Vedvyas Lions Eye Hospital, Rourkela, Orissa
17. Lions Eye Hospital, Jalandhar, Punjab
18. Lions Eye Care Centre, Jaitu, Punjab
19. Rani Lions Eye Hospital, Rajasthan
20. Bhilwara Lions Eye Hospital, Bhilwara, Rajasthan
21. Lions Club of Madras (Host) Shri Maganlal Hansraj Eye Hospital, Chennai, Tamilnadu
22. KG Eye Hospital, Coimbatore, Tamilnadu
23. Lions Eye Hospital, Balrampur, Uttar Pradesh
24. Lions Eye Hospital, Gaziabad, Uttar Pradesh
25. Maharani Laxmibai Memorial Eye Hospital, Jhansi, Uttar Pradesh
26. Sawhney Lions Eye Hospital, Rampur, Uttar Pradesh
27. Lions Eye Hospital, Alipurduar, West Bengal
28. Siliguri Greater Lions Eye Hospital, Siliguri, West Bengal
29. Dhaka Progressive Lions Eye Hospital, Narsingdi, Bangladesh
30. Jyoti Manav Seva Sansthan Hospital, New Delhi
31. Gandhi Shatabdi Mahabir Prasad Eye Hospital, Mirzapur, Uttar Pradesh
32. Panagarh Bazar Lions Eye Hospital, West Bengal
33. Lions Club of Idar and SBNSSPVM Eye Hospital, Idar, Gujarat
34. Lions Eye Hospital, Medak, Andhra Pradesh
35. Lions Eye Care Centre, Kathmandu
36. R.M. Kedia Eye Hospital, Birganj, Nepal
37. Lions Charitable Eye Hospital, The Chittagong Lions Foundation, Bangladesh
38. Lions Eye Hospital, Bangladesh Lions Foundation, Dhaka, Bangladesh
39. Lions SightFirst Eye Hospital, Nairobi, Kenya
40. Lions Eye and Blood Centre, Mombassa, Kenya
41. Lions Upkar Netra Chikitsalaya, Lakhimpur Kheri, Uttar Pradesh
42. Burdwan Lions Eye Hospital, West Bengal
43. Melvin Jones Lions Eye Hospital, Cuttack, Orissa
44. Lions Club of Imphal, Manipur
45. Lions Rajkot Race Course Eye Hospital, Gujarat
46. Lions Eye Care Trust Hospital, Dharmavaram, Andhra Pradesh
47. Lions Eye Care Centre, Dolakha, Nepal
48. Calcutta Lions Netra Niketan, Kolkata, West Bengal
49. Howrah Lions Hospital, Howrah
50. Lions Club of Karimnagar Charitable Eye Hospital, Karimnagar, West Bengal
51. Lions Karnavati Shantaben Vishnubai Patel Eye Hospital, Karnavati, Gujarat
52. Lions Hospital and Research Centre, Khizrabad, New Delhi
53. M. Ram Reddy Lions Eye Hospital, Mahabubnagar, Andhra Pradesh
54. Lions NAB Eye Hospital, Miraj, Maharashtra
55. Mysore Race Club Eye Hospital, Mysore, Karnataka
56. Smt. Rajeswari Ramakrishnan Lions Eye Hospital, Nidadavole, Andhra Pradesh

57. Rajvalli Radharaman Lions Eye Hospital, Palakol, Andhra Pradesh
58. Raniganj Lions M.J. Memorial Lions Eye Hospital, Raniganj, West Bengal
59. Sadhuram Eye Hospital Charitable Trust and Postgraduate Institute of Ophthalmology, Sadhuram, Andhra Pradesh
60. Lions Club of Secunderabad Eye Institute, Secunderabad, Andhra Pradesh
61. Lions Club of Suryapet Eye Hospital, Suryapet, Andhra Pradesh
62. Lions Eye Hospital, Tiruvarur, Tamilnadu
63. Smt. Vallabhaneni Sitamahalakshmi Lions Eye Hospital, Vijayawada, Andhra Pradesh
64. Virangam Sarvajanic Eye Hospital, Virangam, Gujarat
65. Lion Chandulal Agarwal Memorial Eye Hospital, Manendragarh, Chattisgarh
66. Lions Club of Ajmer Eye Hospital, Ajmer, Rajasthan
67. Lions Eye Hospital, Lions Club of Mandawar, Rajasthan
68. Lions Eye Hospital, Krishnanagar, West Bengal
69. Abid Ali Khan Lions Eye Hospital, Hyderabad
70. Lions SightFirst Eye Clinic, Kitwe Central Hospital, Zambia
71. Jhargram Lions Eye Hospital, Midnapore, West Bengal
72. Lions Club of Galsi Welfare Trust, Burdwan, West Bengal
73. Sone Bhadra Dehri Lions Eye Hospital, Tilothu, Bihar
74. Lions Jodhpur West Eye Hospital, Jodhpur, Rajasthan
75. Golcha Organisation, Biratnagar, Nepal
76. Lions SightFirst Eye Clinic, Gwanda, Zimbabwe
77. Haldia Lions Eye Health Care & Research Centre, Durgachak, West Bengal
78. Lions VUNM Eye Hospital, Vatva, Gujarat
79. Lions Eye Hospital, Rewa, Madhya Pradesh
80. Lions Club of Avadi Eye Hospital, Chennai, Tamilnadu
81. Mar Baselios Medical Mission Hospital, Kothamangalam, Kerala

Sight Savers Supported Hospitals

1. Rotary Netra, Vizag, Andhra Pradesh
2. Muzaffarpur Eye Hospital, Muzaffarpur, Bihar
3. Jamshepur Eye Hospital, Bihar
4. CMRM Rotary Eye Hospital, Giridh, Bihar
5. Shree Jalaram Seva Mandal Trust, Bodeli, Gujarat
6. Nandal Mulji Bhuta Medical Foundation, Sihor, Gujarat
7. Kutch Vikas Trust, Bhuj, Gujarat
8. Arpana Research & Charities Trust, Karnal, Haryana
9. Vishwa SEVA Samiti, Sirsi, Karnataka
10. Chattisgarh Eye Hospital, Raipur, Madhya Pradesh
11. Bhopal Eye Hospital, Bhopal, Madhya Pradesh
12. Venu Eye Hospital, New Delhi
13. JPM Rotary Eye Hospital, Orissa
14. Gandhi Mission Trust, Daspur, West Bengal
15. Vivekananda Mission Ashram, Haldia, West Bengal
16. Budge Budge Welfare Trust, Kolkatta, West Bengal
17. Sri Sri Bijoykrishna Ashram Relief Society, Purulia, West Bengal
18. Rotary Service Centre, Purulia, West Bengal
19. Community Service Trust, Vuyyuru, Andhra Pradesh
20. PTSJMCC, Petarbar, Bihar
21. Khairabad Eye Hospital, Uttar Pradesh
22. URMUL Jyoti Sansthan Nokha, Bikaner, Rajasthan
23. Mahatma Gandhi Eye Hospital, Mayurbhanj, Orissa
24. Rotary Sansthan Seth Ratanchand Kanhaiyal Ranka Eye Hospital, Jaitaran, Rajasthan
25. Shree Bhairav Nerra Yagna Samiti, Pali District, Rajasthan
26. Pali Sewa Mandal Eye Hospital, Pali-Marwar District, Rajasthan
27. Netra Jyoti Hospital (Barmer Jan Seva Samiti Managed), Barmer, Rajasthan
28. Dhantari Christian Hospital, Chattisgarh
29. Shri Sadguru Seva Sangh Trust, Chitrakoot, Satna
30. Modele Bastar Integrated Rural Development Society (BIRDS), Jagadapur, Bastar District, Chattisgarh
31. LEPRO India, Regional Office, Sahid Nagar, Bhubaneswar
32. Sambhav Social Service Organisation, Gwalior
33. Gramin Vikas Vigyan Samiti (GRAVIS) Jodhpur, Rajasthan

34. Sundarbans Social Development Centre, Polerhat, West Bengal
35. Jeevan Jyothi Health Service Society, Meghnagar, Jhabua- Madhya Pradesh
36. Rotary Eye Hospital, Dondaicha, Dhule Maharashtra
37. HBS Trust, Jodhpur, Rajasthan
38. The Christian Fellowship Hospital, Rajnandgaon, Chattisgarh
39. Southern Health Improvement Samity 24 South Parganas District, West Bengal

CBM SARO (S) Supported Hospitals

1. CSI Redfern Memorial Hospital, Hassan, Karnataka
2. Malankara Orthodox Syrian Church Medical Mission Eye Hospital, Kariambady, Kerala
3. H.V. Desai Eye Hospital of Poona Blind Men's Association, Pune, Maharashtra
4. Wanless Hospital, Miraj, Maharashtra
5. St. Luke's Eye Care Hospital, Nazareth, Tamilnadu
6. Good Samaritan Eye Hospital, Matrapalli, Tamilnadu
7. Kotagiri Medical Fellowship Hospital, Kotagiri, Tamilnadu
8. CSI Kalyani General Hospital, Chennai, Tamilnadu
9. Schieffelin Leprosy Research and Training Centre, Karigiri, Tamilnadu
10. Scudder Memorial Hospital, Ranipet, Tamilnadu
11. Lutheran Eye Hospital, Dharapuram, Tamilnadu
12. Vizhiyagam Eye Hospital, Sivagangai, Tamilnadu
13. Vision Eye Hospital, Hubli, Karnataka
14. Dr. Somervel Memorial CSI Mission, Karakonam, Kerala
15. Institute of Ophthalmology, Josephs Eye Hospital, Trichy, Tamilnadu
16. Medical Brother St. Johns Hospital, Kattappana, Idukki, Kerala
17. Leprosy Relief Rural Centre, Chettipatty, Salem, Tamilnadu
18. CSI Campbell Hospital, Jammalamadugu, Andhra Pradesh
19. ALC Pakayanathan Memorial Eye Hospital, Chengam, Tamilnadu
20. Malankara Orthodox Syrian Church Medical Mission Eye Hospital, Kotenchery

Seva Supported Eye Hospitals

1. Sitapur Eye Hospital, Bahraich, Uttar Pradesh
2. King Mahendra Memorial Eye Hospital, Bharatpur, Nepal
3. Nepal Eye Hospital, Katmandu, Nepal
4. Provincial Hospital, Siem Reap, Cambodia
5. Cambodia National PBL, Cambodia

WHO Supported Hospitals

1. National Institute of Ophthalmology, Dhaka, Bangladesh
2. Cicendo Eye Hospital, Bandung, Indonesia

IEF Supported Hospitals

1. Centre for Sight, Sofia, Bulgaria
2. Lions SightFirst Eye Hospital, Lilongwe, Malawi
3. Multi-clinicas Vicky Guzman, Santa Ana, El Salvador
4. Vizualiza, Guatemala

Other Hospitals

1. Jnana Prabodhini Medical Trust's Smt. Kamala Mehta Hospital, Satara, Maharashtra
2. K.B. Haji Bachooali Charitable Ophthalmic & E.N.T Hospital, Mumbai
3. Seethalakshmi Hospital, Gobichettipalayam, Tamilnadu
4. Indore Eye Hospital, Indore, Madhya Pradesh

Aravind Medical Research Foundation

The Aravind Medical Research Foundation has well-equipped ophthalmic research laboratories for studies on Molecular Genetics, Immunology, Biochemistry, Microbiology and Molecular Biology.

The Tamilnadu MGR Medical University has recognized Aravind Eye Hospital for Ph.D. in Ophthalmology and Madurai Kamaraj University for Biomedical Sciences. A total of five faculty members have been recognized as supervisors and six scholars are now working for their Ph.D.

Molecular Genetics of Hereditary Glaucoma

Investigators : Dr.S.R.Krishnadas
: Dr.P.Sundaresan
Collaborator : University of Iowa,USA

The project aims to identify genes for congenital glaucoma by using gene mapping methods in the Indian population.

Molecular genetic of Primary Open Angle Glaucoma in Indian Population and structure-function analysis of myocilin protein

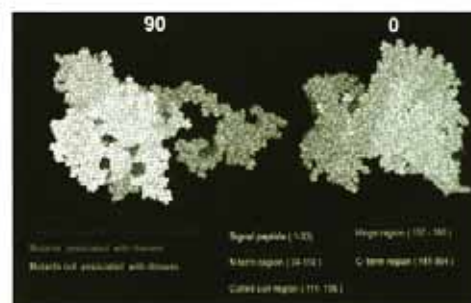
Investigators : Dr.P.Sundaresan
: Dr.S.R.Krishnadas
Collaborator : Dr.S.Krishnaswamy, School of Biotechnology, Madurai Kamaraj University.

Glaucoma is a leading cause of irreversible blindness. Myocilin (MYOC) gene has been associated with JOAG and POAG. By screening for mutations in the MYOC gene of more than 150 patients with Primary Open Angle Glaucoma (POAG) several mutations including a novel homozygous mutation have been identified. Myocilin gene is expressed to study its structure. A possible structural model for myocilin has been proposed. This is funded by Indian Council of Medical Research.

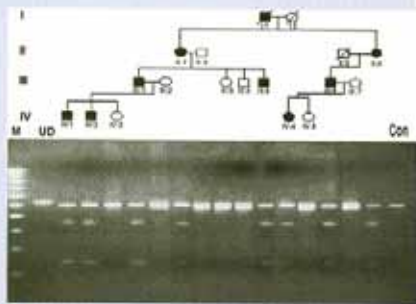
Possible structural model for myocilin



Secondary structural elements in the model



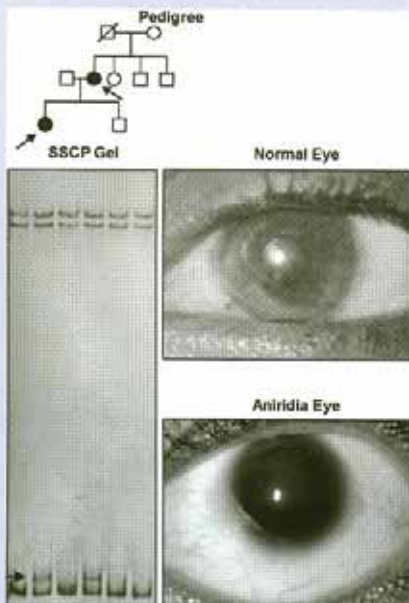
Orthogonal views of CPK-space filling model



M- Molecular weight marker C- Control

AUTOSOMAL DOMINANT CONGENITAL CATARACT

Restriction enzyme analysis revealed the presence of a mutation in a crystallin gene in a four-generation family with nine affected members, having lamellar cataract. The shaded circles (female) and shaded boxes (male) represent affected members of the family. Normal individuals display a single band where as the affected members display three bands indicating the presence of a mutation.



"We demonstrate the genetic mutation in two affected members (arrow) in three generation family. This mutation causes the defective development of Iris as shown in Aniridia Eye".

Molecular Diagnosis of Eye Diseases: Screening for Mutations in Glaucoma Patients and in Congenital Cataract Patients

Investigators : Dr.VR.Muthukkaruppan
Dr.P.Sundaresan
Dr.S.R.Krishnadas
Dr.P.Vijayalakshmi

Funded by : Council of Scientific and Industrial Research, under NMITLI programme

The main objective is to screen for Juvenile onset and adult onset Primary Open Angle Glaucoma patients for mutations in the candidate genes (MYOC, OPTN, CYP1B1 and OPTC). For congenital cataract, Beta A3/A1 crystallin and Gamma C crystallin genes are being screened. It is proposed to devise a macro-chip containing all the responsible genes to facilitate an easy and rapid diagnosis at different centers of the country. This is a multicentre study.

Studies on the Genetics of Inherited Aniridia in Indian Population:

Investigators : Dr.P.Sundaresan
Dr.P.Vijayalakshmi
Dr.S.R.Krishnadas

Funded By : Indian Council of Medical Research

Aniridia is a developmental disorder, which results in partial or complete absence of Iris. The PAX6 gene is responsible for causing aniridia. The objective of the project is to screen PAX6 gene for mutations and to identify Genotype/Phenotype correlations of aniridia in Indian population. Twenty-five aniridia patients and their family members were screened for mutations using PAX6 primers. Five pathological mutations including eight novel, two nonsense and a known polymorphism in the existing spectrum of mutations have been identified in Indian population (<http://pax6.hgu.mrc.ac.uk>).

Molecular Keys To Age-Related Cataract: Differential Gene Expression:

Investigators : Dr.Reena Chandrashekar
Dr.N.V.Prajna

The project aims to identify the differential expression of genes in anterior lens epithelium in normal and age-related cataractous lens. Similarly, the profile of gene expression of the newly differentiated lens in vitro, from the normal and cataractous epithelial cells will be identified. This study is based upon the hypothesis that age-related cataract is associated with changes in the expression levels of specific transcripts. The project may provide valuable clues that may predispose a large number of people to develop age-Related cataract.



Flow Cytometry



Confocal Microscopy



Leptospirosis with hypopyon

Identification of candidate genes and screening for mutations of genes associated with diabetic (Type II) retinopathy.

Investigators : Dr.P.Namperumalsamy
Dr.R.Kim

Dr.P.Sundaresan

Collaborators : Dr.Edwin Stone

Dr.Mina Chung

Funded by : TIFAC-CORE Department of Science and Technology

The project is a part of TIFAC-CORE on Diabetic Retinopathy by Department of Science and Technology, India. Diabetic patients with and without retinopathy have been identified to screen for mutations in the following genes: Aldose Reductase (ALR), Nitric Oxide synthase (NOS), Receptor for Advanced Glycation End Products (RAGE), Angiotensin Converting Enzyme (ACE), Human Leucocyte Antigen (HLA), Vascular Endothelial Growth Factor (VEGF) and Tumor Necrosis Factor-alpha (TNF-alpha).

Pathogenic mechanism of diabetic retinopathy

Investigators : Dr.P.Namperumalsamy

Dr. R.Kim

Dr.VR.Muthukkaruppan

Funded By : TIFAC CORE Department of Science and Technology

The major objectives of this TIFAC-CORE project are to determine the concentration of vascular endothelial growth factor, fibroblast growth factor in vitreous and aqueous humor of PDR patients, to quantify the levels of proinflammatory cytokines in the above samples, to elucidate the role of human (cadaveric) retinal pigment epithelial cells for the secretion of above factors and to characterize in vitro the angiogenic potential of PDR vitreous. Two state-of-the-art equipments Confocal Microscope and Flowcytometer are used to understand the cellular profile and early vascular changes in diabetic and diabetic retinopathy patients as well as to estimate cytokine levels using cytokine bead array methods.

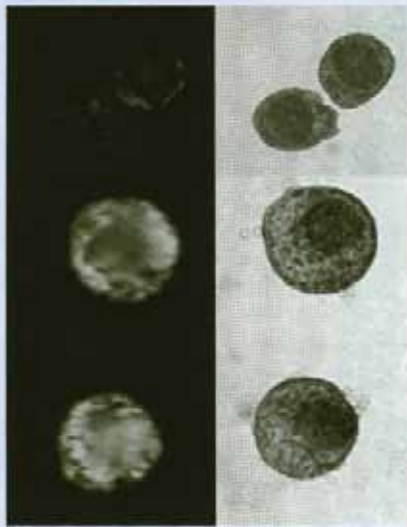
Pathogenic mechanism of leptospiral uveitis

Investigators : Dr.VR.Muthukkaruppan

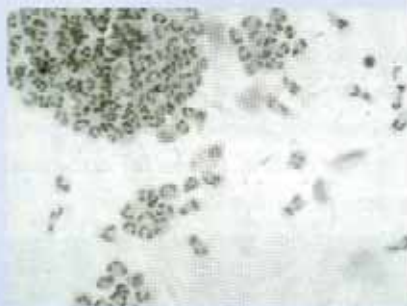
Dr.S.R.Rathinam

On the basis of immunological and PCR analysis, the leptospiral aetiology of this form of uveitis has been confirmed. The significance of this finding is evident from the publication as cover picture of leptospiral - uveitis in Journal of Medical Microbiology. The LPS antigen has been identified and purified from *Leptospira biflexa serovar patoc*, which could be used for diagnosis in ELISA.

Presently, investigations are underway to understand the pathogenic mechanism of leptospiral-uveitis by identifying the profile of infiltrating cells and cytokines in aqueous humor. This is to answer more specifically the question on how the past systemic infection results in ocular inflammation after several months.



Human Corneal Epithelial Stem cells under investigation



Leucocytes in Tear of Fungal Keratitis Patients

Human Corneal Epithelial Stem Cells-characterization, isolation and propagation:

Investigators : Dr.VR.Muthukkaruppan
 Dr.M.Srinivasan
 Dr.N.V.Prajna

By using antibodies to several epithelial cell markers and the methods of immunofluorescence and confocal microscopy, the stem cells in limbal basal epithelium have been identified. The method of culturing cadaver (International Eye Bank) limbal tissue has been established to generate a healthy sheet of multi-layered epithelium with numerous stem cells. Such in vitro generated corneal epithelium is being used for grafting on to patients who have ocular disorders. Presently, a comprehensive protocol is under development to generate limbal stem cells in vitro and to maintain them as a stem cell line retaining the potential to differentiate into a functional epithelium.

Immunology of Fungal Keratitis

Investigators : Dr.VR.Muthukkaruppan
 Dr.N.V.Prajana

Funded by : Allergan

Fungal keratitis is predominantly a disease of developing countries, as much as thirty times more in India than in the West. Among corneal ulceration, fungal infection is more common and majority of fungal isolates from the cornea are of *Fusarium* and *Aspergillus*. The nature of inflammatory cytokine response and infiltrating cells associated with fungal infection in the cornea are being studied. (IL-6, IL-8, IL-1b) the pro-inflammatory cytokines have been demonstrated in tear samples of these patients. Sandwich ELISA, flowcytometry, immunocytochemistry and tissue culture techniques will be used to detect the nature of infiltrating cells and to quantify the cytokines.

Population Based Surveillance For Congenital Rubella Syndrome (CRS) In South India

Investigators : Dr.P.Vijayalakshmi
 Collaborator : Dr.David Brown, Central Public Health Laboratory, London
 Funded By : World Health Organization

This WHO supported project is to establish the burden of CRS by conducting population-based surveillance for CRS related eye diseases in children 0-11 months of age and to assess new diagnostic methods for confirming CRS in children up to 59 months of age. The samples, obtained from these patients serum, saliva, urine, throat swab, and lens aspirate (whenever applicable) are being subjected to PCR analysis. Serum samples are assayed for IgM antibody to Rubella virus. The children confirmed to be CRS both clinically and at the lab are being followed for 2 more years collecting all the above said samples every 6 months. More than 500 children are screened. The project is being carried out in collaboration with Molecular Virology laboratory, London.

Efficacy of Bimatoprost [Lumigan ®] in chronic primary angle closure Glaucoma

Investigators : Dr.Mohaideen
Dr.S.R.Krishnadas
Dr.Ramakrishnan
Funded by : Allergan

A double masked, randomized, multicentric controlled clinical trial to compare the safety and efficacy of bimatoprost, a prostamide derivative as compared to timolol in patients with chronic primary angle closure glaucoma was conducted in Glaucoma Services of the Aravind Eye Hospital at Madurai and Tirunelveli.



Dr.Prabakaran carrying out PCR analysis of lens aspirate from CRS patients

TRAINING – 2003

Dr.Prabakaran – Molecular Virologist visited (sponsored by WHO) Central Public Health Laboratory (CPHL), Health Protection Agency, London for Molecular Virology, for training for three months. This technology is being used to analyze the Rubella Virus Genome.

Safety and Efficacy of topical 0.25 Timolol, 0.5 Timolol gel and 0.25 Betaxolol in children with Paediatric Glaucomas

Safety and Efficacy of topical Betaxolol and Brinzolamide in children with Paediatric Glaucomas

Investigators: Dr.Parthasarathy Sathyan
Dr.S.R.Krishnadas
Funded by Alcon Inc., USA

This multicentric, randomized, controlled clinical trials aim to compare the safety and efficacy of topical beta blocker, betaxolol with different concentration of Timolol and that of Brinzolamide topical carbonic anhydrase inhibitor with Betaxolol. The study is currently underway in Glaucoma Services of the Aravind Eye Hospital at Madurai and Tirunelveli. Todate, 25 children with developmental glaucomas have been screened and over 10 children have been recruited.

The India National Glaucoma Outcomes Treatment Trial

Investigators: Dr.Mohaideen
Dr.Parthasarathy Sathyan
Dr.S.R.Krishnadas
Dr.Ramakrishnan
Study co-ordinators: Dr.Praveen Nirmalan,
Ms.Sheela
Chief investigators & Dr.Nathan Congdon
Collaborators Dr.Harry Quigley, (John Hopkins University, Baltimore, USA)

The India National Glaucoma Outcomes Treatment Trial is a randomized study of clinical and quality of life outcome and efficacy of medical versus primary surgical treatment of primary open angle glaucoma and exfoliative glaucomas. Over 150 subjects have been screened and about 100 patients have been recruited. The study is expected to receive a flip as there are plans to expand the recruitment base of patients to the Glaucoma Centres in Coimbatore and Tirunelveli. The study is expected to yield valuable data and information on modalities of management of Glaucoma in the developing world.

Rotary Aravind International Eye Bank

2003 – for Rotary Aravind International Eye Bank was a productive year dedicated to enhancing the life of corneal blind patients. In this year the Eye Bank was accredited & certified as a member of the International Federation of Eye & Tissue Banks International, USA. An additional honour came when the Eye Bank's Medical Director, Dr.M.Srinivasan was elected as Vice President of the Eye Bank Association of India. In the year 2003, the bank collected a total of 1420 eyes.

ACTIVITIES

Eye bank over 2003 ranged from giving awareness lectures at various Educational institutions, Dhan Foundation's self-help groups, ICICI Bank, voluntary organizations like the Lions Clubs and to the staff of local hospitals. In addition an Eye donation video was made and at the local Home Needs Exhibition, Madittisia Hall, Madurai a counselling booth was set up. Messages about the urgent need for eye donations were released in local newspaper and a talk on the same subject was delivered by the Medial Director on All India Radio. During the fortnight dedicated to Eye donation Awareness, badges were distributed to staff of the Aravind Eye Hospital. Furthermore, a survey was conducted among the different sections (Teachers, medical community etc) of people in the community to assess their knowledge and awareness levels regarding eye donation.

VISITORS

- Rtn.Robert Ketron, & Rtn.Frank Devlyn : Mr. Monty Montoya, President & Ln.Harold Vaughn, Past chairman from North West Lions Eye Bank, Seattle, Washington
- Dr.Paul Dubord & Ms.Pat Ferguson from Operation Eye Sight Universal, Vancouver
- Mr.Mahmood Farazdaghi, Technical Director, Mr. Philip Felton, Vice President – International & Dr.Daniel De' Lap, International Director from Tissue Banks International (TBI) for eye bank inspection & Accreditation.



Dr.M.Srinivasan and Dr.G.Venkataswamy with Mr.Mahmood Farazdaghi, Mr. Phillip Felton and Dr.Daniel De' Lap



Mr.Monty Montoya demonstrating Corneal excision procedure

Aurolab

Aurolab, the manufacturing division of Aravind Eye Care System, plays a very significant role in increasing the volume of intraocular lens surgeries in India and other developing countries. Started in 1992 as a non-profit charitable trust, with the mission of supplying high quality ophthalmic products at prices affordable to common man in the developing countries, Aurolab has made significant progress during its eleven years of operation.



Mr.Sathyamoorthy, Mr.Venkatesh Kannan, Mr.R.D.Sriram, Ms.Vidhya and Mr.P.Balakrishnan with Ms.Catherine Cross from Sight Savers International

Aurolab was established in 1992 as one of the key components of the mission of Aravind Eye Care System to reduce avoidable blindness. Aurolab successfully established itself within a short time as a major supplier of quality intraocular lenses at affordable price to a large number of eye care programs in developing countries. Realizing the need for other affordable ophthalmic eye care products, Aurolab established separate divisions to produce affordable suture needles, pharmaceuticals and spectacle lenses. Aurolab also established a Hearing Aid Division to address the need for affordable hearing aids for the large number of hearing impaired population in developing countries.

Aurolab follows international quality standards and applicable certifications such as FDA, CE, ISO 9001:2000 and WHO-GMP are obtained for its products. The various divisions of Aurolab are continuously introducing new products and looking at new opportunities for expansion. Aurolab is focusing on strengthening its international customer base and participated for the first time at the American Academy of Ophthalmology in USA and Arab-African Council of Ophthalmology in Tunisia.

INTRAOCULAR LENS DIVISION

The sale of lenses increased marginally compared to the previous year. Aurolab, the Aurolab hydrophilic foldable lens introduced last year is well accepted in the market and the sales increased considerably. Major changes in the packaging of this lens were introduced for easy removal from the bottle and to provide an attractive identity for this lens. New imported screw cap type glass bottles, carton box, multi language instruction for use and plastic patient ID card were introduced. A new injector for easy delivery of the lens also has been designed, tested and introduced in the market. Aurolab received the CE mark certification during the past year making Aurolab the major brand available in the Indian market with CE mark.

A new lathe was ordered which will be capable of providing excellent lens surface finish. This lathe also will be capable of producing bifocal and multifocal lenses. With an add-on feature, toric lenses can also be produced using this lathe.

Two new products were developed during the year. The first product is Iris Retractors for use during cataract and other surgeries to enlarge the pupil. These were tested at Aravind Eye Hospital and launched in the market. Efforts will be taken to get CE mark for this product during the next Aurolab certification audit. Another important lens development initiated is a small-incision IOL which needs an incision of only 1.8 mm. Both the cartridge and disposable injectors for this lens model have to be imported at present. This lens has a full 5.75 mm equiconvex optic versus the competing small incision lenses having only 5.5 mm fresnel optic.

With the addition of negative power lenses the Aurolab power range has expanded quite considerably. Now Aurolab offers lenses from -15D to 30Diopters.

The sale of Aurolab designed "Cataract Kit for 5 Surgeries" increased considerably during the year. This kit is a pack of pharmaceuticals and other consumables necessary for specific cataract surgical procedures. Many eye care programs are in the process of

evaluating these kits for their needs. A new attractive wrapper for the kit package was designed and produced to improve the presentation of the kit.

Additional qualified technical personnel have been recruited for product development. They will be built as a team and will start working on new products for the intraocular lens division.

SUTURE NEEDLE DIVISION

Suture Needle Division was started with the mission to supply high quality sutures for cataract surgery to the Indian market and also to other developing countries at affordable prices. Due to advances in small incision cataract surgical techniques which require no sutures, the demand for sutures in cataract surgery is expected to diminish. Currently the diminishing suture market in cataract is making it necessary to look at non-cataract and non-ophthalmology applications for the sustainability of this division.

Suture Needle Division participated in a national competitive bid under the National Blindness Control Program of India and secured a large order for the supply of 8-0 silk sutures.



Mr. Karthikeyan testing the newly developed cardiology sutures

PHARMACEUTICAL DIVISION

The modern state-of-the-art facility of the Pharmaceutical Division was established in 1997 with the mission to manufacture high quality ophthalmic formulations at affordable cost. Aurolab now manufactures more than 52 ophthalmic drugs covering antibiotic, anti-allergic, anti-inflammatory, anti-fungal, ophthalmic dyes, astringent, anti-glaucoma agents, ocular lubricants, viscoelastic solution, silicone oil and perfluoro octane.

In 2003, the Pharmaceutical Division developed and introduced three new formulations including Indocyanine Green (ICG), preservative free Triamcinolone Acetonide and Ofloxacin with Prednisolone Sodium Phosphate combination drops. The Indocyanine Green is a recent advance in retinal angiography and ILM peeling in macular hole surgery. Preservative free triamcinolone is used in vitrectomy. To our knowledge Aurolab is the first manufacturer of these essential and affordable ophthalmic drugs in Asia.

The Viscoelastic solution (HPMC) and Trypan Blue products received CE certification during the year. The division was also audited for the WHO-GMP certification renewal and the certification was awarded for the subsequent time period. The facility also was audited for the Schedule M requirement as per the Indian Drug Regulation and the compliance certificate was issued. The quality control laboratory of the division is well equipped with modern instruments to comply with international standards for the drug quality.

A separate antiseptic and disinfectant production facility produces five products to cover the total hospital asepsis. These five products satisfy the requirement of hand scrubbing, hand rubbing, skin preparation, instrument disinfection, and O.T floor cleaning in hospital.

SPECTACLE LENS DIVISION

The spectacle lens division was established in 1999 to provide technical support services in production, quality control and training areas for the optical shops at Aravind Eye Hospitals.

This division has setup a central plastic lens surfacing laboratory in Madurai and plastic as well as glass lens edging facilities close to the optical shops in all the Aravind Eye Hospitals. The availability of the production facilities helped the optical shops to provide better customer service and increase the sale of plastic lenses.

During the past year this division developed a new edging facility for manual as well machine edging of lenses at the new Aravind Eye Hospital Optical Shop in Pondicherry. This division also developed the processes for producing spectacle mounted telescopes and high power aspheric lenses needed for low vision patients and these special aids are supplied to the low vision clinics in the hospitals. A new scratch resistant hard coating process was also developed to coat plastic lenses so that they do not get scratched easily. This division is supplying these coated lenses to the optical shops at affordable prices.

HEARING AID DIVISION

The Hearing Aid Division was established in the year 2002 with the main objective of producing high quality low cost affordable hearing aids for Project Impact, Inc., USA. In January 2003 two trainers from Project Impact USA, visited the division and trained about eight staff members in production and quality control of the Project Impact designed hearing aids. During their visit the trainers also installed the additional micro electronic assembly equipment needed for assembling and testing of Project Impact BTE hearing aids. With this fully equipped unit and trained staff the division produced more than 6000 high quality hearing aids and supplied the aids to Project Impact for dispensing at affordable prices. The division also underwent the prestigious CE mark auditing successfully and the CE certification is anticipated.

In the coming year the division is planning to produce ITE (In The Ear) hearing aid kits and a new all digital hearing aid for Project Impact.

Other Events

Dr. P. Balakrishnan, Managing Director and Mr. V. Venkatesa Kannan, Manager, Pharmaceutical Division, Aurolab attended the 7th International Congress of the Pan Arab-African Council of Ophthalmology held in Tunis, Tunisia during May 22 - 25, 2003. More than 600 delegates from about 17 Arab and African countries attended this conference. Aurolab promoted their ophthalmic products in the trade exhibition of this conference to ophthalmologists and dealers of ophthalmic products from Middle East and North African countries. There was good response from various potential customers of Aurolab and this export market promotion effort is beneficial to widen the dealer and customer base in future.

They also visited New York, USA, at the invitation of the United Nations Development Programme (UNDP) to participate in the 13th session of the High-level Committee on the Review of Technical Cooperation among Developing Countries held during May 27 - 30, 2003 at the United Nations Headquarters. The UNDP invited Aravind Eye Care System to give a presentation on "Pharmaceuticals and Health Services" at the thematic discussion session on "Enhancing the role of the private sector in promoting south-south cooperation, including triangular cooperation". The Ambassadors from various UN member countries



Dr. Fred Minifie, Northwest Lions foundation (for Sight & Hearing), Sunil Chojar, Project Impact USA, with Mr. Ramkumar during the training program for hearing aids at Aurolab



Dr. Balakrishnan and Mr. Venkatesh Kannan in the Aurolab stall at the Seventh International Congress of the Pan Arab-African Council of Ophthalmology held in Tunis

attended this session. Dr. P. Balakrishnan and Mr. Kannan made a presentation of the Aravind model of eye care services, local production of ophthalmic pharmaceuticals and other products at Aurolab and also explained how Aravind works through LAICO with other developing countries to improve the delivery of eye care services. There was considerable positive feedback from the participants of various developing countries about the Aravind model of eye care services.

Dr. Balakrishnan visited several ophthalmic companies in Madison, Los Angeles and San Francisco to study the feasibility of extending current Aurolab product range and developing new products such as hydrophobic foldable IOLs, cardiology and absorbable suture needles, retinal laser photocoagulators and plastic ophthalmic lenses. He also visited several companies that manufacture hearing aid component in Minneapolis to observe their facilities and discuss the feasibility of local manufacture of some of the high cost components at Aurolab in future to make the hearing aids more affordable.

Mr. Venkatesa Kannan visited ExtRx Corporation in Atlanta for training in pharmaceutical development. ExtRx Corporation provides research and development consultancy services for pharmaceutical and chemical units. He studied their new method for silicone oil purification which is better and more effective than conventional rotovaporative method. Aurolab has plans to adopt this new method with assistance from ExtRx Corporation. It also has expertise in development of new nano particles for pharmaceutical applications. These nano particles enhance the drug activity and mechanism. Aurolab is planning to study the feasibility of these nano particles for ophthalmic pharmaceuticals.

Mr. Venkatesa Kannan also visited a well known biotechnology company in Minneapolis. This company has state-of-the-art, FDA approved and GMP manufacturing facility specializing in the production of sodium hyaluronate. He studied the features of this modern GMP manufacturing facility so that some of the features may be incorporated in a new pharmaceutical facility, Aurolab is planning to set up. He also discussed the possibility of manufacturing sodium hyaluronate based high end viscoelastic solution at Aurolab with the assistance of this company.

Dr. Balakrishnan and Mr. R.D. Sriram visited Minneapolis, Cincinnati, Tampa, San Francisco and Los Angeles in USA and Dusseldorf in Germany during October 26-November 24. One of the major objectives of the trip was to participate in the American Academy of Ophthalmology meeting held in Anaheim, California. Aurolab participated for the first time by setting up a stall at the exhibition to promote Aurolab products to North American ophthalmologists. The overall response for Aurolab products was excellent. In Los Angeles they also visited DAC, an IOL lathe manufacturing company to look at their machinery and California Institute of Technology to discuss a new field testing system which is under development there.

In Minneapolis they attended the Medical Design & Manufacturing Exhibition to gather information on appropriate medical technologies and suppliers for present and future Aurolab products. They also visited Ms. Dori Melnik, an Ocularist, to discuss the feasibility of establishing a customized artificial eyes production unit for the Oculoplastic Clinic at Aravind.



Dr. P. Balakrishnan, Dr. Mohideen and Mr. R.D. Sriram with Dr. Charles Schepens at the American Academy of Ophthalmology

AUROLAB



Mr.B.Jeyanth, Essilor, Bangalore, Mr.Xavier Fontanet, Chairman and CEO, Essilor and Mr.Alain Petard, Senior Vice President, Essilor Asia Pacific Region with Dr.Aravind. They came to discuss how Essilor could participate in Aravind's efforts to reduce blindness due to refractive errors and provide affordable spectacles at community outreach camps.

In Cincinnati they visited US IOL Inc., an IOL manufacturer. They discussed the possibilities of supplying Aurolab IOLs, sutures and viscoelastic. In Tampa they visited two Aurolab IOL technology partners, IOL International and Lenstec to discuss recent IOL developments and technologies. They visited Sterling International, to evaluate their CNC lathe which Aurolab decided to purchase for expanding the IOL production capacity. They attended the Seva Board meeting in San Francisco and also visited Project Impact to discuss foldable lens and hearing aid projects.

In Dusseldorf, Germany they visited Medica 2003, the largest Medical equipment exhibition, to evaluate the various medical companies and technologies.

Visitors to Aurolab

- Ms.Cathy Moore, Mr.Erik Brodersen and Mr. David Green came to discuss the administrative and coordination effort for the shipment of items to the hearing aid production facility and to make arrangements for setting up the hearing aid service delivery center at Madurai.
- Ms.Evey Cherow, Audiologist from USA was here from 12th January. She visited us to train the hearing aid technicians of the Hearing Aid Service Center in performing hearing tests and dispensing hearing aids.
- Mr.Banerjee, retired Chief Pharmacist of Moorfields Eye Hospital, UK was here from 25th January. He assisted us in setting up the Pharmaceutical production facility at Aurolab. He visited us to discuss the future development related activities.
- Mr.George Szmaj, Mr.Sunil Chojar, Mr.Marcel Ruiz, Hearing Aid Project Consultants, USA visited Aurolab to train Aurolab staff in assembling and testing of hearing aids.
- Mr. Phil Hoare, Procurement Manager, Sight Savers International & Mr.Martin Petzoldt, Procurement Manager, CBM came to discuss the preparation of standard list of items for the Vision 2020 programs and how Aurolab could act as a one stop source for the surgical items covered in the standard list.
- Mr.Ashok Kumar, Ms.Zelma Lazarus, IMPACT India Foundation Mumbai.
- Soren Sorensen, Certification Manager, DGM, Danish Medical Devices Certification.

Continuing Medical Education Programmes

Recent Advances in Retina-Vitreous and Uvea

LAICO, February 2

This one day CME programme was organized to commemorate the 10th Anniversary of the Uvea Clinic at Aravind-Madurai. At this meeting, eminent faculty from the United States and from Aravind Eye Hospitals shared their views on the current developments and future trends in the field.

Dr. P. Namperumalsamy

- Diabetic Retinopathy-Emerging problem in India
- Surgical principle for Diabetic Retinopathy

Dr. Emmett Cunningham, USA

- Pharmacotherapy of Diabetes mellitus
- Therapies of age related macular degeneration
- Corticosteroids and immunosuppressives in ocular inflammation
- HIV & CMV Retinitis

Dr. R. Kim

- Surgery for age related macular degeneration

Dr. Rathinam

- Recent advances in investigations in uveitis

Dr. Vasumathy

- Post ETDRS modification of laser surgery

Dr. Mohideen Abdul Kader

- OCT

Dr. Naresh Babu

- AREDS

Dr. K.Chandramohan

- IPCV

Dr. S. Manoj

- TTT vs PDT

Dr. Manohar Babu

- Imaging technology in uveitis
- Toxoplasmosis

Dr. D. Shukla

- Retinal vasculitis

Dr. Anand Rajendran

- Sarcoidosis

Update in Ophthalmology for Postgraduate Students

The 12th update was held at Aravind-Tirunelveli, Feb 9-15

The 13th update was held at Aravind-Madurai, September 14-21

The two week-long courses are structured by experienced ophthalmologists. They help the candidates identify lacunae in his/her knowledge and bridge the deficits and also to rehearse and be well versed with clinical skills and techniques vital to face an examination. It also helps to appraise the candidate with the expectations of typical examiners. It includes interactive sessions,

lectures, discussions with experts in the fields, clinical case presentations and live surgery demonstration.

A Practical Approach to Automated Perimetry

Aravind-Madurai, June 15

The Aravind Eye Hospital and Research Foundation, with support from renowned specialists experienced in the management of patients with glaucoma, offered an instruction course to interpret automated visual fields. All the guest faculties interacted well with the participants.

Guest Faculty

Prof. Dr. Velayudham

Regional Institute of Ophthalmology, Chennai

- Introduction, Basics & Evolution of autoperimetry

Dr. Shantha

Medical Research Foundation, Chennai

- Interpreting Single Field Reports-Humphrey's
- Detecting progressive field loss in glaucoma

Dr. Murali Ariga

Sundaram Medical Foundation, Chennai

- Interpreting Single Field Reports-Octopus



Dr. Shukla and Dr. Vasumathy at the Recent Advances in Retina-Vitreous and Uvea



Dr. P. Namperumalsamy, Dr. Shantha, Dr. Murali Ariga, Dr. R. Ramakrishnan and Dr. Krishnadas at the 'A Practical Approach to Automated Perimetry' Course



EDUCATION PROGRAMMES

-Newer Advances in Automated Perimetry-SITA

Aravind Faculty

Dr. R. Ramakrishnan

-Problems & Pitfalls in Interpretation of Automated Perimetry

Dr. Mahesh Kumar

-Automated Perimetry in Neuro Ophthalmology

Dr. P. Sathyan

-Newer Advances in Automated Perimetry-SWAP

Dr. Mohaideen

-Newer advances in Automated Perimetry-FDT

Student Vision Programme

Aravind-Coimbatore, August 21

Education and Awareness plays an important role in early detection of most eye diseases. On August 21, Aravind eye hospital, Coimbatore conducted sessions for the benefit of the visitors and school teachers.

Dr.V. Narendran welcomed the audience and Mr. N. Muruganantham, District Collector presided over the function. Mr. Muthusamy District Programme Manager, District Blindness Control Society gave the certificates to the participants. About 210 government school teachers benefited from the programme. Mr.Uthamarajan, Camp Manager presided over the valedictory function.

Dr. Kalpana Narendran and Dr. Thomas Mathew spoke on:

-Childhood Blindness and control measures in India

- Eye care for children in India Screening Process

-Vitamin A deficiency in children

-Squint

CME Programme on Age related Macular Degeneration-Clinical Presentations and Role of Antioxidants

Aravind-Pondicherry, September 14

This programme was organised by Aravind-Pondicherry and Universal Medicare Private Limited. Ten ophthalmologists from surrounding areas attended this programme.

Dr. Manoj

-ARMD Clinical Presentations and Role of Antioxidant in ARMD

Dr.R.K.Sanghavi, Medical adviser, Universal Pharmaceuticals

-Role of Luetin Zeaxanthin and Lycopene for Eye Protection

Current Opinion in Glaucoma— XIII Annual Meeting of the Glaucoma Society of India

September 20-21, Aravind -Tirunelveli

This is the first time that a national conference has been held in Tirunelveli. Eminent Glaucoma Specialists from USA

like Dr. Alan Robin, Dr.Harry Quigley, Dr.Don Budenz, Dr.Paul Kaufmann and Dr.Deepak Edward and 20 faculty from all over India participated in this meeting and shared their views and vast experience regarding current trends in Glaucoma Practice. Tirunelveli District Collector Shri Sunil Paliwal, IAS, delivered the inaugural address as the Chief Guest.

Over 120 Ophthalmologists from all over India and nearby countries participated as delegates in this meet.

Dr. P. Namperumalsamy felicitated the national and international faculty present. Dr.R.Ramakrishnan, Organising Secretary and President of Glaucoma Society of India gave the Welcome Address and

Dr. S. R. Krishnadas, Scientific Session Chairman and Secretary of Glaucoma Society of India delivered the vote of thanks.



Dr. Alan Robin addressing the participants at the XIII Annual Meeting of the Glaucoma Society of India

SCIENTIFIC SESSION

The scientific session featured various symposia, lectures and research paper presentations.

List of papers presented at the conference:

Dr. Paul Kaufman

-Aqueous dynamics, optic disc and visual psychophysics in Glaucoma

Dr. Harry Quigley, Director, John Hopkins University

-Epidemiology of glaucoma & magnitude of glaucoma blindness implications for vision 2020

-Recognising the Glaucomatous optic disc

-Disc & NFL Imaging in Glaucoma

-Recent concepts in pathophysiology of primary angle closure glaucoma

Dr. Ronnie George

-Epidemiology of glaucoma in India

Dr. Alan Robin, John Hopkins University

-Glaucoma—Challenges in the new Millennium—Target IOP

Dr. Don Budenz, Bascom, Palmer Eye Institute

-Achieving low IOP—Prostaglandins

-OCT in Glaucoma

-Newer Visual field techniques

Dr. Paul Kaufman, University of Wisconsin

-OHTS & EMGTS—Implications for clinical Practice

-Targeting Trabecular meshworkCell junctional dynamics & aqueous outflow

Dr. Deepak Edward, University of Illinois

-Pathology of optic disc damage in glaucoma

-Bleb leaks

-The Challenge of Intravitreal steroids

Dr. Shantha

-Visual Fields—Humphrey's

-Bleb fibrosis—Risk factors & management



Dr. Deepak Edward, Mr. Vasudev Anand Rao, Dr. JC Das, with Dr. G. Venkataswamy



Dr. Sathyan, Treasurer, GSI

Dr. Murali Ariga

-Visual Fields—Octopus

-Combined Glaucoma & Cataract management

Dr. Velayudham

-Initial Approach to a patient with POAG

Dr. Vinay Nangia

-General principles of medical therapy in Glaucoma

Dr. Noel Moniz

-Newer medications—Combination & Switch therapy in Glaucomas

Dr. Pratheep Vyas

-Potential role of neuroprotection in Glaucoma

Dr. Sridhar Rao

-Fixed combinations—Power and convenience.

-Complications of antimetabolites in glaucoma filtering surgery

Dr. Manish Shah

-Central corneal thickness in Glaucoma

-Normal pressure glaucomas

Dr. Wallace Alward, University of IOWA

-Myocilin & Glaucoma

-Genetics of congenital glaucoma

Dr. Chakrabarti

-Molecular genetics of congenital glaucoma in India

Dr. Sundaresan

-Prevalence of myocilin in POAG in India

Dr. Ramanjit Sihota, R.P Centre, New Delhi

-Gonioscopy—an essential tool in Glaucoma Diagnosis

-Diagnosis & management of Primary angle closure glaucoma

-Ocular blood flow in Glaucoma



Dr. R. Ramakrishnan, President, Glaucoma Society of India (GSI), Dr. Harry Quigley, Dr. Alan Robin, Dr. P. Namperumalsamy, Mr. Sunil Paliwal and Dr. G. Venkataswamy

Dr. Ravi Thomas

-Progression of occludable angles to angle closure and angle closure glaucoma.

Dr. Tanuj Dada

-UBM in glaucoma diagnosis

Dr. Vasudev Anand Rao

-Newer concepts in management of Neovascular glaucomas

-Exfoliative glaucomas

Dr. Anil Mandal

-Pathophysiology & Diagnosis of congenital glaucoma: 12 year experience in management of congenital glaucoma

Dr. Devin Sood

-Glaucoma Suspect

Dr. Nitu Jain

-Glaucomas following intraocular surgery

Dr. Mohideen Abdul Kader

-Hypotony following Glaucoma filtering surgery

Dr. P. Sathyan

-Non penetrating filtering surgery

Dr. JC Das

-Glaucoma Drainage Implants—
Experience with Ahmad Glaucoma Valves

Free Papers:

Dr. Sonal Ambatkar, Dr. R. Ramakrishnan,

Dr. Mohideen Abdul Kader, Dr. Saurabh Mittal, Dr. Ritesh Sanghvi, Aravind-TVL

-OCT measurements of macular and nerve fibre layer thickness in Normal and Glaucomatous Human Eyes

Dr. Ritesh Sanghvi, Dr. R. Ramakrishnan,

Dr. Sonal Ambatkar, Dr. Mohideen Abdul Kader, Aravind-TVL

-Evaluation of the efficacy of C20-1 Screening program of frequency doubling perimeter in Glaucoma Screening

Dr. Saurabh Mittal, Dr. R. Ramakrishnan,

Dr. Sonal Ambatkar, Dr. Mohideen Abdul Kader, Aravind-TVL

-Relation between the optic disc area and retinal nerve fiber layer thickness of Indian population by optical coherence tomography

-Retinal Nerve fiber layer thickness measurements in Normal Indian population by optical coherence tomography

Dr. M. Chockalingam, Dr. P. Sathyan, Aravind-Coimbatore

-Comparison of Goldmann Applanation Tonometer and Home Tonometer in IOP in normal eyes

IX IOL Microsurgery CME

Programme

Aravind-Pondicherry, October 7-10

Dr. G. Natchiar

-Recent Changes in expectation of cataract patients

-Transition from ECCE to SICS—Why?

Dr. Veena

-Anterior and Posterior Capsulorhexis

-Paediatric cataract-Pre op evaluation & IOL power calculation

Dr. Thiruvengada Krishnan

-Hydroprocedures: Basics and Pearls

Dr. Venkatesh

-Nucleus proplase and delivery techniques

-Newer Phaco technologies

-Recent diagnostic modalities in Glaucoma

Dr. HariPriya

-Management of Astigmatism

-When and how to convert?

-Newer IOLs

Dr. Minu M Mathen

-SICS in difficult situations

-Phaco techniques

-SICS and Phaco, Complications and Management

Dr. S. Aravind

-Crisis Management in ophthalmic practice

-Phaco in challenging cases

Dr. Manoj

-Management of dropped nucleus/IOL

-Future direction of Diabetic retinopathy

Dr. R. Ramakrishnan

-Current Management strategies in Glaucoma



IX IOL Microsurgery CME Programme Participants with Dr. V, Dr. Natchiar and guests Ms. Claire Hicks and Ms. Judy Stagg, Impact, UK

Dr. Kalpana Narendran

–Surgical approach to paediatric cataract and Post op Management

Dr. Vanathi

–Clinical diagnosis and management of corneal Ulcers

–Post refractive surgery IOL power calculation

Dr. R.D. Ravindran

–Endophthalmitis



Dr. Thiruvengadakrishnan at Eye Advances 2003



Dr. Pradeep Singh Rathore



Ms. Benitta Retna S. with Dr. Darren Albert

Eye Advances 2003

Aravind-Pondicherry, December 21

The purpose of this programme was to create an awareness about eye diseases. A total of 129 doctors from different specialties in surrounding areas participated in this programme.

DR.G.Venkataswamy

–Information technology & Health

DR.Thiruvengadakrishnan

–Newer technology in cataract removal

Dr.Venkatesh

–Glaucoma diagnosis and management

Dr.Vanathi

–Corneal problems and recent advances

Dr.K.Veena

–Paediatric eye diseases

Dr.Kumaran

–Management of ocular trauma

Dr.Pradeep Singh Rathore

–Refractive errors and Headache

Dr.Manoj

–Diabetic Retinopathy & ARMD

Dr.R.D.Ravindran

–Systemic diseases and eye

Hands on Training Programme on Low Vision Rehabilitation

Aravind –Madurai, 23-25 Dec

A hands on training Programme on Low Vision was conducted at Aravind Eye Hospital-Madurai in collaboration with Lighthouse International and L.V.P. Eye Hospital, Hyderabad. Light house International is a world renowned vision rehabilitation organization in New York. Mrs. Karen Seidmen, Director Continuing Education & Dr.Darren Albert Senior Clinical Ophthalmologist from Light House International and Dr. Sarfaraz Khan, Director and Mrs.Beula Christy Rehabilitationist from Vision Rehabilitation Centre at L.V.P came as guest faculty. The topics covered were:

- Low Vision examination procedure
- Function Test
- Pathology
- Survey of Low vision optical devices
- Survey of high tech devices
- Instructing the low vision patient
- Low vision management of specific ocular diseases
- Rehabilitation of the patient with specific eye disorders
- Rehabilitation adaptation and skill development



Dr. Sukumaran, Dr. Ilango, Dr. P. Namperumalsamy, Mrs. Karen Seidmen, Dr.Darren Albert, Dr. Sarfaraz Khan, Mrs.Beula Christy and Dr. P. Vijayalakshmi with other faculty and participants to the 'Hands on Training Programme on Low Vision'



Dr. P. Namperumalsamy presenting a memento to Dr. Jalali

- Teaching professionals to assess and train patients with low vision to adapt to the loss.

CME on Retinopathy of Prematurity

Retina clinic, Aravind Eye Hospital, Coimbatore, 28th December

Dr. P. Namperumalsamy inaugurated the CME. Dr. Subhadra Jalali was the visiting Faculty from LV Prasad Eye Hospital, Hyderabad.

Didactic Lectures included
–screening Surgical treatment of ROP and
–the Features & Management of the uncommon Fulminate type of ROP.

Faculty included Dr. V. Narendran, Dr. Kalpana Narendran, Dr. Saravanan, Dr. Sasikumar, Dr. Mihir, Dr. A. Raghuram, Dr. Abhijit Chattopadhyay, Dr. Rajesh, Dr. Sowmya, Dr. Vasumathy, Dr. Parag Shah, Dr. R. V. Azad. More than 80 Delegates from all over Tamil Nadu attended and benefited from this CME program. A video for Patient Awareness on ROP was screened at the end of the session.

Scientific Papers Presented and Published

Hospital Infection Society All India Conference

CMC, Vellore, Jan 8-10

Dr. Lalitha along with four of the nursing staff from Aravind –Krishnaveni, Vimala, Maheswari and Sita attended this conference.

Training programme on Low Vision

(organised by Rehabilitation Centre at LVPEI in collaboration with light house international and international eye foundation)

LVP Eye Institute, Hyderabad,
January 11-15

Dr. K. Ilango, Mr. Selvakumar, Ms. Benitta Retna, and Sr. Rama attended the training programme.



Dr. K. Ilango, Mr. Selvakumar, Ms. Benitta Retna, and Sr. Rama at the Training programme on Low Vision

NPCB –ICEH Alumni Symposium on “Childhood Blindness: Towards Vision 2020”

AIIMS, New Delhi, January 15

Dr. P. Vijayalakshmi participated as a guest faculty and gave a lecture on

–Cost and effective & sustainable models for paediatric eye care

61st All India Ophthalmic Society-2003

New Delhi, January 16-19

Dr. P. Namperumalsamy attended the conference and took part in the round table discussion on Diabetic Retinopathy. He also delivered lectures on:

–Strategies for marketing eye care services talk on Diabetic Retinopathy

He was also the special guest at the Academia Ophthalmologica Internationalis

–An emerging Indian Problem –at the Preferred management approach to DR –DR 2005

Dr. R. Kim

–Co-ordinator for the Symposium on “Computers in Ophthalmology” at the Current Status Programme

–Tele-Ophthalmology –Video Conferencing

Dr.P.Vijayalakshmi Chairman, paediatric session on Update on Squint and promotion of Paediatric Eye Care

–Infantile Esotropia when to operate and what is the binocular prognosis.

Dr. Sundaresh

–Surgical option in the management superior oblique palsy

Dr. Usha Kim

–A retrospective analysis of an ophthalmic socket and its management

Dr. Rathinam

–Investigations in Uveitis and Trematode induced granulomatous Uveitis

Dr. Ilango

–Cost effective sustainable low vision services in the context of vision 2020

Dr. Minu Mathen

–Ocular Trauma the South Indian Profile, Vogt-Koyanagi-Harada Syndrome in South Indian Population – A clinical profile,

–Capsular Tension ring assisted manual small incision cataract surgery in soft and hard subluxated cataracts.



Dr. P. Vijayalakshmi at the AIOS

Dr. HariPriya

-Congenital Anomalies Associated with duane's syndrome

Dr. Sundaresh

-Surgical options & results in the management of superior oblique palsy

Dr. Kuldeep

-Secondary posterior chamber intraocular lens implantation in children

Dr. Nagendra Shah

-A retrospective study of success rate of surgical treatment of epiphora in cases of centurion syndrome

Dr. Rajeev Kumar

-Retrospective study of Nocardia Endophthalmitis following cataract surgery

Dr. Lipika Roy

-Role of non optical aids in paediatric low vision practice

Dr. Sapna Jain

-Paediatric cataract with microphthalmos: a challenge

Dr. Mihir T Kothari

-Visual outcome after primary IOL implantation in children following anterior segment penetrating trauma

Dr. Rajeev Tanawade

-X-Linked Retinoschisis (XLR) : Clinical Variations and Management Dilemmas

Dr. Pradeep Singh

-Visual outcome in traumatic endophthalmitis

Dr. S. Kavitha

-Congenital Fistula of Lacrimal Gland – Tarsal Type – A case report

Dr. R. Sharmila

-Congenital Ectropion Uvea with Primary Glaucoma Associated with Iridotrabeular Dysgenesis

Dr. Ramakrishnan

-ONH changes in glaucoma

-SICS in difficult Situations.

He also conducted an Instruction Course on

-Early Diagnosis of Glaucoma in Developing Countries.

Dr. Sathyan

-Glaucoma relationship between MCT+AT Instruction Course

-SICS Nucleus delivery techniques

-Role of risk factors and genetics in glaucoma

Dr. Mohideen Abdul Kader

-Early diagnosis of POAG in developing countries

Dr. Mandar Atul Joglekar

-ND-YAG laser dispersion for the management of Post-cataract surgery papillary fibrin membrane

Mr. Jayahar Bharathi,

-Mycotic keratitis in South India and also a poster on Acanthamoeba Keratitis: a clinical study and microbiological study.

Telemedicine meeting

IIT, Chennai, January 17-18

A meeting was conducted at IIT – Madras to explore the possibilities of developing a common platform for telemedicine applications. Both user organizations and software companies were invited for this meeting to have meaningful discussions. Mr. R D Thulasiraj and Ms. K.M. Sasipriya attended this meeting.

First SERI-ARVO meeting on research in vision and ophthalmology

Singapore, February 6-8.

Sundaresan, J. Kanagavalli, VR.

Muthukaruppan, SR. Krishnadas, and P. Namperumalsamy.

-Myocilin gene mutations: Indian glaucoma patients.

VR. Muthukaruppan, S. Arpitha, NV. Prajna and M. Srinivasan.

-Expansion *in vitro* and characterization of human limbal stem cell cultures.

Dr. Praveen Nirmalan presented a poster on

-Gender inequalities in cataract blindness burden and surgical services in South India



Dr. Sundaresan, Dr. Praveen Nirmalan, Dr. V. Muthukaruppan and Dr. Arpitha at the SERI Conference



Dr. P. Namperumalsamy at the MDRF-UAB seminar

MEDRECON-2003

National Conference on the future of Medical Records in India

Christian Medical College Hospital, Vellore, February 7-8

Mr. M. Rajkumar received the best presentation award on electronic medical records at the conference.

Bombay Ophthalmic Association Meeting

Bombay, February 8

Dr. P. Namperumalsamy

-Strategies to prevent blindness from Diabetic Retinopathy

India HRA Users Meeting

Timbers Trail, February 13-14

Dr. R. Kim participated and took part in the discussion forum.

Workshop on Indian Eye Banking and Education Program

L.V.Prasad Eye Institute, Hyderabad, February 14-15

Ms. Brinda Priyadarshini and Ms. Saradha attended this workshop. The program covered various aspects, ranging from the basic necessities for an eye bank to the current trend in eye donation & eye banking practices.

Vitreoretinal Society Meeting

Chandigarh, February 15

Dr. R. Kim

- Prophylaxis of traumatic endophthalmitis and management

Dr. Jatinder Singh

-Freepaper on laser treatment through the wall of incubator for threshold retinopathy of prematurity

Dr. D. Shukla

-Freepaper on familial exudative vitreoretinopathy -Clinical profile and management

Workshop on Low Vision

Chennai, February 17-19

Dr. K. Ilango and Ms. Benitta Retna from Aravind -Madurai attended a workshop for the professionals working in low vision clinics, organised by the National Institute of Visually Handicapped Regional Centre.

ZFS Partners meeting

Bangalore, February 20-22

Mr. Saravanan, Faculty, LAICO represented the Aravind Eye Care System.

International Symposium On Uveitis & Tuma Ocular Inflammation

Retina Institute of Karnataka, Bangalore, March 1-2

Dr. Rathinam

-Terminology and classification of uveitis and Sarcoid uveitis

Dr. Manohar Babu, Senior Medical Officer, Aravind-Coimbatore,

-Outer retinitis in ocular toxoplasmosis

MDRF-UAB National Seminar on Diabetes & Cardiovascular Epidemiology

Chennai, March 20-22

Dr. P. Namperumalsamy

-Screening of Diabetic Retinopathy in a Rural Population.

Glaucoma Conference

Ganapathy Nethralaya, Jalna, March 29-30

Dr. R. Ramakrishnan

-Novel Medications in Glaucoma

-Non penetrating filtering surgery

-Tonometers and Tonometry

He gave a live demonstration of a glaucoma surgery

A State Level Workshop on Cornea and External Diseases of the Eye Clinical Challenges and solutions

Bangalore, 19-20 April

The workshop was organized by Regional Institute of Ophthalmology, Minto ophthalmic Hospital, Bangalore and Karnataka Ophthalmological Society in association with Rajiv Gandhi University of Health Sciences at Bangalore.

Dr. M. Srinivasan as an invited faculty spoke on

-Medical management of Keratomycosis

-Clinical manifestation of HSV Keratitis

- Herpes Zoster Ophthalmicus -Corneal Manifestations and Treatment

-Surgical treatment of Corneal ulcers - Indications and techniques

-Evaluation of Donor cornea in MK medium

-Penetrating Keratoplasty - Techniques

Dr. D. Sundaresan Endowment Oration

Coimbatore, April 21

(Organised by Dr. S. Krishnamoorthy, President IMA, Coimbatore)

Dr. P. Vijayalakshmi as invited faculty gave a lecture on

–Paediatric Eye Care

Workshop on the role of instrumentation and its development

University Science Instrumentation Centre, Madurai Kamaraj University, April 28-29

Ms M. Thenmalar and Mrs.C.Vasanthi (Bio-Medical Engineers) attended this two day workshop, which was sponsored by the Department of Science & Technology, Government of India

Workshop on Instruments Maintenance

April 21-May 2, Coimbatore Medical College, Coimbatore

Mrs Rm Susila, Aravind-Coimbatore participated in this ten day workshop organised by the Central Scientific Instruments Organisation (CSIO), Chennai. Dr. Kalpana Narendran participated as a special invitee and spoke on Instruments Maintenance Programme at Aravind.



Dr.P.Vijayalakshmi receiving the Dr.D.Sundaresan Endowment Oration award

Annual Meeting of the Association for Research / Vision in Ophthalmology

Fort Lauderdale, USA, May 4-8

Dr. P. Namperumalsamy participated in this meeting.this meeting.

Community Eye Health Course – 2002

ICARE–L. V. Prasad Eye Institute Hyderabad, May 5-6

Mr. R. D. Thulasiraj

–Teaching plan for planning and Management for eye care delivery

May 7-9

Mr. S. Saravanan

–Module on Planning and Management

CME on Paediatric Ophthalmology

Chennai, June 8

In commemoration of Silver Jubilee Celebrations at Sankara Nethralaya

Dr. P. Vijayalakshmi

–Visual rehabilitation of Aphakic Children

–Paediatric Eye Care at Community Level

CME on Cornea

Chaithanya Eye Hospital & Research Institute, Trivandrum, June 15

Dr. M. Srinivasan

–Infective keratitis and management

Awareness programme on visual impairment to Panchayat Leaders

Tuticorin, June 20

(organized by the National Institute for the Visually Handicapped, Chennai)

Dr. K. Ilango

–Medical perspectives of visual impairment

–Visual impairment highlighting common eye disorders

The meeting had a good response with all the village panchayat leaders participating in the meeting. There was an interactive session following the presentation.

Disha Eye Hospital

Calcutta, June 21-22

Dr. P. Namperumalsamy

–Current concept on “Diabetic Retinopathy”

–Aravind Overview

–Vision 2020

Ocular Trauma: Current Management Concepts

21-22 June, Retina Foundation, Ahmedabad

Dr. Revathy, Aravind-Coimbatore

–Corneo scleral tears : Principles of primary suturing

–Chemical Burns : Management

–Role of Amniotic membrane graft

–Role of Stem cell graft

Symposium on Uvea

Miraj, July 19

Dr. Rathinam

–Guest lecture: “HIV” in ophthalmology and Diagnostic approach in uveitis

GOA Ophthalmic Society

Goa, July 20

Dr. Rathinam

Guest lecture on

–Systematic approach in uveitis

12th Annual Meeting of the Indian Eye Research Group

26th –27th July,

L.V. Prasad Eye Institute, Hyderabad.

Gowri Priya, K. Bhavani, SR. Rathinam and VR.Mu

hukkaruppan. –Endotoxin mediated leptu uveitis. In Indian Eye Research Group

Arpitha Saravanan, VR. Muthukkaruppan.

–Characteristics of limbal cultures.

P. Sundaresan, J. Kanagavalli and SR. Krishnadas.

–Is there myocilin Q368 STOP mutation in adult onset primary open angle glaucoma patients in India?

G. Neethirajan, SR. Krishnadas, P.

Vijayalakshmi and P. Sundaresan.

–A novel PAX6 gene mutation in aniridia patients.

J. Kanagavalli, G. Neethirajan, SR.

Krishnadas, P. Vijayalakshmi and P.

Sundaresan.

–Variations in myocilin (TIGR/MYOC) gene of primary open angle glaucoma patients in India.

S. Lalitha

–Management and outcome of culture negative corneal ulcers.

WHO South East Asia Regional Planning Meeting for Elimination of Avoidable Childhood Blindness

Yangon, Myanmar, July 15 -18

Dr. P. Vijayalakshmi as a guest speaker gave lecture on

–Management of Squint and Amblyopia

Bombay Ophthalmic Association meeting

Mumbai, July 27

Dr. R. Ramakrishnan as guest faculty spoke on

–Non penetrating filtering surgery and demonstrated live surgical procedure on viscocanalostomy and deep sclerectomy.

CHENNAI EYE 2003**The 51st Annual Conference of TNOA and Southern Regional Ophthalmic Conference**

Chennai, August 15-17

Dr. P. Namperumalsamy

Chairperson for the Symposium on

Emerging importance of low vision aids

–Low Vision Aids Past And Present

Scenario

Chairperson for the symposium on

Vascular diseases of Retina

Dr. G. Natchiar

–Evolution of cataract surgery

–History of Eye Camps

Dr. M. Srinivasan

–Current Eye Banking

–Stem Cells of the Ocular Surface

Concept and Clinical Applications

Dr. P. Vijayalakshmi

–An overview of Strabismus:

–The surgical management of total third nerve paralysis: A new technique of Ocular Fixation

Dr. Rathinam

–Diagnosis challenges in uveitis”

Mr. R.D. Thulasiraj

–Cataract Surgery – The market potential in Tamilnadu

Dr. R.D. Ravindran

–Capsulectomy & Nucleus delivery into AC

–What is new in manual SICS?

–Transition to SICS

–Nucleus Delivery

Dr. S. Aravind

–Crisis Management

Dr. Haripriya

–Optic Atrophy in Children

–The Best option in uveitic cataract: Phaco, ECCE, SICS ?

Dr. Venkatesh Prajna

–IOL Power Calculation Following Refractive Surgery

Dr. Lalitha Prajna

–Microbial Profile of graft infections following Penetrating Keratoplasty

Dr. Ilango

–Appropriate technology for cost effective sustainable low vision service in the context of VISION 2020

C.P. Gupta Best Paper Award Session

*Emerging Trends in Low vision-Trichi Ophthalmic Society**Symposium*

–Low vision dispensing & hands on trial of Low vision aids.

Dr. R. Ramakrishnan

–Phacotrabeculectomy Twin site Vs Single site

–Target Pressure – Means to achieve it

–Strategies for delivering nucleus through small pupil.

SCIENTIFIC PAPERS PRESENTED & PUBLISHED

Dr. Sathyan

- Comparison between Applanation Tonometer and Home tonometer

Symposium

- Newer glaucoma Surgeries

Dr. Manohar Babu

- Present Concepts in Sympathetic Ophthalmia

- Symposium on Ocular Trauma

Dr. Chokalingam

- The effect of Acetazolamide on postop. IOP Fluctuations following different types of Cataract Surgeries

Prof. V. Srinivasan

- Instruments Maintenance

Dr. Anand Rajendran

- Enzyme Linked Immunosorbent Assay (IgM) - its significance in cases of Ocular Toxoplasmosis

Dr. K. Chandra Mohan

- Ultrasonography for Vitreo-Retinal Conditions

Dr. Koshal Ram

- Paget's Disease : It's Protean Ocular Manifestations

Dr. Kumaran

- Etiology course and Visual outcome in Retinal Vasculitis

Dr. Mamta Tiwari

- Pterygium- An Ophthalmic Enigma

Dr. Minu Mathen

- Endothelial cell loss following phacoemulsification - A comparison of three different techniques
- Phacoemulsification in subluxated cataracts - A safer technique
- A safer approach to phacoemulsification in subluxated cataracts using iris retractor hooks-Video presentation

Dr. Nagendrasa

- Integrated Orbital Implants
- Thyroid Related Orbitopathy

Dr. R. Sharmila

- Clinical Comparison between Goldmann Applanation Tonometer and Tonopen

Dr. Shipra Tripathi

- Effect of LASIK in Myopic Astigmatism
- Stem Cell Transplantation in Ocular Surface disorders

Dr. R. Sripriya

- Möbius Syndrome -A Varied Presentation

Dr. Venkatesh

- Visual experience during cataract surgery

Dr. Veena Venkatesh

- Uveitis in Children

Dr. Vanathi Ganesh

Cornea symposium

- Clinical & Microbiological Correlation of corneal ulcers

Dr. Amar A. Karkhanis

- Visual outcome of Primary Cataract Extraction with IOL Implantation in cases of Traumatic Cataract following penetrating ocular injury.

Dr. Saurabh Mittal

- Idiopathic Occipital Lobe Epilepsy - Case Report

- Comparative study of Silicone versus Acrylic Intraocular lens in Phacotrabeculectomy.

Dr. Mohideen Abdul Kader

- Effect of Diode Laser Transscleral Cyclo Photocoagulation (TSCPC) on intraocular pressure in Refractory Glaucoma. He was awarded Best Paper for the Session

- OCT measurement of Macular and NFL thickness in normal and glaucomatous human eyes.

Dr. Sanghvi Ritesh

- Outcome of Nasolacrimal Duct Probing for Congenital Nasolacrimal Duct Obstruction in children of Various Age Groups. She was given Best Paper award for the session.

Dr. Shamik Ambatkar

- Intravitreal Triamcinolone acetonide for management of refractory diabetic macular oedema.
- Intravitreal triamcinolone acetonide for treatment of refractory macular oedema in cases with central retinal vein occlusion.

Dr. Shamik P. Mokadam

- Visual outcome of cataract extraction with intraocular lens implantation in cases of retinitis pigmentosa.

Dr. Venugopal

- Visual outcome following medical management of benign intracranial hypertension.

Mr. Jayahar Bharathi (Microbiologist)

- Aetiological and epidemiological diagnosis of bacterial keratitis in south Tamil Nadu.
- The role of corneal scraping smears (10% KOH smear and Gram-Stained smear) in the diagnosis of microbial keratitis.

Rajasthan Ophthalmological Society

Rajasthan, September 5-7

Dr. Rathinam

- Key note address on "Spirituality and modern medicine"

Delivered lectures on

- Interesting cases in Uveitis

- Parasitology in ophthalmology"

- "Anterior uveitis"

Strabismology Society Meeting

Cochin, September-27-28

Dr. P. Vijayalakshmi participated in this meeting and gave presentation at the sessions on Strabismus for general ophthalmology

- Amblyopia -Etiology incidence and management

Workshop on Orthoptics

- PBCT -PBRT

Video assisted Surgical session

- Horizontal Muscle surgeries, Interesting Cases.

Advances in Strabismus and Paediatric ophthalmology

- Advances in Strabismus Surgeries

CME on Glaucoma

Maharashtra, September 27

Dr. P. Sathyan was invited by Sangli Ophthalmic Association to give lectures on Glaucoma (Target IOP, Medical Management, Perimetry). Case discussions and surgical video demonstrations were held during the meeting. He also took classes for PG residents at the Lions Eye Hospital. About 100 doctors attended the meeting.

Trichy Ophthalmic Society

October 12th.

Dr. P. Sathyan

- Recent advances in glaucoma medicines and Target IOP

Sankara Eye Society

Coimbatore, October 19th.

Dr. P. Sathyan

- Low vision Aids in Glaucoma and Newer developments in glaucoma medicines

Udaipur Ophthalmic Society meetingNovember 8th and 9th

Dr. R. Ramakrishnan, CMO Aravind-Tirunelveli

- ONH Changes in Glaucoma

- Principles of Glaucoma Medical Therapy

Madurai Ophthalmic Association meeting

November, 23

Dr. R. Ramakrishnan

- OCT in Glaucoma

American Academy of Ophthalmology

Anaheim, USA December

Dr. Lalitha

- 'Protection against infection during cataract surgery with special emphasis on developing countries doing high volume cataract surgery'.

It was part of a symposium on "Controversies & Conundrums in Ophthalmology".

Glaucoma CME ProgrammeSankara Nethralaya, Chennai Dec 6th and 7th

Dr. R. Ramakrishnan

- Update on Newer Anti Glaucoma Medications- Aqueous suppressants

- Aravind Comprehensive Eye Survey (ACES)

PUBLICATIONS

Canadian Journal of Ophthalmology

VOL: 38 2003; p. 23-4 (Letter)
Leo SW, Au Eong KG, Venkatesh R, Muralikrishnan R.
–The Misericordia Health Centre Cataract Comfort Study

Journal of Tamil Nadu Ophthalmic Association

VOL: 43A (1) 2003 MAR.
p.13-16
Shamik Anil; Ambatkar, Sonal and Ramakrishnan, R:
–Ocular Fire Cracker Injuries: a clinical profile;
p.23-25
Venugopal, N; Ramakrishnan, R:
Heterotopic Ossification of Orbital Tissue following Blunt Injury: a case report
p.30
Srinivasan, V and Thulasiraj, R D:
Ophthalmic Instruments–Maintenance Protocol: problem there is no light in your slit lamp

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Editorial

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–The Pressure for Change

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Bharathi, M Jayahar Ramakrishnan, R;
Vasu, Samala; Meenakshi, R;
Palaniappan, R
–Trauma and Corneal Ulcers

Indian Journal of Ophthalmology

VOL: 51 (1) 2003 Mar.
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Bharathi, M Jayahar et al.
–Epidemiological Characteristics and
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Keratitis: a three-year study
p.323-328
Shulda, Dhananjay et al.
–Familial Exudative Vitreoretinopathy
(FEVR): clinical profile and
management

Asia-Pacific Journal of Ophthalmology

Vol: 15 (2) 2003 Apr. p. 5-12
Muralikrishnan, R; Venkatesh, R;
Manohar, Babu B; Venkatesh, Prajna N
–A Comparison of the Effectiveness and
Cost-Effectiveness of three different
methods of cataract extraction in
relation to the magnitude of
postoperative astigmatism.

VOL: 15 (2) 2003 Apr. p. 21-25

Srinivasan, M; Pattnaik, Looly
–Avellino Corneal Dystrophy in an Indian
Family

Journal of American Association for Pediatric Ophthalmology and Strabismus (AAPOS)

April 2003, Vol.7, No 2 , p 91-95.
Vijayalakshmi P; Srivastava KK; Poornima B; Nirmalan P
-Visual outcome of cataract surgery in children with congenital rubella syndrome.

Molecular Vision

VOL: 9 2003 9: 205-9.
Neethirajan G; Hanson IM; Krishnadas SR; Vijayalakshmi P; Anup Kumar K; Sundaresan P
-A novel PAX6 gene mutation in an Indian aniridia patient.

VOL:9, 2003 Nov. p. 606-614
Kanagavalli J; Krishnadas SR; Eswari Pandaranayaka; Krishnaswamy S; Sundaresan P
-Evaluation and Understanding of myocilin mutations in Indian primary open angle glaucoma patients.

J Med Microbiol

2003; 52:667-673
Gowri Priya C, Bhavani K, Rathinam SR and Muthukkaruppan VR.
-Identification and evaluation of LPS antigen for serodiagnosis of uveitis associated with leptospirosis.

Journal of Cataract and Refractive Surgery

VOL: 29 (6) 2003 Jun. p.1143-1151
Mamidipudi, Praveen R Vasavada, Abhay R; Merchant, Suchi V; Namboodiri, Vishnu N; Ravilla, Thulasiraj
-Quality-of-Life and Visual Function Assessment after Phacoemulsification in an Urban Indian Population

VOL: 29 (7) 2003 JUL. p.1453-1454
Tan, Colin S H; Rengaraj, Venkatesh and Eong, Kah-Guan Au
-Visual Experiences of Cataract Surgery"

VOL: 29 (10) 2003 Oct. p.1852-1853
Letter
Rengaraj, Venkatesh; Kannusamy, Veena and Krishnan, Thiruvengada
-Cortical Removal Simplified by J-Cannula Irrigation

Diabetes Care

2003 Jun;26(6):1831-5.
Namperumalsamy P, Nirmalan PK, Ramasamy Kim.
-Developing a screening program to detect sight-threatening diabetic retinopathy in South India.

BMC Medical Genetics

2003 Jul 12;4(1):5.
Selvaraju V, Markandaya M, Prasad PV, Sathyan P, Sethuraman G, Srivastava SC, Thakker N, Kumar A.
- Mutation analysis of the cathepsin C gene in Indian families with Papillon-Lefevre syndrome.

British Journal of Ophthalmology

VOL: 87 (7) 2003 Jul. p.847-849
Nirmalan, P K; Padmavathi, A and Thulasiraj, R D
-Sex Inequalities in Cataract Blindness Burden and Surgical Services in South India"

VOL: 87(10) 2003 Oct. p.1235-1237
N V Prajna, R K John, P K Nirmalan, P Lalitha, M Srinivasan
-A randomised clinical trial comparing 2% econazole and 5% natamycin for the treatment of fungal keratitis

VOL: 87 (11) 2003 NOV. p.1432
Letter
Vedantham, V; Ratnagiri, P K
-Causes of Severe Visual Impairment and Blindness in Children in Ethiopia

JIMSA

VOL: 16 (3) 2003 Jul.-Sep. p.175-179
Thulasiraj, R D; Saravanan, S
-Role of Management and Personnel Training in Prevention of Blindness Programmes

Ophthalmic Surgery Lasers and Imaging

VOL: 34 (4) 2003 JUL.-AUG. p.284-290
Puthalath, Suresh; Chirayath, Anup; Shermila, M V; Sunil, M S; Ramakrishnan, R
-Frequency-Doubled Nd:YAG Laser Treatment for Premacular Hemorrhage

Ophthalmology

(American Academy of Ophthalmology)
VOL: 110 (8) 2003 Aug. p. 1484-1490
R. Ramakrishnan; Praveen K. Nirmalan;
R. Krishnadas; R. D. Thulasiraj; A James
M. Tielsch; Joanne Katz; David S.
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-Glaucoma in a Rural Population of
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Ramakrishnan; R. Krishnadas; T. K.
Manimekalai; N. P. Baburajan; Joanne
Katz; James M. Tielsch; Alan L. Robin
-Blindness and Vision Impairment in a
Rural South Indian Population: The
Aravind Comprehensive Eye Survey

Journal of Medical Microbiology

VOL: 52 (Pr 8) 2003 Aug. p.667-73.
Priya CG, Bhavani K, Rathinam SR,
Muthukkaruppan VR.
-Identification and evaluation of LPS
antigen for serodiagnosis of uveitis
associated with leptospirosis.

British Medical Journal

VOL: 327 2003 Aug. p.254
Lakshmi Rahmathullah, R. D. Thulasiraj,
Sheela Devi, Rajesh John, Karthik Prakash
et.al
-Impact of supplementing newborn infants
with Vitamin A on early infant mortality:
community based randomized trial in
southern India

Archives of Ophthalmology

VOL: 121 (11) 2003 Nov. p.1608-1612
Warren, John F Aldave, Anthony J;
Srinivasan, M; Thonar, Eugene J; Kumar,
Abha B; Cevallos, Vicky; Whitcher, John P;
Margolis, Todd P
-Novel Mutations in the CHST6 Gene
Associated with Macular Corneal
Dystrophy in Southern India

Investigative Ophthalmology and Visual Science

VOL: 44 (11) 2003 NOV. p.4639-4643
Praveen K. Nirmalan, Ramasamy
Krishnadas, Rengappa Ramakrishnan,
Ravilla D. Thulasiraj, Joanne Katz, James
M. Tielsch, and Alan L. Robin
-Lens Opacities in a Rural Population of
Southern India: The Aravind
Comprehensive Eye Study

Current Opinion in Ophthalmology

2003 Dec;14(6):371-7.
Shukla D, Rajendran A, Singh J,
Ramasamy K, Perumalsamy N,
Cunningham Jr ET.
-Atypical manifestations of diabetic
retinopathy.

CHAKSHU (Karnataka Journal of Ophthalmology)

VOL: 20 (1) 2003 p.3 Editorial
Natchiar, G
-Our Ophthalmic Responsibility towards
the Community

American Journal of Ophthalmology

VOL: 135 (6) 2003 Jun. p.830-837
Krishnadas, R. Nirmalan, Praveen K;
Ramakrishnan, R; Thulasiraj, R D; Katz,
Joanne; Tielsch, James M; Friedman, David
S; Robin, Alan L
-"Pseudoexfoliation in a Rural Population
of Southern India: the Aravind
comprehensive eye survey"

Vol. 136, No. 4 Oct. p.. 703-709
Praveen K. Nirmalan, Perumalsamy
Vijayalakshmi, Sethu Sheeladevi, Mihir B.
Kothari, Kannan Sundaresan, and Lakshmi
Rahmathullah
-The Kariapatti Pediatric Eye Evaluation
Project: Baseline Ophthalmic Data Of
Children Aged 15 Years Or Younger In
Southern India

Cornea

VOL: 22 ISS: 6: 2003 Aug. p. 576-577
case report
Moreira, Arun Thomas and Prajna, N
Venkatesh
-Acanthamoeba as a Cause of Peripheral
Ulcerative Keratitis

Med Sci Monit

2003; 9(4): CR125-129
Muthaiah Srinivasan; Sanghamitra
Burman; Celine George; Praveen K.
Nirmalan
-Non-contact lens related Acanthamoeba
keratitis at a tertiary eye care center in
south India: Implications for eye care
programs in the region

Partners in Service

Over the last 27 years a number of institutions and organizations from around the world have come forward to unite their efforts with Aravind's own mission to eliminate needless blindness. Together they made a great deal possible. Aravind gratefully acknowledges the collaboration, support, friendship and continued commitment of its many partners in sight. Their assistance by way of human resources, technical support and donations in kind have been invaluable and Aravind looks forward to strengthening these ties towards realizing its dream of better vision for all in the twenty-first century.



Dr. Balakrishnan, Dr. Arunava Kundu, Dr. Stephen McLeod, Dr. G. Venkataswamy, Dr. John Wilkins, Dr. M. Srinivasan, Dr. Jack Whitcher, Dr. Prajna, Dr. David Gritz, Dr. Scott Smith, Dr. Thomas Lietman - On the final day of Antioxidant study

FOR SERVICE DELIVERY, HUMAN RESOURCE TRAINING AND OTHER DEVELOPMENTAL ACTIVITIES

- Acumen Fund, USA
- CIDA, Canada
- Carl Zeiss, India
- CBM International, Germany
- Combat Blindness Foundation
- International Federation of Eye Banks
- World Diabetes Foundation
- Mission REACH, Council of Scientific and Industrial Research, Government of India
- International Eye Foundation, USA
- Lighthouse International, USA
- Lions International, USA
- ORBIS International, USA
- Rotary International, USA
- Seva Foundation, USA
- Seva Canada Society, Canada
- Sight Savers International, UK
- University of California at Berkeley, USA
- University of Michigan, USA

FOR RESEARCH

- Allergan, USA
- School of Biotechnology, Madurai Kamaraj University,
- University of Iowa, USA
- Council of Scientific and Industrial Research
- Indian Council of Medical Research (ICMR)
- TIFAC-CORE, Department of Science and Technology, Government of India
- London School of Hygiene and Tropical Medicine
- Proctor Foundation, USA
- School of Hygiene and Public Health, Johns Hopkins University, USA
- World Health Organisation, Geneva



Dr. Chandrashekar Shetty, Technical Advisor, SightFirst Project 32483 Dist. with Dr. P. Vijayalakshmi

Other Volunteers & Visitors



Dr.Sue Ashford and Ms.Allie Ashford with Dr.G.Venkataswamy



Dr.Paul Sieving with Dr.P.Balakrishnan in AuroLab



Dr.P.Vijayalakshmi and Dr.G.V.Rao Country Director India, with ORBIS, UK team Ms.Pam William Jones, Executive Director, Ms.Jennifer Shuttle, Program Director and Dr.Arvind Chandna, Board Member



Sir John Coles, Lady Anne Coles, Sir Nicholas Fenn with Ms.Vidhya in the hearing aid manufacturing unit of AuroLab

- Dr. Ivo Kocur, VISION 2020 Global Coordinator, WHO, Geneva
- Dr.Richard Litwin, Mrs.Judith and their daughter Julie USA, friends from Seva
- Ms.Kathryn A.Hecht, Seva Volunteer, USA, for the Curriculum Development for the Ophthalmic Paramedical Nurses.
- Ms.Jennifer Temple, New Program Officer, Seva, Berkeley
- Mr.John Barrows, Program Officer and Mr.Raheem Rahmathullah, Program Officer, Ms.Victoria Sheffield, Executive Director, International Eye Foundation were here to review the activities of the project "LAICO Capacity Building Project" and to discuss other areas of collaboration. They also came to see the performance of Ret cam purchased through IEF funding in Coimbatore. Mr.Howard Pyle, husband of Ms.Victoria Sheffield was here as a visitor.
- Dr.Sue Ashford Professor of Strategy Planning at the University of Michigan came to Aravind as a guide for the Michigan team of students.
- Monty Montoya, President, CEO, Northwest Lions Foundation, Seattle, Washington and Mr.Hal Vaugh, Lion & NLFSh Board Member, Washington, visited Aravind regarding eye banking and hearing aid.
- Ms.Cindy Harrison, Chief of Human Resources, Chelsea Community Hospital, USA came to share her experience in the field of Human Resources with us and to further develop and improve the human resources activities of Aravind Eye Care System.
- Dr.Paul Sieving, Director, National Eye Institute, USA came to visit Aravind's facilities and to discuss future tie-ups.
- Dr.Andrew Boliter, Ophthalmologist, Fred Hollows Foundation, South Africa
- Mr.Rustom Masalawala, Portfolio Manager-Health Technologies Changing Lives and Mr.Daniel Toole, Chief Operating Officer, Acumen Fund, USA. They also reviewed the telemedicine project at Aravind and the telemedicine software. They were able to witness real time patient consultations and Grand Round sessions.
- Ms.Pam Williams Jones Executive Director, OCT, Ms.Jennifer Stuttle Program Director, OCTD, Dr.Arvind Chandna Paediatric Ophthalmologist visited Aravind-Madurai along with Dr.G.V.Rao, ORBIS, New Delhi. They were here to orient themselves with ORBIS India key projects and see the quantum and quality of impact that ORBIS interventions have accrued through these projects. The OCT is providing direct funding to Paediatric Ophthalmology Learning & Training Center project at AEH, Madurai.
- Dr.G.V.Rao, Country Director and Mr.Kamlesh, Programme Officer, ORBIS, New Delhi, were here to discuss about ORBIS Paediatric Project at Aravind-Madurai and Coimbatore.
- Sir John Coles, Lady Anne Coles, Sir Nicholas Fenn, Sight Savers, UK, were here at Aravind in March. Sir Nicholas Fenn is working on a biography of Sir John Wilson. He came to see the work of Aravind and to meet Dr. V and others to get information about Sir John Wilson's connection with Aravind.
- Dr. Susan Robertson, USA came to review the CRS project.
- Dr.Jennifer M Best, London, came regarding the study on CRS – Lab Techniques

OTHER VOLUNTEERS & VISITORS



Ms. Andrea Atkinson, Mr. Michael G Daher, Mr. Joseph Gordhamer, Ms. Lori Hollander, Mr. Andrew John Margie, students from Univ. of Michigan, came to work on a project with Aravind staff on "Doctors Retention"



Mr. Steve Hilton, President of Conrad N Hilton Foundation with Dr. P. Namperumalsamy.



Catherine Michelle Karmody, ORBIS, came to orient Aravind's paramedical staff in outpatient preparation & sterilization practices



Dr. Chang visited Aravind-Pondicherry and gave lectures to Pondicherry Ophthalmic Association. He also demonstrated Surgical techniques for consultants from Madurai and Tirunelveli

- Ms. Elizabeth Lee, Senior Process Officer, CIDA.
- Dr. Astrid Fletcher, London School of Hygiene and Tropical Medicine, UK
- Mr. Matt Sieving, volunteer from USA to help in the documentation of Diabetic Retinopathy project
- Mr. Mike Myers, volunteer to implement Backtalk Conference Software at Aravind
- Mr. Colin & Mrs. Marie
- Mr. Viveka Boddipalli, Verenda Foundation, USA
- Dr. Julio Yanguela Rodilla, Spain
- Ms. Maxine Harrington, USA
- Mr. Gordon Derzon, Mrs. Gale Derzon, Mr. & Mrs. Suresh R. Chandra
- Lady Anne Prance, Chairman, IMPACT, UK, came to visit Aravind facilities, ACWCCH community projects and hearing aid project.
- Dr. Alvan Balent and Dr. Linda, USA
- Dr. Daniel Pearlman
- Mrs. Neharika Vohra, Indian Institute of Management, Ahmedabad
- Dr. Indra Man Maharajan, Himalaya Eye Hospital, Nepal
- Ms. Emilie Cassou, USA, worked on the Manual on Preparation for Outreach Programs
- Mr. S. K. Dutta, Confederation of Indian Industries, Bangalore
- Mr. T. Shankar, Management Solutions, Chennai
- Dr. T.P. Lahane, Mumbai
- Mr. Mike Brace, Zurich, came to establish a WAN (Wide Area Network).
- Sri M.V. Subbiah, Executive Chairman, from Murugappa Group of Industries
- Dr. Jignesh Parikh, Sewa Rural Hospital, Gujarat
- Mr. Moses, Photographer, Executive Director and Founder of Diversity Works, USA was here for photo documentation of Aravind.
- Dr. Rajvardhan Azad, Dr. D.B. Dayal, Dr. Arun Agarwal, Dr. Radhika Tandon, Dr. Shishir Rastogi, Dr. Achal Gulati, Dr. S.K. Mittal from New Delhi conducted the OSCE sensitization workshop held by the National Board of Examinations to Senior Examiners in the field of ophthalmology, O & G and Forensic Medicine in Aravind-Madurai.
- Mr. Ravi Saksena, Mr. Achari, Ahmedabad



Dr. Bluementhal, Prof. of Ophthalmology from Israel with Dr. G. Venkataswamy and Dr. R.D. Ravindran at Aravind-Pondicherry



Ms. Mirjam Schöning, Director and Ms. Devyani Rana Project Manager of the Schwab Foundation with Dr. G. Venkataswamy

OTHER VOLUNTEERS & VISITORS

- Dr.Lorenz E Zimmerman International Council of Ophthalmology, UK
- Prof.G.O.H. Naumann, Dr.Mrs.Naumann Dept. of Ophthalmology University Erlangen-Nurnberg Germany
- Mr.Abarbanel, Dr.Natalie Hahn, President – Hahn Associates, NY, USA
- Mirjam Schöning, Director and Devyani Rana Project Manager of the Schwab Foundation visited Aravind and LAICO to see the work done by Aravind Eye Care System.

'Dr. Paul Courtright, KCCO, Tanzania, Ms. Ida Paul, KCCO, Tanzania, Mr. R.P. Kandel, Seva Kathmandu, Ms. Karen Cardiff, University of British Columbia, Vancouver, Canada, Dr. Ken Bassett , BCCEIO, UBC, Vancouver, Canada, Dr Suzanne Gilbert, Dr. Chundak Tenzing, and Ms. Dechen Tsering from Seva Foundation, US, were all here from September 29 to October 4, to visit the community ophthalmology field site at Kariapatti and interact with staff and people in the communities there to better understand the community ophthalmology work currently being done through Aravind Eye Care System. During this visit, they also made presentations regarding the community ophthalmology work they do in their respective countries . The discussions also focused on means to develop a community ophthalmology network for developing countries.'



Dr.Aravind presenting Aravind Eye Care System facilities to visiting ORBIS Taiwan team



Mr.Amichai Treves, Mr.Sridhar Varadarajan, Ms.Juan Bailen and Ms.Karen Sharp University of Michigan students with Aravind-Coimbatore staff

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The Royal College of Ophthalmologists, London, UK

MS in Ophthalmology



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Dr. Prashant Raphael



Dr. Aravind P.M.



Dr. Sathian N.



Dr. Malar Magal S.



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Dr. Subhashis Mukherjee



Dr. Dina Vikram



Dr. Abhayan Kumar



Dr. Vivek P.S.



Dr. Amit Basia

D.O. Diplomate in Ophthalmology



Dr. Anil Kumar Gurda



Dr. Bansal Rasheena



Dr. Khairatkar Sarita Shashikant



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