





As so he grew into his larger self,
Humanity framed his movements less and less,
A greater being saw a greater world.
A fearless will for knowledge dared to erase
The lines of safety reason draws that bar
Mind's soar, soul's dive into the Infinite.
Even his first steps broke our small earth-bounds
And loitered in a vaster freer air.
In hands sustained by a transfiguring Might
He caught up lightly like a giant's bow
Left slumbering in a sealed and secret cave
The powers that sleep unused in man within.
Book I The Book of Beginnings
Canto III The Yoga of the King: The Yoga of the Soul's Release



building institutions is all about building people...

"The same way you train somebody for the Olympics
- a leader must train everybody. Every day you coach him,
guide him, play with him so you can develop him quickly as a
top player. And then there must be an internal motivation also
- he must develop a physical stamina, a mental capacity and a
vision. This our doctors feel, and they carry this all their lives.
The whole society has the potential to change when one institution
shows positive change. It becomes a sort of a benchmark for
other people to do it also."

- Dr V, on Mentorship

Activity Report 2009 - 2010

(From April 1, 2009 to March 31, 2010)

Contents

Highlights 2009-10	07
Performance	13
Community Outreach	15
Education and Training Programmes	19
Lions Aravind Institute of Community Ophthalmology	29
Information Technology and Systems	40
Aravind Communications	42
Human Resources	42
Rotary Aravind International Eye Bank	45
Dr. G. Venkataswamy Eye Research Institute- Aravind Medical Research Foundation	47
Aurolab	53
Awards and Recognitions	56
Partners in Service	58
Trustees and Staff	59

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Aravind Eye Care System

Mission:

To eliminate needless blindness . . .

- . . . by providing compassionate and high quality eye care for all ARAVIND EYE HOSPITALS
- . . . through teaching, training, capacity building, advocacy, research and publications
 LIONS ARAVIND INSTITUTE OF COMMUNITY OPHTHALMOLOGY
 (LAICO)
- ... by providing evidence through research and evolving methods to translate existing evidence and knowledge into effective action
 - DR. G. VENKATASWAMY EYE RESEARCH INSTITUTE, ARAVIND MEDICAL RESEARCH FOUNDATION
- ... by making high quality ophthalmic products affordable and accessible worldwide AUROLAB
- ... by reducing corneal blindness through eye banking activities, training, research and public awareness programmes

ARAVIND EYE BANKS



"THERE IS A NATURAL LAW,
A DIVINE LAW, THAT OBLIGES
YOU AND ME TO RELIEVE
THE SUFFERING, THE DISTRESSED
AND THE DESTRUTE"

Highlights 2009-10

A Model with Global Relevance

At the core of the Aravind Model is a design sense rooted in compassion that creates a win-win proposition for all stakeholders-its patients, the broader community, its employees, its supporters and the hospital system. It is a nonexploitative model built on a set of strong values, ensuring all participants experience distinct benefit and a meaningful return on their investment and involvement. This approach has ensured that the Aravind Eye Hospitals continue to be financially viable, purely through internal income generation in spite of the fact that close to 60% of its patient services are provided either free or at a steeply subsidised rate. Aravind's work has caught the attention of influential business communities and

diverse health systems in different countries, all of whom are striving to find innovative methods to serve those at the base of the pyramid, in a viable manner. Today Aravind is featured in case studies at most leading business schools around the world. The increasing global relevance and recognition of its model was again evidenced last year when the organisation received 'The Gates Award for Global Health'. This year, the Aravind Eye Care System was chosen as the recipient of the prestigious 'Conrad N. Hilton Humanitarian Prize', an acknowledgement that transcends health care boundaries and demonstrates the bearing this approach has on a wider stage. 'Fast Company', the notable business magazine that tracks cutting-edge advancements globally, listed Aravind prominently in their 2010 listing of "Innovation All-Stars", a tribute to the most innovative companies in the world. These recognitions not only honour our past work, but also serve as a strong reminder of what made this all



Dr. P. Namperumalsamy, Chairman - AECS, with Dr. William H. Foege, Senior Fellow at the Gates Foundation and Mr. Steven M. Hilton, President and CEO-Conrad N. Hilton Foundation

possible. They help reinforce the path that Aravind must continue to tread in the years to come.

A Progressive Approach to Community Outreach

Over the years Aravind's outreach activities have continued to advance, adopting new processes and technologies as they become available, in an endeavour to reach the unreached and provide comprehensive eye screening for all. Today its outreach services have evolved to routinely provide specialised diagnostic services to specific target groups such as children, diabetics and industrial workers. In recent years, Aravind has placed emphasis on establishing permanent primary eye examination centres in small towns that serve as hubs for surrounding rural areas. This is reflected in the establishment of 32 Aravind Vision Centres, each linked to one of Aravind's base hospital's using low cost telemedicine technology to provide real time patient



Inauguration of the awareness rally on World Diabetes Day organised by Aravind-Tirunelveli

consultations. As a new venture, Aravind with support from Essilor India launched a Mobile Refraction Unit in Theni thus making it possible for villagers to undergo basic eye examinations and refraction tests at their doorstep. These sustained and diverse initiatives have collectively heralded a positive change in the health seeking behaviour of the community and have been responsible for a significant increase in the number of direct walk in patients-both paying and free. This has ensured uninterrupted growth in Aravind's patient volume even when there were issues in conducting outreach camps due to government restrictions etc.

Recognising that the incidence of diabetes would increase exponentially, Aravind made this a focal area of its work almost a decade ago. Over time the emphasis has grown beyond effective service delivery to bold initiatives for remote diagnostic services, as well as developing affordable diagnostic and treatment devices for Diabetic Retinopathy, including a low-cost laser and fundus

Dr. Manohar Babu with the local school students at the second anniversary celebrations of Kinathukkadavu Vision Centre



camera. Basic research in the field is also underway, and in addition Aravind is helping other centres set up effective programmes for managing Diabetic Retinopathy. This work has now transcended the borders of India with technical support being provided to organisations in Bangladesh and China for the establishment of community oriented Diabetic Retinopathy services.

Breaking Records, Going Beyond Numbers

Aravind Eye Care System's core purpose is to provide eye care to the community and to do so proactively. Thus a simple measure of achievement of this purpose is the number of patients served and growth in volume. During the course of this year, as in past years, communications from each of Aravind's hospitals and from departments within them stated that their previous records for patient volumes had been broken. This typically happens several times during the course of the year as new records get set. Of far more importance than the mere numbers, is

Mr. P. Muthuveeran, District Collector-Theni launching the Mobile Refraction Unit





the sense of fulfilment and joy among the staff when such milestones are crossed. This is a true testimony to the continued spirit of service at Aravind. It is this spirit and the compassion that stems from it, that has helped the hospital network, its outreach services and its two managed hospitals handle 2,539,615 outpatient visits and perform 302,180 surgeries and laser procedures during the current year.

In addition to direct patient care, Aravind is committed to sharing the benefits of its experience with others, as well as to contributing to the body of existing knowledge in the field of eye care. Towards these ends, the staff continues to make hundreds of presentations at a host of workshops and conferences both in India and other countries. The number of Aravind publications this year in peer reviewed journals alone was 48 making it the highest in number and in impact factor from an institution in India. The commissioning of the new

"Dr.G.Venkataswamy Eye Research Institute" with additional space and enhanced research facilities has significantly increased Aravind's research potential and will no doubt contribute to bettering eye care in the local context.

In order to cater to the growing demands of the patients, staff and volunteers, various infrastructural developmental activities were undertaken at AECS during the year 2009–2010. Aravind Library and Information Centre, moved to the spacious premises of Dr. G. Venkataswamy Eye Research Institute on August 17, 2009. The newly built PG hostel and staff quarters were opened at Aravind–Coimbatore and in Madurai the international hostel "Inspiration" which can house close to 80 people is getting ready for occupation. Besides the inauguration of a Zyoptix LASIK Centre with an Orbscan at Aravind–Tirunelveli, extensive renovations were done to double the outpatient area and provide better patient amenities.







Aravind Library and Information Centre in the new premises

Helping Others Help Others

LAICO continues to provide "organisation development" services to other eye hospitals and during the year, nine eye hospitals enrolled. Each such enrolment entails individual site visits to understand the eye hospital's particular needs and opportunities; helping their staff set visionary targets that reflect the needs of the community, assisting them in the creation of actionable strategic plans, providing them technical and training support for implementation and finally onsite support through a follow up visit.

In recent years, recognising the need for strong evidence-based practices and human resources, LAICO has expanded its activities to promote research as well as help organisations engaged in training to achieve excellence. Each year, LAICO pays homage to the innovative spirit of Dr. G. Venkataswamy through a unique event in October that coincides with Dr. V's birth anniversary. Dubbed the

October Summit, this series of workshops and consultations focuses on neglected areas fundamental to improving eye care with an aim to develop better insights and brainstorm possible solutions. The 2009 October Summit encompassed five main areas-How to create enabling environments for the delivery of eye care, Influencing sustainable change, Patient empowerment, Knowledge management and Identifying the real bottlenecks and constraints in the implementation of the National Plans to ensure that the revised national plans incorporate solutions to address them.

Recognising that the availability of well-trained mid-level ophthalmic personnel is a bottleneck, Sightsavers International and LAICO worked with other stakeholders to develop national consensus on the training and development of Ophthalmic Technicians who will work in hospital and community settings. A common curriculum and assessment methodology has been developed and submitted to the government with recommendation for adoption nationwide.

As an early adoptor of Information Technology since 1983, Aravind continues to innovate in the deployment of this rapidly developing resource. Today Aravind implements IT solutions in very unconventional ways to enhance patient reach, improve quality, manage waiting time and much more. Such developments are also widely shared with other eye programs in India and other countries. Its approach to technology has helped Aravind continue

Mr. R.D. Thulasiraj and Mr. Ganesh Babu at the NASSCOM-CNBC IT User Award ceremony



to be highly efficient and has brought it several recognitions as well, the most recent being the "NASSCOM-CNBC IT User Award – 2009".

New Initiatives

Aravind instituted a lecture in memory of its founder Dr. G. Venkataswamy who pioneered a unique, self-sustaining model of eye care delivery and left an enduring legacy to the world of ophthalmology. The honour of delivering the inaugural Dr. G. Venkataswamy Memorial Oration was conferred on Dr. Morton F. Goldberg, in recognition of his outstanding contributions to vision sciences and his selfless efforts towards the goal of eliminating needless blindness.

When Mr. Manohar Devadoss (a long-time friend of Aravind) approached Aravind with a generous contribution in memory of his wife Mahema, a spontaneous decision was made to use it to establish the Mahema Devadoss Dr. Endowment Fund to honour this deeply inspiring couple. The fund will specifically support and promote low vision services.

Years of efforts came to fruition with the release of Atlas of imaging in Neuro-Ophthalmology and Orbit, which provides valuable insight to ophthalmologists and radiologists, and is geared at enhancing their competence and skill in interpreting CT and MRI images with relation to Neuro-ophthalmic and Orbital disorders.

Recognising the global need and demand for developing skills in instruments maintenance, the DVD on this subject has now been made available in multiple languages-English, Spanish & French. Efforts are currently underway to make it available in Chinese as well.

In continuation of Aravind's focus on quality maintenance, a new initiative Total Quality Management (TQM) method has been adopted in IOL clinic, operation theatre, wards and medical records department since December.

Manufacturing for a Mission

In the year 2009-2010 Aurolab continued to forge ahead in its contributions to Aravind's mission of affordable, high quality eye care for all. Its various divisions launched a series of new ophthalmic products and pharmaceuticals, including Aurolac (a lacrimal intubation set), Nanocut



Dr. P. Namperumalsamy and Mr. G. Srinivasan presenting Dr. G. Venkataswamy Memorial Oration Award to Dr. Morton F. Goldberg

(superior technology blades) and Auroprost (eye drops for glaucoma treatment). The latter has the distinction of being the only affordably priced product of its kind available today. Audits that awarded CE and ISO certification to a wide range of Aurolab products were conducted, and the organisation's presence at leading ophthalmology conferences across the world helped strengthen its international reach.

The Road Ahead

Building an institution that lasts far beyond an individual's lifetime is an important aspiration harboured by founders of all service-minded organisations and Aravind Eye Care System is no exception. In the last decade, including the four years since the passing away of its remarkable founder Dr. G. Venkataswamy, Aravind has continued to grow and to make impressive progress under the leadership of the other members of its founding team, headed by Dr. P. Namperumalsamy. As the organisation now charts its course into a rapidly changing future it will be called upon countless times to push its boundaries, reinvent itself and respond to the evolving needs of the communities it serves. Stepping into this New Year Aravind will strive as always, to navigate the road ahead with a renewed commitment to the unchanging values at its core.



Performance: April 2009 - March 2010 Aravind Eye Hospitals (Includes Aravind Managed Eye Hospitals (AMEH)*)

	Madurai	Theni	Tirunelveli	Coimbatore	Pondicherry	AMEH	Total
OUT PATIENTS							
Paying (new + review)	447,908	71,406	224,331	302,555	204,064	91,318	1,341,582
Free (new + review)	138,918	19,811	65,148	100,652	62,994	-	387,523
OUTREACH							
Comprehensive free eye camps	107,957	24,186	47,248	83,997	58,167	49,451	371,006
Diabetic retinopathy screening camps	4,037	4,419	2,069	22,011	4,756	271	37,563
Refraction camps	23,589	3,650	7,225	14,023	7,645	5,242	61,374
School eye screening - base hospitals	8,234	527	4,343	3,708	5,098	2,375	24,285
School eye screening - vision centres	1,178	4,468	1,146	1,507	700	-	8,999
Paediatric eye screening	2,317	1,187	1,534	681	1,229	-	6,948
Mobile van DR screening camps			301	2,241		-	2,542
Vision centres	46,446	41,619	33,932	18,413	19,224	-	159,634
Community eye clinics	62,126	16,414	30,797	28,822	-	-	138,159
TOTAL OUTPATIENT VISITS	842,710	187,687	418,074	578,610	363,877	148,657	2,539,615
SURGERIES							
Paying	58,620	5,107	20,312	33,175	18,011	5,805	141,030
Free (direct + camp)	60,635	5,596	20,797	40,959	22,755	10,408	161,150
TOTAL SURGERIES	119,255	10,703	41,109	74,134	40,766	16,213	302,180
SURGERIES IN DETAIL							
Cataract surgeries	77,831	8,525	28,541	47,028	27,536	13,020	202,481
Trab & combined procedures	2,528	149	1042	2,067	667	347	6,800
Retina & vitreous surgery	3,114	12	397	2,401	866	708	7,498
Squint correction	884	0	245	641	110	4	1,884
Keratoplasty	922	0	122	577	187	1,34	1,942
Pterygium	1,437	110	205	905	587	300	3,544
Ocular injuries	367	11	94	375	375	0	1,222
Lacrimal surgeries	2,956	100	872	960	757	32	5,677
Other orbit and oculoplasty surgeries	3150	196	790	1,873	791	371	7,171
OTHER SURGERIES	1,552	1,30	498	1,588	1,145	627	5,540
Laser procedures	22,518	1,470	7,725	14,895	7,166	670	54,444
LASIK refractive surgery	1,996	0	578	824	579	0	3,977
TOTAL SURGERIES	119,255	10,703	41,109	74,134	40,766	16,213	302,180

^{*} AMEH - Priyamvada Birla Aravind Eye Hospital, Kolkatta, West Bengal and Sudharshan Nethralaya, Amreli, Gujarat, India



Community Outreach

Community outreach contributes to about 40% of the total cataract volume and 27% of total ophthalmic surgeries performed at Aravind Eye Hospitals. Over the years, outreach at Aravind has extended its activities to establishing vision centres apart from conducting eye camps, to further reach all sections of the community including all age groups.

Vision Centres

Two new vision centres were established this year one at Alandurai and the other at Sattur.

The first vision centre under the roof of community outreach was started in 2004 in Theni district of Tamilnadu. Since then the outreach department has scaled up its activities and until March 2010, 32 vision centres have been established to cater to the ophthalmic needs of rural Tamil Nadu and six community eye clinics that target a semi urban population.

Dr. K. Rangarajan and Dr. S. Selva Sundari at the inauguration of the Vision Centre at Sattur



Eye Care Education through Vision Centres

Community outreach department sets goals for all kinds of outreach activities annually. Since vision centres are established for every 50,000 or slightly larger population, the enhanced level of penetration helps achieve the objectives of eliminating needless blindness. Apart from screening patients, the vision centres and community eye clinics conduct periodical eye health awareness campaigns and speciality eye screening programes on the occasion of World Glaucoma Day, World Diabetes Day etc. The key objective is the comprehensive coverage of eye problems like cataract—curable, glaucoma and diabetic retinopathy—preventable and rehabilitation services for the low vision patients and the incurably blind.

Launch of Mobile Refraction Services

Aravind Eye screening camps in Theni district contributes to over 75% of the district cataract surgeries annually. Blindness due to Refractive Errors is rapidly increasing and in Theni it is estimated that 286,000 people have refractive errors and only about 10 to 15% of them use eye glasses. Realising the magnitude of the problem and to address the same, Aravind – Theni with support from Essilor India launched Aravind Essilor Mobile Refraction Unit–a van with all the necessary equipment and spectacles preparation machinery on March 26.

World Glaucoma Day at Aravind-Tirunelveli



Outreach Performance

	Madurai	Theni	Tirunelveli	Coimbatore	Pondicherry	Total
1. Regular Comprehensive Eye Camps					•	
Camps	362	109	266	365	237	1,339
Patients examined	107,957	24,186	47,248	83,997	58,167	321,555
Glasses advised	20,671	6,826	10,083	15,707	13,676	66,963
Glasses ordered	17,779	6,119	8,166	12,206	10,418	54,688
On the spot deliveries	13,255	3,815	6,475	9,787	7,318	40,650
Percentage	75%	62%	79%	80%	70%	74%
2. Diabetic Retinopathy Screening Camps						
Camps	27	21	15	143	24	230
Patients screened	4,037	4,419	2,069	22,011	4,756	37,292
Diabetics identified	2,237	1,845	773	4,746	1,526	11,127
DR Patients Identified	309	301	132	1,016	321	2,079
				,		•
3. Refractive Error Camps	01	10	42	21	20	221
Camps	91	18	43	14.022	38	221
Patients examined	23,589	3,650	7,225	14,023	7,645	56,132
Glasses prescribed	7,213	923	2,507	3,680	3,123	17,446
Glasses ordered	6,396	847	2,094	2,701	2,690	14,728
On the spot deliveries	3,895	511	1,621	800	1,569	8,396
Percentage	61%	60	77	30	58	57
4. Eye Screening of School Children - Base Hospital						
Schools	59	5	29	18	29	140
Teachers trained	356	73	137	62	78	706
Children screened	8,234	527	4,343	3,708	5,098	21,910
Children with eye defects	3,918	316	1,991	629	1,958	8,812
5. Eye Screening of School Children - Vision Centre						
Schools	9	132	11	6	6	164
Teachers trained	51	10	28	42	7	138
Children screened	1,178	4,468	1,146	1,507	700	8,999
Children with eye defects	494	2,185	545	320	313	3,857
·		,				-,
6. Paediatric Camps	11	8	8	9	7	43
Camps Children examined				681		
Refractive error	2,317 385	1,187 107	1,534 64	127	1,229 447	6,948 1,130
Glasses prescribed	349	67	45	44	447	547
Glasses prescribed Glasses ordered	349	60	17	24	27	477
Other defects identified	111	-	92	93	180	477
	111		92	93	100	470
7. Mobile Van DR Screening Camps						
Camps	-	-	3	8	-	11
Patients screened	-	-	301	2,241	-	2,542
Diabetics identified	-	-	153	338	-	491
DR patients identified	-	-	115	57	-	172
8. Vision Centres						
Centres	8	8	5	5	5	31
New + review	46,446	41,619	33,932	18,413	19,224	159,634
Outpatients / day / vision centre	18	17	22	12	12	17
9. Community Eva Clinics						
9. Community Eye Clinics Centres	2	1	1	_	_	4
New + review	37,409	16,414	2,460	-	-	56,283
Outpatients / day / community eye clinics	37, 4 09 60	53	39	_	-	50,263
10. City Centre	00	23	39			57
No. of centres	1		1	1		2
					-	91 976
New + review	24,717	-	28,337	28,822	-	81,876
Outpatients / day/ City Centre	80	-	97	93	-	88



During the camp organised in Lakshmipuram at the launch of the mobile refraction van

SightFirst Seminars for Eye Care Awareness

To create awareness about eye problems among the team of President, Secretary and Treasurer of Lions Clubs, seminars are conducted annually. The seminar focuses on common eye problems, service opportunities and the role of Lions clubs in serving the poor blind community under SightFirst Programme— a global Lions Initiative. Three such seminars were conducted during the last year at Madurai, Tirunelveli and Theni.

Outreach for Persons with Low Vision and for the Incurably Blind

For the first time, a camp for the blind and persons with low vision was conducted at Tirupuvanam. List of irreversibly blind and low vision persons in the area was gathered through key informant method and all the identified were informed ahead. A total of 31 patients attended the camp. Dr. Ilango Medical Officer, Low Vision Clinic examined the patients. Patients with incurable blindness were referred to the Sivagangai District Rehabilitation Centre for disability benefits. Magnifiers were provided to patients who had scope for vision improvement. Patients who had residual vision with curable blindness were referred to the base hospital for further intervention.

At the Tirupuvanam camp for the blind and persons with low vision



DIABETIC RETINOPATHY INITIATIVES

Diabetic Retinopathy has been evolving as a leading cause of blindness amongst the middle aged population globally. The emerging scenario in the developing world suggests that diabetes and blindness secondary to Diabetic Retinopathy may soon be a major problem in this part of the world as well. Aravind developed a working model in 2004 for awareness creation, service delivery and tertiary care in Diabetic Retinopathy, to promote early diagnosis and thus reduce its burden in future.

TIFAC-CORE Phase II

The TIFAC-CORE Phase II was completed in March 2010. The main objectives were to enhance research in Diabetic Retinopathy through basic research – Molecular genetics and immunology, and Proteomics and early diagnosis of Diabetic Retinopathy and to develop human resource through various training programmes.

Under the Phase II of TIFAC-CORE, in addition to the regular training courses, the following three new courses were introduced:

- Short term training in vitrectomy (Virtual).
- Molecular genetic methods in diabetic retinopathy
- Flow cytometry and its applications in ophthalmic research

Product Development

As one of the industrial partners of TIFAC-CORE in Diabetic Retinopathy, Aurolab has developed Aurolase 532 Green Laser Photocoagulator for using in Diabetic Retinopathy treatment. For the promotion and marketing of this Green Laser Photocoagulator, the Aurolab laser marketing team visited various eye hospitals and ophthalmic conferences. Based on the input from many ophthalmologists, the team identified the need to

Dr. VR. Muthukkaruppan, Dr. R. Kim, Dr. P. Sundaresan with the TIFAC team at the TIFAC-CORE Phase II meet





Demonstration of Aurolase 532 Green Laser Photocoagulator

provide Laser Indirect Ophthalmoscope (LIO) and Laser Endoprobes as accessories along with the laser unit. Aurolab initiated a development program to add the LIO and Endoprobes to the laser product range.

International Symposium on Diabetic Retinopathy and Retinal Vascular Diseases

January 9 - 10

TIFAC-CORE in Diabetic Retinopathy organised an International Symposium on Diabetic Retinopathy and Vascular Diseases at Aravind Eye Hospital, Madurai in collaboration with Beetham Eye Institute and Joslin Diabetes Centre, Boston, USA.

Diabetic Retinopathy Clinical Research Network (DRCR.net)

The Diabetic Retinopathy Clinical Research Network (DRCR.net) established in September 2002 is a collaborative network dedicated to facilitating multicentric clinical trials in the management of Diabetic Retinopathy. The DRCR.net supports the identification,

design, and implementation of multicenter clinical research initiatives focused on diabetes-induced retinal disorders. This network which was limited to U.S centres only has now been extended outside U.S for the first time and, Aravind Eye Hospital is included in the set up. The official announcement regarding this came on October 5, 2009. The Department of Biotechnology, Government of India has given approval for the DRCR Network at Aravind.

Observation Visit

A team from Orbis Bangladesh partner organisations visited Aravind from 14-18th August to get orientation on Diabetic Retinopathy projects.

Follow-up visit to Eli Lilly Diabetic Eye Disease Centre

Beijing, China, December 20 - 24

The objective of the visit was to provide consultation to achieve the specific goals for which ELDEDC is set up in order to promote Diabetic Retinopathy services in China. The Aravind team consisting of Dr. K. Naresh Babu, Retina Consultant, Aravind - Madurai and Mr. V. Vijayakumar (Faculty, LAICO) assessed the performance of the ELDEDC, extent to which the strategies/recommendations and action plans have been implemented, challenges faced and the impact.

World Diabetes Day Observation

World Diabetes Day was observed at all Aravind Hospitals on November 14 to create awareness among the public about diabetes and its complications. The theme of this year's World Diabetes Day campaign was "Diabetes education and prevention". Various camps, seminars and lectures were organised as part of the programme.

Awareness and Diabetic Retinopathy screening camp by Aravind-Madurai - part of World Diabetes Day observations



Education and Training Programmes

Aravind offers various courses, long and short term, designed for ophthalmologists and paramedics as well as administrators and technicians. Participants from across the world attend the programmes here and take home the principles to replicate the success of Aravind in their respective areas.

INTERNAL CAPACITY BUILDING

Ms. Nithya Neelakantan, Biostatistician, LAICO attended a short term training program on 'Data Management Techniques and Statistical Analytic Methods' at the Department of Biostatistics-Collaborative Studies Coordinating Center (CSCC), School of Public Health, University of North Carolina, USA from March 15 to April 30.

Dr. K. Nirmala Devy, Medical Officer, Neuro Ophthalmology Clinic, Aravind – Pondicherry underwent observership on Neuro ophthalmology under the guidance of Dr. Edward Margolin from October 30 – November 21 at Mount Sinai Hospital. She had an observership on vision rehabilitation at Toronto Western Hospital and under the guidance of Dr. Samuel Marcowitz at the Canadian National Institute of Blindness, Toronto.

Dr. K. Nirmala Devy with Dr. Samuel Marcowitz and his team



Dr. Anand Rajendran, Retina Consultant,
Aravind – Madurai underwent training on new generation
Optical Coherence Tomography (OCT) and Age-related
Macular Degeneration (ARMD) management at Doheny
Eye Institute, Los Angeles from October – December. He
had interactions with experts on ocular oncology and
artificial vision prosthetic devices. He got himself updated
on macular diseases and had discussions with some
renowned ophthalmologists on various topics at
Bascom – Palmer Eye Institute, Miami.

MAJOR CONTINUING MEDICAL EDUCATION PROGRAMMES ORGANISED AT ARAVIND

Glaucoma Surgical Symposium

Aravind-Pondicherry, July 18 – 19

A total of 110 delegates from outside and 40 delegates from Aravind attended the CME Programme. The guest faculty included Dr. Scharioth Gabor, Germany, Dr. Amy Hennessy, Baltimore, USA, Dr. Tanuj Dada and Dr. Devender Sood from New Delhi, Dr. Sridhar Rao, and Dr. Murali Ariga from Chennai. A wide variety of topics focused on surgical management were covered, which included optimising trabeculectomy success, minimising complications with trabeculectomy, over filtering bleb, managing a failing filter, managing cataract and glaucoma, managing paediatric glaucoma and angle closure glaucoma. Sessions were also held on Non Penetrating Filtering surgeries, Valves and Tubes in glaucoma. At the session on live surgery Trabeculectomy, Phaco/ Trab (single site and Twin site) and Canaloplasty were demonstrated.

Optocon 2009

Aravind-Madurai, September 12 – 13, 2009

A CME was organised by Aravind School of Optometry on optometry, contact lens and low vision aids from September 12-13. The key note address was given by Prof Jay. M. Enoch from University of California, Berkeley.



CANDIDATES TRAINED 2009-2010

Name of the Course	Duration	Total
POST GRADUATE COURSES		
Diploma in Ophthalmology (D.O)	2 years	8
Master of Surgery in Ophthalmology (M.S)	3 years	6
Diplomate of the National Board (Dip.N.B)	3 years	11
Post DO DNB	2 years	11
LONG TERM - OPHTHALMOLOGY FELLOWSHIP	•	
Retina - Vitreous	2 years	11
Anterior Segment / Intraocular Lens Microsurgery	2 years	11
Glaucoma	2 years	13
Cornea	18 months	
Paediatric Ophthalmology and Strabismus	18 months	. •
Orbit and Oculoplasty	18 months	_
Uvea	18 months	_
Comprehensive General Ophthalmology	2 years	1
•	•	•
SHORT TERM - FELLOWSHIP (ONLY FOR INTERNATIONAL CA	6 months	1
Orbit and Oculoplasty	6 months	I
SHORT TERM - CLINICAL COURSES		
IOL Microsurgery	1 month	22
Small Incision Cataract Surgery	1 month	38
Phacoemulsification	1 month	48
Diagnosis and Management of Glaucoma	2 months	42
Lasers in Diabetic Retinopathy Management	2 months	42
Low Vision	1 month	7
Orientation to Paediatric Ocular Anaesthesia		
for Anaesthetics	1 month	1
LONG TERM - PARAMEDICAL COURSES		
Diploma in Ophthalmic Techniques	2 years	62
SHORT TERM - PARAMEDICAL COURSES		
Optical Dispensing	3 months	18
OT Techniques	2 months	8
Refraction Techniques	2 months	8
Training for Orthoptist	6 months	7
Training for Paediatric Nurses	3 months	7
Training for Paediatric Counsellors	2 months	2
Training for Ocularist	3 weeks	3
Fundus Angiography and Ultrasonography	2 months	4
MANAGEMENT COURSES		
Management Training for Eye Care Programme Managers	2 weeks	36
Management Priorities in Eye Care Delivery	1 week	20
Eyexcel-Expanding Global Eye Care Workforce through		
Excellence in Training	4 days	39
Management Training and Systems Development	, .	
for Hospital Administrators or Managers	6 weeks	14
Medical Records Management	1 month	4
Project Management Training for Eye Care	4 weeks	13
Workshop on Research Methodology	5 days	21
Instruments Maintenance for Technicians	6 weeks	40
Instruments Maintenance for Ophthalmologist	5 days	1
Community Outreach and Social Marketing of	•	
Eye Care Services	4 weeks	18
TOTAL		622



Prof Jay M. Enoch, University of California addressing the audience at Optocon 2009 through videoconferencing

The inauguration was followed by a day long scientific programme with four sessions on general refraction, optical dispensing, contact lens and low vision aids. Hands on training sessions were also a part of the programme. More than 200 delegates participated in the CME.

Update in Ophthalmology for Postgraduate Students

Aravind - Tirunelveli, October 5 - 9

A total of 46 Post Graduate students in ophthalmology attended the update. Senior Aravind faculty and experts from outside discussed the recent advances and developments in their respective fields.

CME on Child Blindness and Eye Health

Aravind - Madurai, December 12

A2Z, the United States Agency of International Development (USAID) Micronutrients Sight Innovation Project managed by Academy for Educational Development (AED) supports Paediatric Department of Aravind Eye Hospital, Madurai in the eye care programmes on school based screening for refractive error, paediatric cataract surgery and Retinopathy of Prematurity (ROP) screening at Neo-natal Intensive Care Units.

During the CME on Child Blindness and Eye Health





Guest Faculty with the Aravind team at the International Symposium on Diabetic Retinopathy and Retinal Vascular Diseases

As part of this project, a CME was jointly organised by Aravind Eye Hospital - Madurai, Indian Academy of Paediatrics - Madurai Branch and Institute of Child Health and Research Centre, Government Rajaji Hospital. Madurai. Around 45 Paediatricians and Postgraduate students attended the programme. A practical demonstration of fundus pathology using model eye was arranged at the end of the programme.

International Symposium on Diabetic Retinopathy and Retinal Vascular Diseases

January 9 – 10

The Symposium was organised by TIFAC-CORE in Diabetic Retinopathy at Aravind Eye Hospital, Madurai in collaboration with Beetham Eye Institute and Joslin Diabetes Centre, Boston, USA. Around 180 participants including ophthalmologists, postgraduates, consultants, diabetologists, postgraduates in genetic studies from various hospitals and institutions across India participated in the symposium. Eminent international and national faculty delivered lectures in the symposium.

Apart from these, Aravind – Pondicherry conducted two CMEs, one on Recent Trends in Ophthalmic Care (April 19) and the other on Paediatric Ophthalmology (June 21) for the general physicians in and around Pondicherry.

CONFERENCES ATTENDED ELSEWHERE

In the year ending March 2010, Aravind doctors and senior managers made over thirty paper presentations at the Tamil Nadu Ophthalmic Association (TNOA) Conference held in Coimbatore and around forty five at the prestigious All India Ophthalmic Society (AIOS) Conference held in Kolkata. Apart from these they participated in several state level conferences across India. Listed below are the national level clinical society meetings and international conferences attended by Aravind staff:

American Society of Cataract and Refractive Surgeons

San Francisco, USA, April 3 – 8

Dr. Haripriya

- Comparing the safety and efficacy of 3 phaco techniques
- Capsule fixation devices to aid safe phaco in subluxation SICS in difficult situations and quality assurance in high volume system

Lead instructor for the Course on Posterior Capsule Rupture and Zonular Dialysis Management.

Dr. R. Venkatesh

 Torsional phaco for small pupil in a course on torsional phaco for challenging cases

14th Annual International Meeting of the American Telemedicine Association

Las Vegas, USA, April 26 – 28

Dr. R. Kim

Tele-health primary, secondary and tertiary eye care in India

Association for Research in Vision and Ophthalmology

Fort Lauderdale, USA, May 3 – 7

Dr. Badrinath Talwar

- Risk factors for cataract in the INDEYE study

24th Congress of the Asia-Pacific Academy of Ophthalmology

Bali, Indonesia, May 16 - 19

Dr.R.Kim, Dr. Ravindranath Reddy and Dr. R. Meenakshi participated in the 24th Congress of the Asia-Pacific Academy of Ophthalmology conference held at Bali.

Participants of 20th Update in Ophthalmology for Postgraduate Students at Aravind-Tirunelveli



Annual Meet of Canadian Ophthalmological Society

Toronto, Canada, June 20 - 23

Dr.Venkatesh

 Manual sutureless cataract surgery - A practical short course for phaco surgeons

World Glaucoma Congress

Boston, USA, July 8 - 11

Dr. S. Kavitha

Poster presentation - Mitomycin C augmented trabeculectomy with single site manual small incision cataract surgery - a retrospective analysis.

Case report titled Topiramate induced bilateral angle closure glaucoma

Dr. R. Ramakrishnan

Managing trabeculectomy complications

Chaired the session on Glaucoma surgery basics

Dr.Manju Pillai

Video presentations

- Training to tackle glaucoma in the developing world.
- Combating glaucoma blindness reaching the undetected

She also visited massachussets eye and ear infirmary and met Dr. Wallace Lee Alward, Dr. Fingert, Dr. Kwong and Dr. S.S. Hayreh at the university of IOWA.

Indian Council of Medical Research (ICMR) Registry Meetings

Dr. Usha Kim and Dr. P. M. Aravind participated in the National Retinoblastoma Registry Meetings on July 27 and March 26, 2010 respectively and Dr. R. Kim attended the Retinitis Pigmentosa (RP) Registry Meeting held under ICMR at New Delhi on February 25, 2010.

Nystagmus Research Group Meeting

Oxford, UK, September 2 – 5

Dr. Shashikant Shetty participated in Nystagmus Research Group meeting at Oxford. He also visited Leicester Infirmary hospitals for observation under the guidance of Prof. Irene Gottlob.

Dr. R. Ramakrishnan, Dr. Manju R. Pillai and Dr. S. Kavitha with Mrs. Barbara Shingleton, Dr. Bradford Shingleton at the World Glaucoma Congress held at Boston, USA



World Congress of Paediatric Ophthalmology and Strabismus (WCPOS) Conference

Barcelona, Spain, September 12 – 14

Dr. P. Vijayalakshmi

Developing a teaching network in south India

Dr. Meenakshi

- Optic neuritis in children
- Etiology and management of commitant esotropia in children in south India

Dr. Kalpana

Poster presentations:

- Visual outcomes and complications following surgery for ectopia lentis in paediatric population with use of cionnis endocapsular ring
- Visual outcomes and complications following surgery for traumatic cataract in paediatric population - long term results

Paper presentation

 Visual outcomes and complications following surgery for intraocular lens exchange in paediatric population

Dr. K. Veena

Poster presentation

 Diagnosis and management of pre existing posterior capsular defect in traumatic white cataract in children

European Society of Cataract and Refractive Surgeons

Barcelona, Spain, September 12 - 14

Dr. K. Veena

Instruction course:

Manual sutureless small incision cataract surgery - cost effective, high volume, high quality alternative to phacoemulsification for developing countries

National Conference on Advancements in Medical Instrumentation

Maharashtra, India, September 19

Prof. V. Srinivasan

Paper presentation

- Care, maintenance and repair of hospital equipment.

Prof. V. Srinivasan at the National Conference on Advancements in Medical Instrumentation



International AMD and Retina Congress Meeting

Athens, Greece, October 7 - 12

Dr. V.Narendran and Dr. Rodney J Morris, Aravind-Coimbatore participated in the International AMD and Retina Congress meeting held at Athens from October 7 - 8. They also went for an observership in the EYESI Vitrectomy Training facility at University Hospital, Frankfurt from October 10 - 12.

Conference on Global Health Care Sustainability

Gothenburg, Sweden, October 12 - 14

Dr. Krishnadas attended the conference convened by the Center for Effective Organisations, University of California and the Center for Health Care Improvement of the Chalmers University of Technology, Gothenburg, Sweden to discuss globally effective systems of health care delivery. Dr. Krishnadas presented and discussed the Aravind model of effective, low cost and high quality delivery.

Annual Meeting of the American Academy of Ophthalmology

San Francisco, USA, October 23 – 27

Dr. Dhananjay Shukla

- A comparison of brilliant blue G, trypan blue and indocyanine green to assist internal limiting membrane peeling during macular hole surgery (poster)
- A prospective controlled trial of transpupillary thermotherapy for chronic central serous chorioretinopathy (poster)

Dr. Anand Rajendran

- Isolated Intravitreal bevacizumab for choroidal neovascular membranes of multiple aetiologies (poster)

Dr. K. Nirmala Devy

Instruction course on SICS - steps of manual small incision cataract surgery

Mr. R. D. Thulasiraj

Participated as the chief instructor and instructor of the courses

- High-volume, high-quality, cost-effective cataract surgery to tackle cataract backlog
- Workshop on strengthening eye care infrastructure in developing countries

He also participated in Cataract Working Group and ICO's Refractive Task Force meetings to identify strategies to address the problem of refractive error in developing countries.

TELEMEDICON 2009

Pune, India, November 6 - 8

Dr. R. Kim

 Teleophthalmology - primary, secondary and tertiary eye care in India

XIX Annual Meeting of the Glaucoma Society of India

Bangalore, India, November 6 – 8

Dr. R. Ramakrishnan

- Relevance of different glaucoma surgical procedures in Indian scenario



Dr. Krishnadas at the conference on global health care sustainability, Sweden

Panel member for the discussion on Medical management, surgical management and clinical management of glaucoma.

Dr. S.R. Krishnadas

Management of over functioning blebs

Dr. P. Sathyan

- Setting up of a glaucoma practice
- Trabeculectomy with phacoemulsification in glaucoma

Dr. Venkatesh

Non penetrating glaucoma filtering surgery

Dr. Sharmila

Family screening for open angle glaucoma (best paper award)

Dr. Ganesh Raman

- Mobile services to enhance patient compliance and review

Dr. R. Prashanth

- Correlation of DDLS and RNFL measurements

Dr. George. V. Puthuran

- All that is cupped is not glaucoma

Dr. G. Vijaya

- Small pupil phaco- trabeculectomy

Dr.R. Venkatesh

Viscocanalostomy

Dr. S. Kavitha

Poster presentation

- History taking a never dying art

World ROP Congress Conference

New Delhi, India, November 21 - 23

Dr. V. Narendran

Screening guidelines

Dr. Parag K Shah

 Transpupillary thermal therapy (TTT) - A quicker and more efficient laser for the treatment of ROP

Annual Conference of Vitreo Retinal Society India

Palampur, India, November 25 – 28

Dr. V. Narendran

- Virtual reality in VR surgery training

Dr. V.R. Saravanan

Initial experience with intravitreal macugen for non-AMD macular diseases

Dr. Rodney J Morris

Indian experience of anti VEGF in DME

Dr. Rajasekhar

 Anatomical and visual outcome of posterior segment intraocular foreign body removal (poster)

Dr. Thomas K Chacko

 Anatomical and visual outcome following 23g transconjunctival sutureless vitrectomy for repair of primary rhegmatogenous retinal detachment

Dr. R. Kim

- Current concepts in vitrectomy for open globe injury

Dr. Naresh Babu

- 23-20G PPV for posterior segment IOFB
- Novel technique of sutureless scleral fixation of dislocated lens

Dr. Praveen Murali

- Myopic tractional maculopathy as rare cause for visual loss in degenerative myopia
- 23G PPL for children with ectropia lentis

Dr. Shashank Rai Gupta

- Intravitreal bevacizumab for CNVM with retinochoroidal coloboma

Dr. Manjunath

- RPE rip presenting as a subtotal retinal detachment-A case report
- Computerised eye simulator A surgical training tool

Dr. Shashank Rai Gupta, Dr. Anand Rajendran, Dr. Kim Ramasamy

Intravitreal bevacizumab for choroidal neovascularization associated with retinochoroidal coloboma (poster)

Dr. Praveen Murali, Dr. Dhananjay Shukla, Dr. Anuradha Dhawan, Dr. Kim Ramasamy

 Myopic tractional maculopathy as rare cause for visual loss in degenerative myopia (poster)

Dr. K. Naresh Babu, Dr. R. Kim, Dr. Praveen Muraly

 23 – 20g pars plana vitrectomy for posterior segment intraocular foreign body (poster)

Dr. Kim, Dr. Indiresan, Dr. R. Chidambaram, Principal Advisor to the Govt of India, Chairman, TIFAC, Sudhakaran, Aurolab, Laser division at TIFAC-CORE Meet 2009



Dr. P. Raja Sekhar, Dr. M. Dheepha, Dr. Parag K. Shah, Dr. Rodney J Morris, Dr. V.R. Saravanan and Dr. V. Narendran

 Anatomical and visual outcome following posterior segment intraocular foreign body removal (poster)

Uveitis Society of India Conference

Chennai, India, December 4 – 6

Dr. S.R. RATHINAM

- Idiopathic uveitis-how long they are idiopathic.
- Construction of differential diagnosis in uveitis

Dr. S. Balamurugan

- A rare disorder that masquerade as intermediate uveitis

Dr. Kawali Ankush Ashok

STAPH. AUREUS endogenous endophthalmitis

Dr. B. Manohar Babu

- Update in intermediate uveitis

Oculoplasty Association of India Conference

Ahmedabad, India, December 4 - 6

Dr. Usha Kim

- Endoscopic DCR presentation

Live surgery - Auro sling with frontalis sling surgery

Strabismus Society of India (SSI) Conference

Hyderabad, India, December 19 - 20

Dr. Ramakrishnan

- Management of sixth nerve palsy

Dr. Rajesh Prabu and Dr. Neelu Agarwal

- Surgical outcome of MED

Dr. Sreepathy

 Case presentation - A rare case on traumatic superior oblique rupture

Dr. Laxman Narale

Case presentation - A rare case of inferior oblique palsy

TIFAC - CORE Meet (TCM) 2009

Coimbatore, India, December 22 - 24

Dr. R. Kim participated in the TCM 2009, an annual event held to discuss the major developments and activities of TIFAC-CORE in the management of diabetic retinopathy.

Dr. M. Srinivasan and Dr. Lalitha Prajna at the fifth International Conference on Ocular infections



5th International Conference on Ocular Infections

Florida, USA, February 18 – 21

Dr. M. Srinivasan

- Steroid vs no steroid in bacterial keratitis
- Prevention of suppurative keratitis
- Newer antifungals and anti protozoals

He also moderated the sessions on

- Fungal keratitis
- Global infectious blindness

Dr.S.Lalitha Prajna

- Comparison of natamycin and voriconazole for the treatment of fungal keratitis
- Real time quantitative PCR in the diagnosis of tubercular uveitis

8th National Conference of Society for Human and Animal Mycologists

New Delhi, March 4 – 6

Dr. S. Lalitha Prajna

- Study of the host response in fungal corneal ulcers in humans (won the first prize)

P. Manikandan, Microbiologist, Aravind - Coimbatore won "Dr. Pankajalakshmi Venugopal Glaxo Meritorious Award" for outstanding work in the field of medical mycology.

India Conference 2010

Boston, USA, March 6

Dr. P. Namperumalsamy participated in the health care discussion at the India Conference held at Harvard Business School

ARTICLES PUBLISHED IN PEER REVIEWED JOURNALS

International Journals

BR J OPHTHALMOL

VOL: 93 (4) 2009 APR. P.429-434

Namperumalsamy, P; Kim, R; Vignesh, T P; Nithya, N; Royes, J; Gijo, T; Thulasiraj, R D; Vijayakumar, V

 Prevalence and risk factors for diabetic retinopathy: a population-based assessment from Theni district, South India

VOL: 93 (5) 2009 MAY P.701-702

ROE, R H; RATHINAM, S R; WONG, R W; McDonald, H R; Jumper, J M; Cunningham J., E T

 Delayed fellow eye involvement in patients with vogtt-koyanagiharada disease

OPHTHALMIC SURG LASERS IMAGING

VOL: 40 (2) 2009 (MAR-APR) P.115-119

Shukla, Dhananjay; Behera, Umesh Chandra; Chakraborty, Somnath; Mahalakshmi, Rajendran; Prasad, Noela Marie

Serous macular detachment as a predictor of resolution of macular edema with intravitreal triamcinolone injection

VOL: 40 (5) 2009 SEP.-OCT. P.501-503

Shukla, Dhananjay; Kanungo, Sanghamitra

 Surgical repair of iatrogenic macular hole secondary to vitrectomy for long-standing traumatic retinal detachment

2010 MAR 9:1-3. (Epub ahead of print)

Shukla, Dhananjay; Dhawan A.

Evolution and management of a post-uveitis macular hole

2010 MAR 1-7 (Epub ahead of print)

Shukla, Dhananjay; Ramchandani, B; Vignesh, TP; Anand, Rajendran; Neelakantan, Nithya

 Localized serous retinal detachment of macula as a marker of malignant hypertension

2010 MAR 9:1-3. (Epub ahead of print)

SENGUPTA, S; VENKATESH, R; RAVINDRAN, R D

- Unilateral optic nerve entrance coloboma: The broken disc anomaly

CURR OPINION OPHTHALMOL

VOL: 20 (4) 2009 JUL. P.318-323

Lalitha, Prajna

Nocardia keratitis

OPHTHALMIC EPIDEMIOLOGY

VOL: 16 (3) 2009 JUN. P.193-197

Katz, Joanne; Tielsch, James M; Thulasiraj, Ravilla D; Coles, Christian; Sheeladevi, Sheela; Yanik, Elizabeth L; Rahmathullah, Lakshmi

Risk factors for maternal night blindness in rural south India

OPHTHALMIC PLAST RECONSTRUCTIVE SURGERY

VOL: 25 (5) 2009 SEP.-OCT.

Usha, Kim R; Vipul, Arora; Shanti, R; Akash, D Shah

Neglected giant atypical fibroxanthoma of the eyelid

2010 JAN-FEB; 26(1):30-2.

USHA, KIM R; VIPUL, ARORA; RAMCHANDRAN, S; AKASH, D SHAH; PHELPS, PO

Orbital hyalinizing spindle cell tumor with giant rosettes

MAR.- APR. 2010

Usha, Kim R; Shah, Akash D; Shanti, Ramachandran; Arora, Vipul

Primary adenoid cystic carcinoma of the eyelid

ARCH OPHTHALMOL.

2010 VOL: 128(1) JAN. P.28-32.

Balasundaram, MB; Andavar, R; Manikandan, P; Narendran, V

Outbreak of acquired ocular toxoplasmosis involving 248 patients

EYE

VOL: 23 (4) 2009 APR. P.945-956

Ramakrishan, R; Jayahar, M Bharathi; Shivkumar, C; Mittal, S; Meenakshi, R; Khadeer, M A; Avasthi, A

Microbiological profile of culture-proven cases of exogenous and endogenous endophthalmitis: a 10-year retrospective study

VOL: 23 (5) 2009 MAY P.1155-1157

Venkatesh, R; Tan, C S H; Singh, G P; Veena, K;

Tiruvengadakrishnan, K; Ravindran, R D

 Safety and efficacy of manual small incision cataract surgery for brunescent and black cataracts

2009 AUG. P.1-2

Anand, Rajendran; Gupta, S R; Brahadeesh, S; Kim, R

 Intravitreal bevacizumab for choroidal neovascularization associated with a retinochoroidal coloboma

COMMUNITY EYE HEALTH

VOL: 22(70) JUN. 2009 P.S2

Srinivasan, V

Equipment repaired is equipment gained

VOL: 22 (71) DEC. 2009 P.39-41

UPADHYAY, MADAN P; SRINIVASAN, M; WHITCHER, JOHN P

- Managing corneal disease: focus on suppurative keratitis

CLINICAL RHINOLOGY

SEP.-DEC. 2009 P.47-50.

RAJINIGANTH, MG; USHA, KIM R; MAHESH KUMAR

- Coexistent optic neuritis and isolated acute sphenoid sinusitis

MOL VISION

VOL: 15 2009 (SEP. 4) P.1781-1787.

Sundaresan, P; Vijayalakshmi, P; Thompson, Stewart; Ko, Audrey C; Fingert, John H; Stone, Edwin M

- Mutations that are a common cause of leber congenital amaurosis in northern America are rare in southern India

2010 MAR 5;16:353-8

TIERCY JM; RATHINAM, SR; GEX-FABRY M; BAGLIVO E

 A shared HLA-DRB1 epitope in the DR beta first domain is associated with Vogt-Koyanagi-Harada syndrome in Indian patients.

HUM GENET

2009 (APR) 125 (3) P.340.

RENUGADEVI, K; SIL AK; VIJAYALAKSHMI, P; SUNDARESAN, P

Novel human pathological Mutations. Gene Symbol: OCA2.
 Disease: albinism, oculocutaneous II.

CORNEA

VOL: 28 (3) 2009 APR. P.317-320

Revathi, Rajaraman; Singh, Satinderpal; Anita, Raghavan; Karkhanis, Amar

- Efficacy and safety of intracameral perfluoropropane (C3F8) tamponade and compression sutures for the management of acute corneal hydrops

VOL: 28 (8) SEP. 2009 P.951-954

Laʻszloʻ Kredics; Jaʻnos Varga; Saʻndor Kocsube; Revathi, Rajaraman; Anita, Raghavan; Ilona Doʻczi; Madhavan Bhaskar; Tibor Mihaʻly Neʻmethm; Zsuzsanna Antal; Narendran, V; Csaba Vaʻgvoʻlgyi; Robert A. Samson; Manoharan Chockaiya; and Manikandan, P

Infectious keratitis caused by aspergillus tubingensis

2010 JAN 28. [EPUB]

Mehta, JS; Hemadevi, B; Vithana, EN; Arunkumar, J; Srinivasan, M; Prajna, NV; Tan, DT; Aung, T; Sundaresan, P

Absence of phenotype-genotype correlation of patients expressing mutations in the SLC4All gene

JR CLINICAL MICROBIOLOGY

VOL: 47 (10) 2009 OCT. P.3382-3385

Manikandan, P; Varga, Janos; Kocsube, Sandor; Samson, Robert A; Anita, Raghavan; Revathi, R; Doczi, Ilona; Nemeth, Tibor Mihaly; Narendran, V; Vagvolgyi, Csaba; Manoharan, Chockaiya; Kredics, Laszlo

- Mycotic keratitis due to aspergillus nomius

VOL: 47 (5) 2009 MAY P.1463-1468

Azor, Monica; Gene, Josepa; Cano, Josep; Manikandan, P; Narendran, V; Guarro, Josep

 Less-frequent fusarium species of clinical interest: correlation between morphological and molecular identification and antifungal susceptibility

JAAPOS

VOL: 13 (5) 2009 OCT. P.485-487 Ajay Yeliathaya Harish; Sandra, C Ganesh; Kalpana, Narendran

Traumatic superior oblique tendon rupture

J PEDIATR OPHTHALMOL STRABISMUS

2009 JUN 25 P.1-2

Parag, K Shah; Narendran, V; Kalpana, Narendran

Appearance and spontaneous resolution of macular pucker after triple freeze-thaw cryotherapy for retinoblastoma

J CATARACT REFRACT SURG

VOL: 35 (4) 2009 APR. P.629-636

Ravindran, R D; Venkatesh, R; Chang, David F; Sengupta, Sabyasachi; Gyattsho, Jamyang; Talwar, Badrinath

Incidence of post-cataract endophthalmitis at Aravind Eye Hospital: outcomes of more than 42000 consecutive cases using standardised sterilisation and prophylaxis protocols

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2009 AUG 27

KHAIRALLAH, M; CHEE, SP; RATHINAM, SR; ATTIA, S; NADELLA, V

Novel infectious agents causing uveitis

2010 FEB 3.

Muralidhar, R; Vijayalakshmi, P; Gunda, AK

Inferior rectus paresis and medial rectus overaction following retrobulbar anesthesia for cataract surgery.

J NEURO OPHTHALMOLOGY

VOL: 29 (6) 2009 JUN. P.154

Sengupta, Sabyasachi; Dhanapal, Praveen; Ravindran, R D; Nirmala Devi

Cerebral blindness after scorpion sting

POSTGRAD MED J.

VOL: 85(1010) DEC. 2009 P.643-8

Namperumalsamy, P; Kim, R; Vignesh, TP; Nithya, N; Royes J; Gijo, T; Thulasiraj, RD; Vijayakumar, V

 Prevalence and risk factors for diabetic retinopathy: a population-based assessment from Theni district, south India

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VOL: 51 (2) FEB. P.701-707.

Tiruvengadakrishnan, K; Ravindran, R D; Murthy, Gudlavalleti VS; Praveen, Vashist; Kathryn E. Fitzpatrick; Thulasiraj, RD; Neena John; Giovanni Maraini; Monica Camparini; Usha Chakravarthy; Astrid E. Fletcher

 Prevalence of early and late age-related macular degeneration in India: the INDEYE study

RETINA

2010 FEB 17. EPUB.

MARTIN, TD; RATHINAM, SR; CUNNINGHAM, ET JR

 Prevalence, clinical characteristics, and causes of vision loss in children with Vogt-Koyanagi-Harada disease in south India

OPHTHALMOLOGY

2010 FEB;117(2):253-8. [EPUB 2009 DEC 6.] HENDERSON, BA; KIM, JY; GOLNIK, KC; OETTING, TA; LEE, AG; VOLPE, NJ; AARON, M; UHLER, TA; ARNOLD, A; DUNN, JP; PRAJNA, NV; LANE, AM; LOEWENSTEIN, JI

- Evaluation of the virtual mentor cataract training program

GLOB PUBLIC HEALTH

2010 FEB

LEWALLEN, S; THULASIRAJ, RD

- Eliminating cataract blindness - How do we apply lessons from Asia to sub-Saharan Africa?

BMC OPHTHALMOLOGY

FEBRUARY 2010

Hemadevi, Boomiraj; Srinivasan, M; Arun kumar, J; Prajna, NV; Sundaresan, P

- Genetic analysis of patients with fuchs endothelial corneal dystrophy in India

HUM MOL GENET.

2010 JAN 15;19(2):287-98

YE M; BERRY-WYNNE KM; ASAI-COAKWELL M; SUNDARESAN, P; FOOTZ T; FRENCH CR; ABITBOL M; FLEISCH VC; CORBETT N; ALLISON WT; DRUMMOND G; WALTER MA; UNDERHILL TM; WASKIEWICZ AJ; LEHMANN OJ

 Mutation of the bone morphogenetic protein GDF3 causes ocular and skeletal anomalies

National Journals

INDIAN J OPHTHALMOL

VOL: 57 (5) 2009 SEP. P.385-386 Vipul, Arora; Usha, Kim R; Khazei, Hadi M; Kusagur, Shivayogi - Ophthalmic complications including retinal detachment in hyperimmunoglobulinemia E (Job's) Syndrome: case report and review of literature

VOL: 57 (5) 2009 SEP. P.387-389

Vipul, Arora; Usha, Kim R; Khazei, Hadi M

Delleman oorthuys syndrome: Oculocerebrocutaneous syndrome

VOL: 57 (5) 2009 SEP. P.395-398 USHA, KIM R

 Multimodality treatment approach in management of primary peripheral primitive neuroectodermal tumor of the orbit

VOL: 57(5) SEP. 2009 P.398-400

Vishwakarma, P; Ganesh, V Raman; Sathyan, P

 Mefenamic acid-induced bilateral transientmyopia, secondary angle closure glaucoma and choroidal detachment.

INDIAN J RADIOL IMAGING

VOL: 19 (4) 2009 NOV. P.298-300

Usha, Kim R; Vipul Arora; Akash D Shah; Srinivasan, K G

Ocular malformation with a double globe appearance

INDIAN JOURNAL OF PEDIATRICS

VOL: 76(8) AUG. 2009 P.801-804

Parag, K Shah; Narendran, V; Kalpana, Narendran; Clare Gilbert

Severe retinopathy of prematurity in big babies in India: History repeating itself

VOL: 76 (5) 2009 MAY P.513-517

Neethirajan, Guruswamy; Solomon, Abraham; Krishnadas, S R; Vijayalakshmi, P; Sundaresan, P

Genotype, phenotype association in Indian congenital aniridia

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VOL: 58(2) 2010 MAR-APR. P.153-5

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VOL: 58(2) 2010 MAR-APR. P.151-2

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HIGHLIGHTS OF OPHTHALMOLOGY

AUG. 2009

KARAN KUMAR; KRISHNADAS, R

Update on medical treatment of congenital glaucomas

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Jayahar, M Bharathi; Ramakrishnan, R; Meenakshi, R; Shivakumar, C; Lional Raj, D

Analysis of the risk factors predisposing to fungal, bacterial and acanthamoeba keratitis in south India

Lions Aravind Institute of Community Ophthalmology (LAICO)

The year 2009-2010 has been remarkable for LAICO in terms of sharing with the external world the preferred practices learned at Aravind. This was achieved through workshops, training programmes, publications as well as through a series of global consultations and visits by experts and learners from various walks of life that provided a platform for sharing and cross learning. The new division, Advocacy and Patient Empowerment established itself as another component of LAICO's offering.

Consultancy and Capacity Building Services

LAICO in collaboration with international voluntary organisations, engages with several eye care institutions and programmes in a systematic capacity building process where the core principles of demand generation, productivity, quality and sustainability are incorporated into the institution's way of working – by enhancing the capacity of the management and by instituting appropriate systems to ensure optimum utilisation of resources and developing ways to serve the need in the community in a sustainable manner. The key collaborators are the Lions Clubs International Foundation, Sightsavers International, Christoffel Blinden Mission, International

Mr. Sanil Joseph, Faculty, LAICO and Mr. Mohammed Gowth, Assistant Manager-Community Outreach with the Lions Revanker Charity Eye Hospital, Kumta team



Eye Foundation, Right to Sight, Seva Foundation, ORBIS International, Lavelle Fund for the Blind, International Council for Ophthalmology and the World Health Organisation.

Listed below are the capacity building activities carried out from April 2009 – March 2010:

Needs Assessment Visits

- Eye Care Centre, Banglore, Karnataka
- Ganga Devi Pandey Eye Hospital, Mahendragarh, Haryana
- Lions Eye Hospital, Guna, Madhya Pradesh
- Lions Revanker Charity Eye Hospital, Kumta, Karnataka
- Ram Mohan Mission Eye Hospital, Prantik, West Bengal
- Eye Micro and LASIK Centre, Chinsura, West Bengal
- Lions Eye Hospital Surat, Gujarat
- Lions Eye hospital Jalgaon, Maharashtra
- Dr. Bhanuban Nanavathi Hospital, Chorwad, Gujarat,
- Dr.Balabhai Nanavathi Hospital, Mumbai, Maharashtra

Vision Building and Strategic Planning Workshop July 13 – 18, 2009

The participants were from:

- Lions Eye Hospital Surat, Gujarat
- Lions Eye hospital Jalgaon, Maharashtra
- Dr. Bhanuban Nanavathi Hospital, Chorwad, Gujarat
- Dr.Balabhai Nanavathi Hospital, Mumbai, Maharashtra

August 31 - September 05, 2009

The participants were from:

- Dhaka Shariatpur Central Lions Eye Hospital, Bangladesh
- Lions Revankar Charitable Eye Hospital, Kumta, Karnataka
- Shri Sadguru Sankalp Netra Chikitsalaya, Anandapur, Madhya Pradesh
- Gangadevi Pandey Eye Hospital, Haryana
- Dr. M.M. Joshi Eye Institute, Hubli, Karnataka





Mr. Sanil Joseph and Dr. K. Tiruvengadakrishnan, Consultant, Aravind-Pondicherry with the KCMC team, Moshi

Follow-up Visits

Kilimanjaro Christian Medical Center (KCMC), Moshi, Tanzania, July 29 – 31

The Lavelle Fund supported consultancy for capacity building of the KCMC Eye Department was initiated in January 2006. The hospital is showing a positive growth despite challenges such as high incidence of staff leaving from key positions.

Eli Lily Diabetic Eye Disease Centre

Beijing, China, December 20 – 24

The main objective of this capacity building project initiated in January 2007 was to provide consultation to achieve ELDEDC's specific goals to promote diabetic retinopathy services in China. Aravind team assessed the performance of the ELDEDC-the extent of implementation of strategies, recommendations and action plans, the challenges faced and the change in impact.

Update on CCO Network Activity

Mr. Sanil Joseph visited W2 Consulting, UK from July 21 - 25 to plan for the follow up review on the Workshop on Developing Consultancy Skills for Seva CCOs. He had discussions on the design of the October Summit-2009 workshop on Influencing Sustainable Change with

Dr. K. Naresh Babu, Retina Consultant, Aravind - Madurai and Mr. V. Vijayakumar, Faculty, LAICO at ELDEDC, China





Dr. Shivakumar Chandrasekhar at the Capacity Building Workshop for Rural Practitioners in China

Mr. Colin Williams and Mr. John Bickel who were the resource persons for the workshop.

Mr. Sanil Joseph visited Kilimanjaro Centre for Community Ophthalmology, Tanzania from July 27 – 31 to conduct onsite coaching review for the participants of the workshop on consulting skills held in February, 2009. This was part of the SEVA CCO capacity building initiative in collaboration with Wescott Williams Consulting Ltd., UK.

Workshop on Capacity Building and Community Participation

Zhongshan Ophthalmic Centre, Sun Yat-sen University, Guangzhou, China, June 12 – 13

Dr. Shivakumar Chandrasekhar, Consultant, Aravind-Tirunelveli participated in the workshop which was conducted as part of capacity building for the rural practitioners and also for the hospitals to perform adequate number of quality cataract surgeries to meet the community need. He made presentations on

- The core concept of Aravind way of providing quality and large volume service for the paying and underprivileged patients
- Reaching the rural and urban communities to provide needed eye care and to increase patient volume.

Curriculum Development Workshop for Lions Hospitals

December 2009

Having worked with over 100 Lions eye hospitals through its structured capacity building initiative, LAICO saw tremendous scope for these hospitals to further build their capacity to serve the community better. The curriculum development workshop was aimed to:

- Develop better understanding about the hospitals' current situation
- Understand the support required by the hospitals in their attempt to grow



Participants at the Lions' Curriculum Development Workshop

- Develop better understanding of what directions and growth levels these hospitals should aim at
- Evolve intervention strategies to support these hospitals

26 participants representing LCIF, Lions Eye Hospitals, non–Lions Eye Hospitals, INGOs and LAICO-AECS attended the workshop. The workshop was formally inaugurated by Ln. Mahendra Amarasuriya PMJF and Past International President. The participants included Mr. Joshua Friedman, Assistant Department Manager, LCIF SightFirst- Programmes and the technical advisors of SightFirst-India programme. By the end of this workshop a broad curriculum matrix was developed to work with Lions Eye Hospitals. This will be further detailed and reviewed before submission of the final proposal to LCIF.

Evaluation Visits

Eye Care Evaluation in Rev. Abdul Wadud Memorial Hospital (RAWMH)

Khulna, Bangladesh, August 10 - 15

The evaluation visit supported by Dark and Light Foundation was carried out to understand the relevance of RAWMH's services to the need of the community.

Dr. Datta and Mr. Suresh Kumar at RAWMH, Khulna, Bangladesh



Dr. D. Datta, Chief Medical Officer, Aravind – Theni and Mr. Suresh Kumar, Faculty – LAICO analysed the performance, clinical and non-clinical quality, patient satisfaction level, utilisation of resources and the effectiveness of demand generation. The team also evaluated the sustainability aspect of the hospital.

Quality Assurance Assessment of Dalian He Eye Hospital China, November 9-13

Dr. R D Ravindran, Joint Director, AECS and Dr. Muralidhar, Consultant, Paediatric Ophthalmology Services, Aravind-Madurai visited Dalian He Eye Hospital, China to assess its quality assurance practices. This was done as part of a continuous capacity building initiative to provide high quality paediatric eye care services to serve Northeast China. Dalian He Eye Hospital is setting up a pediatric eye care centre with support from ORBIS International. The key tasks carried out during the visit were:

- Assessing the existing quality assurance system at Dalian HEH for cataract surgery, strabismus surgery, amblyopia treatment, and patient satisfaction.
- Conducting a training workshop for Dalian HEH's Quality Assurance Monitoring Team (to be established) and staff members on concepts, methods and protocols of QA.
- Providing advisory support to Dalian HEH, particularly to the Quality Assurance (QA) Monitoring Team, on developing a QA system for priority clinical areas of cataract surgery, strabismus surgery, and amblyopia treatment, as well as for non-clinical areas, namely patient satisfaction, based on the results of the above mentioned assessment.

Prior to the workshop, the Aravind team visited the hospital facilities including various departments to understand current practices and approaches and also an outreach screening camp. The team discussed as to how to implement the QA system and shared relevant quality assurance information and documents such as

Dr. R D Ravindran and Dr. Muralidhar at Dalian He Eye Hospital, China



quality assurance indicators, assessment instruments, QA policies, QA job descriptions etc.

Final Evaluation of Child Eye Care Support Project Vietnam, December 13 – 19

Dr. Kalpana Narendran, Senior Consultant, Aravind – Coimbatore and Sasipriya KM, Faculty, LAICO visited Quang Nam and Quang Ngai provinces in Vietnam to carry out final evaluation of Child Eye Care Support project implemented by the respective provincial Ministries of Health funded by USAID and managed by Fred Hollows Foundation, Vietnam. This evaluation exercise assessed the progress made against the targets set, efficiency and effectiveness of project implementation strategies, partnerships and linkages. The team provided necessary recommendations for future projects by visiting and having discussions with different stakeholders – provincial and district hospitals, commune health stations, schools, beneficiaries (children who were operated upon) and also the official authorities at different levels.

Progress of Vision 2020 in Oman

December 26 - 30

Aravind team consisting of Mr. R. D. Thulasiraj, Executive Director - LAICO and Dr. Mohideen Abdul Khadar, Medical Officer, Aravind - Tirunelveli reviewed the implementation of Disease Control strategy (Cataract, glaucoma, Diabetic Retinopathy, corneal pathologies and ocular trauma) at the representative institutes of secondary and tertiary eye care units under the Ministry of Health, Oman. They analysed the present scenario of human resource in the field of eye care in Oman and recommended steps to improve efficient utilisation of available manpower and generate sustainable mid level eye care personnel. The team had a discussion on the efficiency of eye care delivery and suggested cost effective technological upgradation for eye care delivery with international standards. The team made an assessment

Dr. Kalpana Narendran and Ms. Sasipriya KM with the Vietnam team





Mr. R.D. Thulasiraj and Dr. Mohideen with the Ministry of Health, Oman team

of VISION 2020 programme management and suggested recommendations for the strengthening of the same.

Collaboration with Grameen Hospitals

LAICO has been supporting Grameen Hospitals in Bogra and Barisal in terms of design, operations and staffing. On September 14, Mr. R.D. Thulasiraj and Dr. Suzanne Gilbert, Seva Foundation met with Prof. Mohammad Yunus and Mr. Imamus Sultan in Dhaka to have a strategic level discussion on how Aravind – Seva could support these hospitals in scaling up the project.

At Grameen GC Eye Hospital (GGCEH), Bogra

During the visit made by Dr. D. Datta and Mr. Suresh Kumar from August 16 – 19, performance parameters were introduced and discussed in-depth with the different clinical and non-clinical departments.

At GGCEH, Barisal

Aravind team consisting of Dr. Lional Raj, Medical Officer, Aravind – Tirunelveli, Mr.Dhinakaran, Asst. Administrator (Aravind – Tirunelveli), Sr.Pitchaimeena (Refraction), Sr.Gomathi (MRD), Sr.Innasi (OPD). Sr. Indhumathi (Ward) and Sr.Sangeetha (OT) provided training to the staff of various cadres in their respective areas. The team carried out evaluation based on performance parameters.

Dr. Datta in discussion on performance parameters with the Grameen team in Bogra





Mr. R.D. Thulasiraj and Dr. Iqbal Anwar signing the MoU

Mr. R.D. Thulasiraj, Dr. Usha Kim, Medical Officer, Aravind-Madurai, Ms. K.M. Sasipriya, Faculty, LAICO, Mr. Ganesh Babu, Senior Manager-IT and Systems and Mr. Dhinakaran, Assistant Administrator, Aravind-Tirunelveli made a visit to both these hospitals from March 27 – April 1. The areas focused were demand generation, quality of services offered, achieving operational efficiency, financial viability and governance. Mr. Ganesh Babu had discussions regarding the strengthening of data management and reporting.

Aravind IT team consisting of Mr. Senthil Kumar, Mr. Vigneshwaran and Mr. Oliver Selvam visited these hospitals in May 2009 and March 2010 to customise and implement Integrated Hospital Management system (IHMS) according to their requirements and also to orient the staff in the use of this software.

Promising Future-Collaboration for Setting up an Eye Hospital in Dhaka

On April 2, LAICO and Prime Bank Foundation, Dhaka entered into a MoU for setting up of a comprehensive eye facility in Dhaka. Mr. R.D Thulasiraj, Executive Director, LAICO and Dr. Iqbal Anwar, CEO, Prime Bank Foundation signed the MoU representing the respective organisations. LAICO will support Prime

Community Outreach and Social Marketing of Eye Care Services Course participants with Aravind team



Bank Foundation by providing technical support in the planning and execution of this project.

Teaching and Training Division

Management Training and Systems Development for Hospital Administrators

April 13 - May 23

A total of two participants from Vietnam and China attended the course.

August 17 - September 30

A total of twelve participants participated: Ten from India, one each from Bangladesh and Pakistan.

Course on Community Outreach and Social Marketing of Eye Care Services

June 15 - July 14

Eight participants from India and one from Nepal attended the course.

November 16 – December 14

Six participants from India, two from China and one from Bangladesh participated.

Certificate Course on Project Management for Eye Care September 1 – 26

Participants included three from India, five from Bangladesh, two from Nigeria and one each from Uganda, Nepal and Indonesia.

Course on Medical Records Management

November 1 - 28

Three participants from India and one from Kenya participated.

Management Priorities in Eye Care Delivery

January 3 – 9

Thirteen participants from India, two each from Nepal, Bangladesh and Ethiopia and one from Vietnam took part in the course.

Participants at the Certificate Course on Project Management for Eye Care



Management Training for Eye Care Programme Managers February 8 – 20, 2010

A total of 36 participants participated- six from Africa, two from East Mediterranean region, thirteen from South East Asian region and fifteen from West Pacific region.

Certificate Course in Eye Hospital Operations

A total of nine participants attended this three month course. The participants, at the completion of the course were appointed as co-ordinators of various departments in Aravind Eye Care System.

Fellowship in Eye Hospital Management

The fifth batch of Fellowship in Eye Hospital Management commenced on September 1, 2008 with nine candidates. On completion of the training, the Fellows will be employed as managers in various areas according to their aptitude, skills and requirement in the system.

Eyexcel Training Programme September 2 – 5

A total of 42 members from Vietnam, Bangladesh, Nepal and India attended the program. The workshop aimed to offer inputs for developing a training programme. This course, conducted in collaboration with ICO and SEVA Foundation, is specially designed for teaching hospitals aiming at developing a training institute or developing into a center for excellence. The guest faculty for this workshop included Dr. Karl Golnik, Vice Chairperson, Cincinnati Eye Hospital and Director of Residency Education, ICO, Dr. Katryn Hecht, Volunteer-SEVA and Ex-Director of Education, AAO and Susan Spinola, SEVA volunteer.

October Summit

Various workshops were conducted with the funding support from organisations such as International Agency for Prevention of Blindness, Light for the World, Seva Foundation, Christoffel Blinden Mission.

Participants of the Review and Development of National Plans-a VISION 2020 Regional workshop





Mr. Colin Williams and Mr. John Bickel, Wescott Williams Ltd., UK facilitating the workshop on Influencing Sustainable Change

Review and Development of National Plans – a VISION 2020 Regional Workshop

September 24 - 26

The workshop focused on reviewing the national plans for Bhutan, Nepal, Sri Lanka, India and Bangladesh. The existing service levels and training capacity were assessed against the actual need in the country. Issues in implementing these national plans in the past decade were elicited and discussed. The different strategies and approaches in each of these countries were presented and this provided rich cross-learning for all those present. The national plans were then worked upon, in order to ensure that in the next decade, eye care services in the country can be designed to effectively address blindness in a way wherein these issues can be overcome.

Global Consultation on Enabling Environment for Service Delivery

September 28 - 30

This consultation was convened to address those issues in the environment that affect the effectiveness of eye care service delivery. It strived to bring about the paradigm where the environment is recognised as an important influence in eye care delivery and how one can successfully create an enabling environment for the same. As such impediments in the environment are not unique to eye care, the consultation drew lessons from organizations from different sectors, who have successfully overcome similar challenges in their respective fields.

Workshop on Influencing Sustainable Change October 1 – 3

Effective implementation of a programme or running of an institution requires considerable influencing skills on the part of those who are in charge of orchestrating it. Faculty from Wescott Williams Ltd, UK guided the participants through a structured process for influencing to bring about change. They facilitated application of the learning in a real life problem, specific to each of the participants.

Global Consultation on Patient Empowerment October 5 – 6

While considerable costs are incurred towards getting patients into the system it is often with limited success. Empowering the patient was recognized as being the key to effective eye care delivery. Eminent resource persons drawn from key areas helped the participants appreciate the powerful role that patients themselves can play in improving the effectiveness of eye care services. Strategies aimed at empowering the patient and community were developed through discussion. Case studies were used to illustrate the principles necessary to bring about the desired positive behaviour change.

International Conference on Knowledge Management: Keeping Pace with the Digital Age

October 9 - 10

This workshop highlighted the multiple ways in which knowledge is being created in eye care and the current practices and emerging technologies in information management. It helped to redefine the role of the librarian to that of a proactive knowledge worker – one who not only responds to information requests but proactively disseminates information to those who are likely to utilise it. It was emphasised through demonstration that IT could be leveraged for effective information management. Eminent faculty from prestigious institutions facilitated the whole programme.

First Academic Council Meeting of the DOTT. NET November 28 – 29

The main focus of the first Academic Council meeting of the DOTT. NET (Diploma in Ophthalmic Techniques Training Network) was to accelerate the plans for implementing the DOTT.NET initiative by finalising the guidelines and reviewing the proposal. Delegates from 11 eye care institutions, 6 INGOs and Dr. A S Rathore from ADG (NPCB), Ministry of Health and Family Welfare, Government of India participated in the meeting.

Participants of the First Academic Council Meeting





Participants of Instruments Maintenance Course

Instruments Training Courses

In the year ending March 2010, six batches of instruments training courses were conducted thus providing training to a total of 41 participants.

Projects Division

LAICO Projects Division contributes to the elimination of needless blindness through

- Effective provision of end to end project management systems and processes
- Development of project management capability through sharing of best practices, systems and training

The main areas of work under this division are promoting the right approaches to project development, its implementation and evaluation. The developments in the year ending March 2010 in the major projects are discussed here.

Primary Eye Care through Vision Centres

Lavelle Fund, USA is supporting establishment of 20 Vision Centres, now onwards known as 'Primary Eye Examination Centres' in rural parts of Tamilnadu and Pondicherry. During the year 2009 – 2010, two more vision centres were established under the phase two of this project. Aravind incorporates Community Based Rehabilitation coupled with systematic community based activities, thus providing comprehensive coverage and services-preventive, curative and rehabilitative. On the rehabilitation front, 552 incurably blind people and 656 persons with low vision have been identified. CBR services were provided for 136 persons.

Seeing is Believing–Standard Chartered Bank Supported Vision Centre Project

Seeing is Believing Project is supported by Standard Chartered Bank, UK through International Agency for Prevention of Blindness (IAPB)) for setting up of forty vision centres across four States in the country as part of



Ophthalmologist examining patients at Alandurai Vision Centre

a strategy for providing comprehensive sustainable eye care to the under-served populations. The implementing agencies are

- Aravind Eye Hospital Theni and Madurai, Tamil Nadu
- Venu Charitable Society, Tapal, Aligarh
- Sadguru Netra Chikitsalaya, Chitrakoot, Madhya Pradesh
- Dr. Shroff Charitable Eye Hospital, Delhi

Of the total target of ten vision centres, five were established in the Phase I of the project connected to Aravind eye Hospital, Madurai and Theni. Two more vision centres have been established at Sathur and Singampunari in phase II.

TIFAC-CORE in Diabetic Retinopathy Project-Phase II

The Phase II of the project with the objective to enhance research in Diabetic retinopathy through basic research and to develop human resource through various training programmes was completed in March 2010. The research and academic programmes are under progress. The fourth meeting of the Reach Monitoring Committee (RMC) was held at Aravind on February 12 wherein the RMC members reviewed the performance of this project.

A2Z Child Blindness Project

A2Z, the USAID Micronutrients Sight Innovation Project managed by Academy for Educational Development (AED) is supporting Paediatric Department of Aravind Eye Hospital, Madurai in the eye care programmes on school based screening for refractive error, paediatric cataract surgery and Retinopathy of Prematurity (ROP) screening at Neo-natal Intensive Care Units. The expected result of the project is to increase the knowledge on paediatric eye diseases and make the community realise the importance of checking visual acuity in all children in the age group 0–17 years.

From the starting of the project till March 2010, around 186.000 school students were screened for refractive

errors and 6725 of them were provided with spectacles. Around 3600 children were examined and 500 spectacles dispensed in the fifteen paediatric eye camps conducted in different locations of Tamilnadu. Nearly 500 children underwent cataract surgery.

ORBIS – Aravind Paediatric Ophthalmology Learning and Training Centre (POLTC)

Training of human resource for paediatric ophthalmology service is the main focus of this centre. The centre is conducting training courses, long-term fellowship for Ophthalmologists and short term for paediatric anaesthetists, MLOPs, community outreach workers and instruments maintenance workers. The centre also has developed a training manual exclusively for this training course.

Aravind WDF Diabetic Retinopathy Management Projects – Phase III (Aravind-Coimbatore, Tirunelveli)

With the successful implementation of Diabetic Retinopathy (DR) Programme at Aravind Eye Hospitals at Madurai, Theni, Tirunelveli and Pondicherry, WDF is now extending support to further expand this programme to Aravind-Coimbatore covering three districts-Coimbatore, Salem and Erode and has extended the support to Tirunelveli region also. Phase III of the project was concluded in September 2009.

Project Impact

The impact of the phase 3 of the project shows significant increase in the number of diabetes patients attending the Retina Clinic at Aravind.

At Aravind - Tirunelveli the number of diabetes patients has increased from 4,937 in the year 2006 to 7,026 in 2008 (29% increase). At Aravind - Coimbatore the number has increased from 6,272 in the year 2006 to 10,789 in the year 2008 (42% increase).

During the project period, the number of laser patients has increased from 2,639 to 2826 (6.6%) at Aravind-Tirunelveli and from 4,957 to 6,553 (16%) at Coimbatore.

A strong referral system was developed with local physician and diabetologists for sustainable diabetic retinopathy screening.

Research Division

LAICO's Research Division was established primarily to build the organisations' research capacity to conduct scientifically rigorous and relevant research, and to engage in epidemiologic, and population based studies and health systems research to generate evidence to guide global policy in the elimination of avoidable blindness.

The Biostatistics Department provides vital support in data entry, management and analysis for all ongoing clinical, epidemiological and health systems research conducted at Aravind. Additionally, statistical inputs are provided whenever needed for planning research studies and for reviewing articles by various reviewers within Aravind and to research projects elsewhere on request.

Workshop on Research Methodology

LAICO, August 25 - 29

The basic level workshop was designed to enhance the research culture among health care service providers and structured to facilitate the participants get oriented to both research methodology and statistical methods. This included didactic lectures, problem solving sessions, hands-on-training, group work and participants' presentations.

A total of 18 participants attended the workshop.

The Major Operations Research Undertaken by LAICO in the year Ending March 2010 are

- Investigating Gender Associations amongst the Users of Cataract Surgical Services in South India - Seva Canada
- A Cluster Randomised Trial of Spectacle uptake for Refractive Errors across Multiple Delivery Systems in South India - Champalimaud Research Grant
- HR Practices which Influence Employee Satisfaction and Patient Satisfaction.

Nutrition Workshop on Dietary Intake Assessment Methods in India

Aravind - Pondicherry, February 5 - 6

In the workshop organised by South Asia Network for Chronic Disease (SANCD), 20 delegates from India, Bangladesh, USA and UK participated. There were discussions on the collection and analysis of dietary intake data. Dr. R.D. Ravindran presented the dietary intake method and analysis package designed by Aravind Eye

Hospital – AuroNutriSoft. The workshop discussed the current knowledge gaps and research priorities in the Indian setting associated with 24 hour diet recall, food frequency questionnaire with food composition tables and intake analysis package.

Meeting on Gender Inequity and Eye Care

Tanzania, March 11 - 13

Mr. Sanil Joseph, Faculty-LAICO attended the 3 day meeting on Gender Inequity and Blindness at Kilimanjaro Centre for Community Opthalmology (KCCO), Moshi, Tanzania. This was a meeting of the global forum working on initiatives to reduce the gender inequity in the use of eye care services. Mr. Sanil also presented the findings of the research study carried out at Aravind: Investigating Gender Associations among the Users of Cataract Surgical Services in South India. The group, by the end of the meeting has come up with a set of recommendations and actions to be taken within the next 18-24 months.

Other Events

Guest Lecture

International Center for Eye Health, London, May 7 – 8 Mr. R.D. Thulasiraj visited ICEH, London School of Hygiene and Tropical Medicine to deliver a lecture for the students of M.Sc - Community Eye Health.

World Congress in Health Economics

Bejing, China, July 12 – 15

Ms. Preethi Pradhan

- Preferred HR Practices in Eye Hospital Sector.

Lions National SightFirst Committee Meeting

Mumbai, India, August 29

Mr. R D Thulasiraj

- Human Resource Needs for Eye Care in India.

Workshop on ICT in Rural Areas

Chennai, India, September 15

Mr. Ganesh Babu

Metrics for Monitoring Vision Centres.

Participants of the Nutrition Workshop on Dietary Intake Assessment Methods in India





Mr. R.D. Thulasiraj at Lions National SightFirst Committee meeting



Chennai, October 23 - 24

Ms. Preethi Pradhan

Best Practices of Aravind Eye Care System

Seva Sight Programme Meeting

San Francisco, US, October 27 - 31

Mr. R.D. Thulasiraj participated in the Seva Sight Programme meeting at Berkeley, San Francisco.

Visit to Fundacion Vision

Paraguay, November 1 – 4

Mr. R.D. Thulasiraj visited Fundacion Vision, Asuncion as Faculty for a two week management course. He anchored sessions on management aspects of eye care delivery. Mr. Thulasiraj along with Dr. Rainald Duerksen, Executive Director, Fundacion Vision briefly met with Dr. Luis Federico Franco Gómez, Honourable Vice President and Dra. Esperanza Martinez, Minister of Health Services, Paraguay to discuss the role of government to enhance eye care services in the country.

TELEMEDICON 2009

Pune, Inadia, November 6 – 8

MR GANESH BABU

 Primary Eye Care Services in Rural Areas Using Wireless Technology

Annual Forum of Global Forum for Health Research

Cuba, November 16 - 18

Mr. R.D. Thulasiraj made a presentation on research at Aravind and participated in the discussions on the barriers to research, and the ways to foster and improve health research.



Mr. R.D. Thulasiraj at the TED India conference

Summit on Redefining the Global Agenda

Dubai, November 20 - 22

Mr. R.D. Thulasiraj attended the Summit on redefining the Global Agenda at Dubai, 20-22 November 2009 convened by the World Economic Forum. He participated in discussions on the theme of social entrepreneurship and economic development.

TED Conference

Mysore, India, November 27

Mr. R.D. Thulasiraj made presentation on Aravind model and its relevance outside of eye care at the prestigious TED conference, held for the first time in India, at Mysore.

IHMS Users' Workshop

Nepal, December 10 - 11

Mr. Ganesh Babu, Sr. Manager IT and Systems, Mr. Karthikeyan and Mr. Praveen Kumar-Programmers attended the Integrated Hospital Management System (IHMS) Users workshop. The main purpose for conducting the workshop was to help Nepal Netra Jyoti Sang develop a central database of all the hospitals for generating country level reports. The new developments in IT for eye care, introduction of the new software tools developed by LAICO and how effectively IT can be used in eye care were all discussed in the workshop.

ORBIS Meeting

New Delhi, India, December 19

Mr. R.D. Thulasiraj along with Dr. G.V. Rao met the leadership team of ORBIS International, New York.

INFORMATION TECHNOLOGY AND SYSTEMS

Today IT is viewed as a tool to provide quality health care, irrespective of geographical location. Providing real time appropriate relevant information to every stakeholder in the health care industry makes a difference. Aravind Eye Care System has found many innovative ways of participating in efforts to bridge the digital divide while increasing service delivery in eye care. A large number of diverse IT initiatives are in various stages of experimentation. These new healthcare models initiated by AECS, while delivering quality care will explore the possibility of innovative new technology that are simple to use, cost effective, portable.

Software Installations

The IT Division, during the period April 2009 – March 31 2010 installed the following software:

- The Integrated Hospital Management System (IHMS): installed in two hospitals in Bangladesh, four in Nepal and five in India.
- Opticals Management System: in two hospitals in India
- Lab Management software: in Joseph Eye Hospital,
 Trichy and Aravind Eye Hospitals at Tirunelveli,
 Coimbatore and Pondicherry
- Vision Centre Management Software (VCMS): installed in Aravind Vision Centres at Sathur, Singampunari and Alandurai;
- Community Centre Management Software (CCMS): installed in Community Centre at Sankarankoil

In the already existing Aravind Diabetic Retinopathy Evaluation Software (ADRES), SMS alert was developed to reduce the waiting time of patients and to alert doctors about the patient arrival.

Referral Patients Reply option was developed in Low Vision Clinic to keep track of patients referred from other speciality clinics to the Low Vision Clinic at Madurai. This provision enables to generate a reply letter to the Doctor who referred the patient with Diagnosis.

Other Applications

Geographical Information System

This is an application used for graphically representing the data of Aravind Eye Hospitals on Google maps. It can be used as a standalone application or can be integrated to other applications or web applications. Currently the department uses this for representing the camp details and the details of hospitals that participated in Manpower Management Development Programme (MMDP) organised by Aravind Eye Hospitals.

Map Builder Application

This is an application being developed to generalise the applications related to Google map. With the help of this, one can upload data on their own regarding eye camp locations, its statistics, course participants etc and the corresponding map would be generated without doing any programming.

Trip Planner

Travel Portal is a web based application which simplifies trip planning by providing pertinent information of hotels, travel agencies and booking forms. It enables the users to submit their trip planning information to Logistics Administration Department. It also generates monthly report for the trips and cost involved in ticket booking and rescheduling the trip. Another salient feature of the application is employee trip calendar which shows the offsite work and onsite availability of the employee.

Aravind Outlook

Aravind Outlook is a web platform which helps you build an online repository of all the contacts of Aravind and enable to retrieve the same at any time.

Research Study Data Entry Software

A software was developed to capture the data of Mycotic Ulcer Treatment Trial Study survey forms. The user friendly forms enable the user to feed data as well as provide necessary validations. This software is installed in Madurai and Pondichery. The entire software is designed based on the requirements specified by the technical team from Proctor Foundation under the leadership of Dr. Tom Lietman.

Enhancements in Intranet

Personnel

The personnel page in the intranet is rejuvenated with a new layout and added feature like attendance summary of employee.

Demonstration of the software developed by IT department at the stall set up during DR symposium



Thingal Udhayam

Thingal Udhayam, Aravind's bilingual weekly e-magazine now uses "Azhagi" Tamil unicode font for its Tamil columns which enables cross browser compatibility.

Aravind.org sub websites

Low Vision Website

It provides information about low vision, its causes, rehabilitation products, services offered and concessions in government jobs and educational institutions for the low vision patients.

Vanakkam

Vanakkam is an online information guide to visitors and volunteers coming to Aravind Eye Care System. It provides an overview of Aravind Eye Care System and its locations.

e-newsletters

Aravind News

A content management system is developed for publishing Aravind news letter and archiving it.

Journey Towards Light

Journey towards Light, biannual newsletter of the "Friends of Aravind" is also designed and published.

Eyeznewz

A content management system developed for publishing eyeznews, an e-newsletter of Aravind libraries and information centres and archiving it.

Visit to Christian Medical College (CMC)

Vellore, March 30

The key objectives were to have an overview of

- Medical record system
- Level of Electronic Medical Record implementation
- Details of Information technologies applied for EMR and in general
- Management of Patient care activities

IT and Medical records staff at CMC, Vellore

ARAVIND TELE-OPHTHALMOLOGY NETWORK

Telemedicine link has been established through video conferencing between all the satellite hospitals of Aravind. Aravind uses this technology to overcome the issues of transportation and inadequate specialist availability.

Aravind Tele-ophthalmology Network provides facilities for tele-education, tele conference and tele- consultation.

Educational interactions include grand rounds (cases of academic interest), journal clubs (Clinical research and management articles), clinical meetings, special lectures, regular class sessions, research committee meetings, post graduates classes, CMEs, projects review meetings and classes for mid level ophthalmic personnel and paramedics.

Through videoconferencing doctors, paramedical personnel and administrative staff at Aravind can interact and share their experiences with the experts during Continuing Medical Education (CME) programmes, grand rounds and Journal Clubs, research and management meetings. During the academic year (April 2009 to March 2010) the department conducted around 320 videoconferencing sessions. The department also conducted seven international conferences (four with institutions in the US, 3 with institutions in Ireland).

Teleconsultation involves opportunistic screening of Diabetes patients for Diabetic Retinopathy. Aravind links screening eye campsites and the base hospital through VSAT mounted on a mobile van. In the year ending March 2010, 1100 Diabetic Retinopathy cases were graded through 24 such camps. The technology involves the use of a retina imaging camera and a special software, Aravind Diabetic Retinopathy Evaluation Software (ADRES) to offer remote diagnosis and consultation using store and forward technology. 2136 Diabetic Retinopathy cases were graded in collaboration with various Diabetes Centres.



ARAVIND COMMUNICATIONS

HUMAN RESOURCES

The division consisting of the DTP, Publications, Videography and Audio Visual departments produced around fifty six patient information materials, handouts and about four hundred posters for various workshops and conferences held in and out of Aravind. It helps in designing the layout and publishing the annual reports of NGOs - Kilimanjaro Centre for Community Ophthalmology (KCCO) and International Eye Foundation (IEF). The department also has to its credit the publishing of monthly Tamil magazine Kannoli, quarterly English magazines, Illumination and Compassion. Besides these, visiting cards for Aravind staff and members of Friends of Aravind are also prepared.

With the support from Right to Sight, the French version of the DVD on Instruments Maintenance was brought out, thanks to the efforts put in by the volunteers, Miss Isabelle Hoyaux and Mr. Yohann Abbou in the making of it. The department plans to integrate the English, Spanish and French versions in a single DVD with multiple language tracks so that a person may choose the language of his choice.

A noteworthy publication of Aravind Communications this year was the book entitled Atlas of Imaging in Neuro-ophthalmology and Orbit co – authored by Dr.Usha Kim, Dr. S. Mahesh Kumar and Dr. K.G. Srinivasan. The book release function was held on September 29 at Aravind – Madurai.

The videography department of Aravind Communications produced various quality video presentations, one of which "Iris fixation of Rigid IOLs" won the Best Video Award at the ASCRS film festival held in Boston. The department has various rare clinical photographs in its archives.

At the launch of the Atlas of Imaging in Neuro-ophthalmology and Orbit



With the theme for the year as "Employee Empowerment", the HR activities at Aravind Eye Care System were numerous reflecting the dynamic growth of the organisation.

Continuing Education Programmes and Retreats

There has been a constant emphasis within the organisation to continually improve specific clinical skills along with soft skills in order to provide the best experience for the patients. Continuing education programmes and retreats have proved to be a strong motivation as well as a training ground.

CEPs for Mid Level Ophthalmic Personnel were conducted at all Aravind Eye Hospitals in the second weeks of October and January when the patient crowd was low due to the festivals of Diwali and Pongal.

A two day workshop was conducted from March 20-21 to systematically plan the MLOP manpower for the various departments across all Aravind Eye Hospitals. The Chief Medical Officers, Senior Medical Officers of the specialty clinics, Heads of various departments, Nursing Superintendents, Senior MLOPs/ Supervisors, Managers of each department and HR Managers participated in the workshop.

Similarly, a meeting was held on August 27 to streamline and discuss the activities of the newly formed cadre, Head cleaners in the cleaning employees section

A retreat was conducted at Black Thunder Resort, Mettupalayam, near Coimbatore for the Glaucoma teams across all Aravind Hospitals to plan for the future developments and to standardise the diagnosis and treatment practices, equipment-used and patient flow pattern.

Team spirit - Auroutsav, Coimbatore





Kids' graduation ceremony at Aravind - Madurai

The HR Department conducted a conference on Human Resource Management-Best practices in Health Care from January 6-7 at LAICO. The conference which covered the key practices of HR was attended by medical officers, HR personnel and administrative staff from various institutions. The faculty included Mr.U.K. Ananthapadmanabhan (Kovai Medical Centre and Hospital, Coimbatore), Dr. T. Manonmani (Ganga Hospitals, Coimbatore), Dr. Rohini Sridhar (Apollo Speciality Hospitals, Madurai), Ms. Cindy Harrison (Chelsea Community Hospital, USA), Dr. R. Ramani (Sankara Eye Hospital, Coimbatore, Dr. K. Prabhakar (Apollo Hospitals Group) and Mr. Biju V. John (Manipal Health System, Bangalore).

Educational activities of the HR Department also include organising various awareness exhibitions by departments like Outpatient, Counselling, Housekeeping and Wards. Various charts, models and equipment displayed during the exhibitions provide a learning opportunity for both the organisers and the visitors.

Employee Welfare Activities

In the year ending March 2010 various workshops, guest lectures and seminars were organised for the personal welfare of the employees and their families. Eminent resource persons spoke on health awareness, value system,



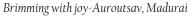
Lighting ceremony of human resource management conference

nutrition, personality development, housekeeping and catering.

Aurowel, the routine health check up programme is conducted annually to promote a healthy lifestyle among all the employees of Aravind Eye Care System. The employees grouped under different age-groups undergo basic health-screening as part of this programme.

To acknowledge the invaluable service rendered and to motivate them for a better performance, awards were distributed to the staff and MLOPs who served for more than five, ten, fifteen and twenty years at Aravind.

At another award function the children of Aravind







Theme presentation-Auroutsav, Tirunelveli

employees who successfully completed their secondary and higher secondary public examinations were felicitated. Dr. G. Natchiar, Director – Human Resources, in her inspirational speech advised the children that this being a turning point in their life, they should work hard to excel in various examinations. She also focused on the importance of setting a goal in life and how to attain it. In the year ending March 2010 across all Aravind Eye Hospitals, sixteen of the total thirty children of Janakiamma Child Care Centres were graduated as "Ready for School" to join school in the following academic year.

Dr. V. Mediclaim Group Insurance Scheme was introduced for the employees who completed ten years of their service and for Managers from the second year of their joining at Aravind. As a first phase, 110 employees and their families were insured and health insurance identity cards were distributed.

Recreational activities organised in the year ending March 2010: Auroutsav, a week-long series of competitions conducted once in two years across all the Aravind Eye Hospitals, was celebrated in August. The employees were

given an opportunity to bring out their talents in art, craft, literature and sports and also to promote team spirit among themselves.

For the employees to rejoice themselves Melody Friday, (Aravind – Madurai and Tirunelveli) and Festive Friday (Aravind – Coimbatore) are observed on a monthly basis. These initiatives provide a platform for the staff to showcase their talents through singing, dancing and other performing arts. The department also conducts various excursion programmes for the staff of different cadres.

To facilitate interaction between the staff and employees of AECS, HR Department celebrates various days on different occasions. Mission Day is celebrated on July 7 across all the hospitals to re-dedicate the staff to the mission of eliminating needless blindness.

To reflect on the Founder Chairman's vision of creating a blind-free society, Vision Day is observed on October 1. Besides these, the HR also organises various celebrations on the anniversary of hospitals and International Women's Day.

Aravind-Pondicherry gets the Government's award for the 'Best Maintained Ornamental Garden' consecutively for the fourth year



Rotary Aravind International Eye Bank

The year 2009 – 2010 started with evolving various strategies to enhance eye collection and utilisation and ended with many successful events like commemoration of 10 years in eye banking and conducting a national CME on eye banking. Thanks to the consistent efforts put forth by the eye bank in creating awareness on eye donation, eye collection has increased by 14.12% and new eye collection centres have emerged in the districts of Nagapatinam and Madurai.

Tenth Anniversary of Rotary Aravind International Eye Bank (RAIEB)

Madurai, May 1

The celebrations began with the lighting of Kuthuvilakku by Dr. P. Namperumalsamy, Chairman, Dr. G. Natchiar, Vice-Chairman, Aravind Eye Care System, past Rotary Governors Rtn. Ramanathan, Rtn. Shanmugasundaram and Mr. Lalji Vora. Dr. S.R. Krishnadas, CMO, Aravind-Madurai delivered welcome address.

Dr.P. Namperumalsamy released the 10 year souvenir and acknowledged the active participation of eye collection centres Felicitation speeches were made by Dr.Kousalya Devi, Kasthurba Hospital, Gandhigram, Rtn. M.N.Nayagam, Rtn.Ramanathan, Rtn.Lalji Vora and Rtn. Shanmugasundaram. Dr.M.Srinivasan, Director-AECS

Releasing the 10 year souvenir at anniversary celebrations



and secretary-RAIEB explained the genesis of Madurai Eye Bank Association (MEBA) and RAIEB. Various Lions Clubs, NGOs and active eye collection centres from 12 districts of Tamil Nadu were honoured for having collected a total of 14,232 eyes over 10 years.

Eye Donation Fortnight Celebrations

August 25 – September 8

During the eye donation fortnight Aravind doctors gave awareness lectures on radio and local television channels. Various awareness seminars, rallies and exhibitions were also conducted. Drawing and poster – making competitions for school children were conducted at Madurai. Cinema theatres in Madurai displayed slides on eye donation. At Aravind – Tirunelveli, an awareness human chain was formed by the staff in front of the hospital and an awareness walk was organised through the heart of the city. The Hindu published an article by Dr. Sri Sankar, Aravind - Coimbatore on the need for increase in eye donation.

IFETB (International Federation for Eye and Tissue Banking Inspection) Reaccreditation for RAIEB

RAIEB was reaccredited by IFETB, USA in January 2010 following a visit by the IFETB team consisting of

School students at the drawing and poster making competition





IFETB inspection at RAIEB, Madurai

Mr. Philip Felton, Vice President, International Programs and Mr. Daniel De'lap, Director, International Programs in September 2009.

National CME on Eye Banking

Madurai, December 19 - 20

In collaboration with National Programme for Control of Blindness (NPCB) and Eye Bank Association of India (EBAI), Rotary Aravind International Eye Bank, Madurai conducted a national CME on eye banking which was the first of its kind that RAIEB has conducted so far. A total of 120 participants from Gujarat, Andhra Pradesh, Kerala, New Delhi, Pondicherry, West Bengal, Karnataka, Maharashtra and Tamilnadu attended the CME.

Visitors to Rotary Aravind International Eye Bank

October 1 - 3

Sight Life team consisting of Mr.Tim Schottmann, Vice President, Global Programs and Mr.Jeremy Schuman, Director, Global Programs visited eye bank to:

- enhance the capacities of the Eye Bank
- frame strategies for the growth of the eye banks in India
- sponsor Eye Bank projects

The team analysed RAIEB data of 2008 and did process mapping and bench marking for the Rotary Aravind International Eye Bank.

Refresher Training on Eye Donation

Madurai, March 4

The training programme was conducted mainly for the existing eye collection centres. Thirty-four participants from Lions Clubs of Kariyapattinam, Karaikal, Thirunallar Temple City, Pugalur, Pondicherry, Kumbakonam, Tanjavur, Vedaraniyam, Pudukottai, Ayakarranpulam, Sivakasi, RAMCO Cements-Aruppukkottai, Pattukottai,



Mr. Tim Schottmann, Vice President, and Mr. Jeremy Schuman, Director, Global Programs discussed with the Aravind team

and Watrap-Madurai participated. Dr. M. Srinivasan – Medical Director, RAIEB gave an orientation about corneal blindness and the significance of eye donation. There were video demos on corneal diseases, transplant surgeries etc. The eye bank manager presented the statistics for the year 2009. All aspects of eye collection, enucleation, storage, transportation and transplant surgeries were explained in detail with exhibits.

Trainings Offered

- Physician training was offered to three doctors (from Madurai, Portblair and Ivory Coast)
- Eye Bank Manager from Gouthami Eye Hospital,
 Vishakapattinam underwent an observation training in eye banking at RAIEB.

Internal Capacity Building

Ms. Hepsiba Jawahar, Eye Bank Manager, Aravind-Madurai attended observership training on eye banking from July 13 - 18 at Ramayamma International Eye Bank, LVPEI, Hyderabad.

Statistics 2009 - Eye Collection and utility

Name and place of the Eye Bank	No. of Eyes Procured	No. of eyes utilised for surgery
Rotary Aravind International Eye Bank, Madurai	2238	676
Aravind IOB Eye Bank, Coimbatore	1185	520
Rotary Aravind Eye Bank, Pondicherry	446	151
Rotary Aravind Eye Bank, Tirunelveli	69	42
Total	3938	1389

Dr. G. Venkataswamy Eye Research Institute Aravind Medical Research Foundation

The Dr.G.Venkataswamy Eye Research Institute with its state-of-the-art infrastructural facility has been able to make significant contributions in understanding the basic biological mechanisms of eye diseases. Molecular genetics of eye diseases is a proven approach to understand the disease mechanism. At AMRF considerable effort is underway to use this approach to examine several eye diseases (diabetic retinopathy, age related cataract, age related macular degeneration, Leber congenital amaurosis, albinism). Apart from the generation of basic information, identification of those genes that are directly involved in the disease process as well as those genes that cosegregate with a particular disease will be of clinical importance.

INDEYE Review Meeting

Indeye project is one of the ongoing multi centric projects funded by Wellcome Trust for a duration of 3 years (2008-2011). The title of the project is "A genetic component to the Indeye study of cataract and age related macular degeneration in India". A review meeting was held at AMRF from February 8 - 9 in which all the investigators participated, analysed the genetic data and discussed the future directions

Workshop on Mass Spectrometry in Clinical Proteomics

September 30

Thirty four participants took part in the workshop which included lectures by national and international faculty.

Ongoing Projects

Basic Research

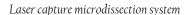
- Molecular genetics of leber congenital amaurosis in South Indian population
- Molecular genetic analysis of fuchs endothelial corneal dystrophy
- Association studies on diabetic retinopathy with type 2 diabetes in South Indian population
- Genetic and functional dissection of FOXL2 gene involved in the pathogenesis of the Blepharophimosis Syndrome (BPES)
- Identification of genetic defects occurring in Indian Oculocutaneous (OCA) and Ocular Albinism (OA) families
- Molecular genetics of keratoconus
- Biophysical characterisation of human myocilin and glaucoma database
- Screening of LOXL1 gene mutations in exfoliation glaucoma patients







- Transcriptome and proteome analysis of ALR2 gene and its involvement in the pathogenesis of diabetic retinopathy
- A genetic component to the INDEYE study of cataract and age-related macular degeneration in India
- Topical kinetics of voriconazole (1% & 0.1%) in humans
- Evaluating the relationship between Pharmacokinetics (PK) and efficacy of Methotrexate (MTX) in patients with non-infectious uveitis
- Molecular mechanism of neovascularization in proliferative diabetic retinopathy and Eales' disease
- Pathogenesis and molecular mechanism of age-related macular degeneration
- Corneal surface reconstruction using cultured human limbal epithelial cells
- Developing xenobiotic-free culture conditions to generate stem-cell rich epithelium for corneal surface reconstruction
- Etiology and immuopathogenesis of presumed trematode induced uveitis
- Cytokine profile in aqueous humor of parasitic granuloma
- Antigenic mimicry between leptospiral and human lens proteins
- International leptospirosis MAT proficiency testing scheme
- Molecular insights into the etiology of infectious
- Characterisation and speciation of aspergillus and fusarium species from corneal ulcer
- The pathogenesis of fungal keratitis in human corneal Tissue by fusarium SP and aspergillus SP
- Pathogen host interaction in human mycotic keratitis
- proteomic profiling of serum in proliferative diabetic retinopathy
- Identification of biomarkers for primary open angle glaucoma







Sample preparation for genetic analysis

Clinical Research

- Health literacy and other barriers to follow-up after initial diagnosis of glaucoma in south Indian population
- A multi-center, double-masked study of the safety and efficacy of Travoprost APS compared to TRAVATAN® in patients with open-angle glaucoma or ocular hypertension.
- Pharmacoeconomics of various brands of timolol for patients with glaucoma or ocular hypertension
- A Multicenter, open label, active control, parallel group randomised study to demonstrate non inferiority of brinzolamide 1% ophthalmic suspension compared with Dorzox (Dorzolamide) 2% ophthalmic solution in treatment of elevated intra-ocular pressure in patients with primary open angle glaucoma or ocular hypertension
- Fluocinolone acetonide for the treatment of diabetic macular edema
- Rinzolamide 1% ophthalmic solution for the treatment of primary open angle glaucoma and ocular hypertension
 - A multicenter, open label, active control, parallel-group, randomised study to demonstrate non-inferiority of BRINZOLAMIDE 1% Ophthalmic Suspension compared with DORZOX (Dorzolamide) 2% ophthalmic Solution in treatment of elevated intra-ocular pressure in patients with primary open angle glaucoma or ocular Hypertension.
 - A multicenter, open label, active control, parallel-group randomized study to demonstrate non inferiority of brinzolamide 1% ophthalmic

- suspension compared to dorzox (dorzolamide) 2% ophthalmic solution in treatment of elevated intra-ocular pressure in patients with primary open angle glaucoma or ocular hypertension
- A randomised, double masked, active controlled, phase 3 studies of the efficacy, safety, and tolerability of repeated doses of intravitrial VEGF Trap in subjects with neovascular age-related macular degeneration (AMD)
- A safety and efficacy assessment of Vitreosolve® for ophthalmic intravitreal injection for inducing posterior vitreous Detachment in non-proliferative diabetic retinopathy subjects
- A study of featureless retina in diabetic retinopathy: Clinical and angiographic features and therapeutic implications.
- A retrospective analysis of patients with Idiopathic Macular Telangiectasia: Natural history, incidence of visual loss and investigations of causes of visual loss.
- A retrospective study of the natural history of lamellar macular hole
- A study of polypoidal choroidal vasculopathy:incidence, angiographic and tomographic features
- Atypical manifestations of posterior scleritis: Diagnosis and management
- A restrospective study of anatomic and functional outcome of chronic macula-off rhegmatogenous retinal detachment
- A prospective study of Transpupilary Thermotherapy (TTT) for Chronic Central Serous Chorioretinopathy (CSCR)
- Pigment Epithelial Detachment (PED) in Chronic Central Serous Retinopathy (CSCR)
- Radial optic neurotomy for ischaemic central retinal vein occlusion: a case-control study
- Brilliant blue dye for internal limiting membrane peeling in macular surgery
- Laser photocoagulation for diabetic macular edema with serous retinal detachment
- Optical coherence tomography for subhyaloid haemorrhage of various etiologies
- A study of combined occlusion of central retinal artery
- Vitrectomy for macula-threatening tractional retinal detachment in diabetic retinopathy
- Silicone oil tamponade in 23 gauge sutureless vitrectomy: long term anatomical and functional outcome
- Yag hyaloidotomy with gas tamponade as a viable option for pre macular haemorrhage in PDR against surgical intervention by pars plana vitrectomy
- IVTA Vs Macular PHC for diffuse diabetic macular edema – prospective study
- Isolated intravitreal bevacizumab therapy for choroidal neovascular membranes of multiple aetiologies

- Intravitreal bevacizumab as a preoperative adjuvant for diabetic macular tractional detachments with active new vessels
- Intravitreal bevacizumab therapy for polypoidal choroidal vasculopathy
- Retinochoroidal coloboma a comparison of laser barrage photocoagulation versus natural history
- Atypical acute posterior multifocal placoid pigment epitheliopathy associated with serous retinal detachment: Clinical and angiographic features and treatment
- Post Pan Retinal Photocoagulation (PRP) serous macular detachment in patient with nephropathy
- Serous macular detachment as a predictor of malignant hypertension
- Serous macular detachment as a predictor of resolution of macular edema with intravitreal triamcinolone injection
- Vitrectomy for macular hole associated with rhegmatogenous retinal detachment
- Comparison of the safety and efficacy of fluocinolone acetonide intravitreal inserts to sham injection in subjects with diabetic macular edema
- Investigation of efficacy and safety in Wet AMD-View2 study
- A multicenter, open study assessing the efficacy and safety of ranibizumab (intravitreal injections) as adjunctive therapy to laser in patients with visual impairment due to Diabetic Macular Edema(DME)
- A 12 month randomised pilot study to compare the efficacy and safety of PDT (standard Fluence) plus intravitreal lucentis vs. PDT (reduced fluence plus intravitreal lucentis)
- A randomised, parallel group, multicentre, dose finding, comparison of the safety and efficacy of ASI-001A 0.5G/day And ASI-001B 0.2G/day fluocinolone acetonide intravitreal inserts to sham injections in subjects with diabetic macular edema
- A phase 3 safety and efficacy study of Vitreosolve® for ophthalmic intravitreal injection for inducing posterior vitreous detachment in retinopathy subjects
- VEGF trap eye: Investigation of efficacy and safety in wet AMD
- National retinoblastoma registry
- Randomised, double blind, active controlled study of the efficacy, surgical outcome and complications of silicone rod sling in frontalis sling suspension surgery
- Socket reconstruction using bio-engineered autologous oral mucosal epithelium
- Oral clonidine premedication in patients undergoing dacryocystorhinostomy under local anaeshtesia
- Prospective clinical evaluation of Dacryocystorhinostomy (DCR) with lacrimal intubation
- AURO KPRO

- Mycotic Ulcer Treatment Trial (MUTT)
- Steroids for corneal ulcer trial
- SICCA study
- Posterior capsular opacification after implantation of Square edge PMMA, Round edge PMMA and hydrophobic acrylic intraocular lenses: A prospective, randomised comparative trial
- Clinical evaluation of hydrophobic foldable IOLs
- Capsule wash for paediatric eyes
- To analyse the effect of CTR on Anterior Capsular Opening (ACO) in eyes with retinitis pigmentosa
- Hemodynamic response to routine phacoemulsification among normal healthy ophthalmic surgeons during high volume cataract surgery
- Effect of square edge PMMA IOL in preventing lens epithelial cell migration in paediatric cataract surgery: A randomised controlled trial
- Comparison of phacoemulsification vs. SICS: A randomised control trial
- Role of wetlab training in donor eyes and simulator for learning capsulorhexis
- Cataract and its treatment patient awareness and public myths
- Comparison of secondary PCIOL, iris fixated IOL and scleral fixated IOL
- Outcomes of high volume phacoemulsification compared to standard volume phacoemulsification
- A double masked, Placebo-controlled, multicentric, parallel group, dose ranging study to assess the efficacy and safety of LX211 as therapy in subjects with noninfectious intermediate, anterior and intermediate, posterior or pan-uveitis
- Protocol: CAIN457C 2303: A 24 week multicenter, randomized, double-masked, placebo controlled study to assess the difference in the rate of recurrent exacerbations in Behçet's patients with posterior or panuveitis treated with AIN457 vs. placebo adjunctive to standard-of-care immunosuppressive therapy
- Protocol CAIN457C2301: A 24 week multicenter, randomised, double-masked, placebo controlled, dose ranging phase 3 study of AIN 457 versus placebo for maintaining uveitis suppression when reducing systemic immunosuppression in patients with quiescent ,non-infectious intermediate, posterior or panuveitis (ENDURE study)
- A2Z Child Blindness and Eye Health Project

Aurolab Clinical Trials

 Posterior capsular opacification after implantation of square edge PMMA and acrysof intraocular lenses in paediatric cataract: Randomised controlled trial

- Posterior capsular opacification after implantation of square edge PMMA, round edge PMMA and acrysof intraocular lenses: Randomised controlled study
- Clinical evaluation of hydrophobic foldable intraocular lenses
- Safety and efficacy of aspheric IOL in cataract
- Randomised, double masked, active controlled study of the efficacy, surgical outcome and complications of silicone rod sling in frontalis sling suspension surgery
- Prospective clinical evaluation of Dacryocystorhinostomy (DCR) with lacrimal intubation
- Evaluation of Auro-tube in Conjunctivo Dacryocystorhinostomy (CDCR)
- Pharmacoeconomics of various brands of timolol for patients with glaucoma or ocular hypertension

Operations Research

- Investigating gender associations amongst the users of cataract surgical services in south India - Seva Canada
- A cluster randomised trial of spectacle uptake for refractive errors across multiple delivery systems in South India - Champalimaud Research Grant
- HR practices which influence employee satisfaction and patient satisfaction

Awards

Dr.P.Sundaresan was awarded the ICMR AWARD 2009 and Prize for Biomedical Research for scientists belonging to underprivileged communities.

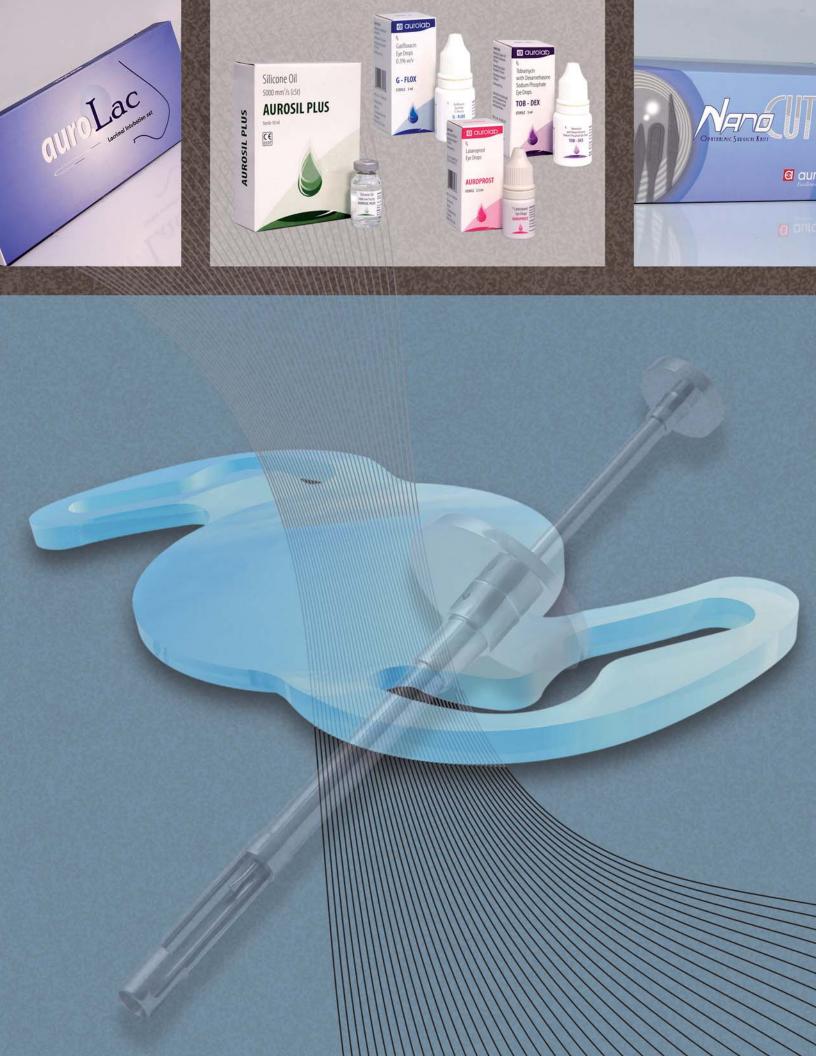
Ph. D Awarded

Ms. Amala Raja Sundari April 2009

Serological and Molecular characterisation of Rubella virus in children with Ocular defects of Congenital Rubella Syndrome.



Ms. Amala Raja Sundari



Aurolab

In 2009-2010 Aurolab continued to expand its range of innovative, high quality ophthalmic products, further contributing to Aravind's mission of making eye care affordable for the common man. All Aurolab products are manufactured on efficient production lines with strict quality assurance measures that meet international standards. Regular presence at various major ophthalmic conferences across the globe in recent years has increased the reach of Aurolab's products in both national and international markets.

NEW PRODUCTS

IOL Division

Aurolab's IOL division introduced a user-friendly surgical injecting system for its hydrophobic acrylic lens, Aurovue. The new metal injectors developed for this are now gaining acceptance and popularity among ophthalmologists.

Suture Division

Aurolac

Aurolab's suture division launched the Aurolac Lacrimal Intubation set, a new product used in DCR surgeries. DCR or Dacryocystorhinostomy is a surgical procedure

Metal injectors



that is performed to treat blocked nasolacrimal ducts.. Aurolac is made of medical grade silicone for excellent biocompatibility and longer retention time. It is malleable and makes convenient probes for easier insertion through the canaliculi and nasoloacrimal duct.

Blade Division

Nanocut

Aurolab's Blade division launched Nanocut Superior Technology blades. These blades are produced using a superior technology for improved consistency and performance.

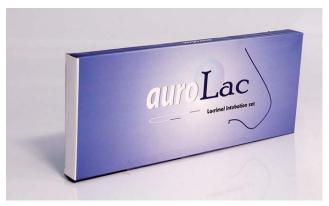
Pharma Division

Aurosil Plus

Aurolab's pharmaceutical division launched Aurosil Plus Silicone Oil 5000 mm²/s (cSt). This product is employed for prolonged tamponade postsurgical treatment for severe retinal detachment. Close on the heels of its launch Aurosil Plus obtained CE certification.

In the last year Aurolab's pharma division has also introduced the following new eye drops:

- TOB-DEX Tobramycin + Dexamethazone sodium phosphate, antibiotics with steroid drug
- G-FLOX Gatifloxacin, antibiotic drug



- AUROPROST Latanoprost eye drops for glaucoma. Auroprost is the only economically priced product of its kind currently available in the market.

Audits

ISO and CMDCAS Certification

January 19 - 23

Aurolab received CMDCAS (Canadian Medical Device Conformity Assessment System), ISO 9001:2000 and ISO 13485:2003 certification for its pharmaceutical medical devices and its aspheric lenses. Its surgical blades also received ISO 13485:2003 certification.

CE Certification

July 28 - 30

Aurolab received CE certification for its surgical blades, aspheric lenses, microsurgical sutures, ptosis slings, Aurosil plus and the complete range of cartridges and injectors currently in the market.

USFDA Audit

October 19 - 22

This audit, done for the suture division was completed successfully and recommendations for process and documentation enhancement were made.

MAJOR CONFERENCES ATTENDED

Participation in various domestic and international ophthalmic conferences provided an opportunity for Aurolab to meet delegates from various regions and discuss future business with existing distributors. Apart from national and state level conferences, Aurolab participated in the following international conferences:

- 24th Congress of the Asia-Pacific Academy of Ophthalmology, Bali, May 16 to 19
- XXVII European Society of Cataract & Refractive Surgeons Conference, International Congress Centrum, Berlin, September 12-16

CE audit at Aurolab





AAO conference at San Francisco

- American Academy of Ophthalmology Conference, San Francisco, October 24 – 27
- MEDICA-2009 conference, Düsseldorf, November 18-21

Conference on Engineering Innovation in Manufacturing

Chennai, November 19 – 20 Dr. P. Balakrishnan

- Innovations in eye care

The conference was organised by the Confederation of Indian Industry (CII), Southern region.

All India Ophthalmological Conference

Kolkata, January 21 - 24 2010

At the AIOS conference stall, Aurolab introduced its new products, "Aurolac" – Lacrimal Intubation set, "NanoCut" – superior technology blades, Auroprost – Latanoprost and also introduced the metal injector for Aurovue lenses (Hydrophobic foldable lenses) to the ophthalmic society.

Best Stall Award

Aurolab won the "AIOS Certificate of Merit" for its stall set up at in the 68th All India Conference held at Kolkata.

Mr. Ramnath, Production Engineer, Mr. R.D. Sriram, Director-Operations, Mr. Padmanabhan, Product Manager at MEDICA – 2009 conference





Dr. P. Balakrishnan at the Conference on Engineering Innovation in Manufacturing, Chennai

The certificate will be presented during the inauguration of the 69th All India Conference – Ahmedabad on 3rd February 2011.

Apart from these, Aurolab was represented in a number of annual conferences held at Delhi, Andhra Pradesh, Madhya Pradesh, Uttar Pradesh, Gujarat, Uttarkhand, Maharashtra, Bihar and Rajasthan.

HR Initiatives

July 7th was observed as Mission Day at Aurolab, in honor of its Founder Chairman, Dr. G. Venkataswamy. Senior employees shared their experiences of working with Dr. V.

A 15 day summer course was conducted for children of Aurolab staff from April 25 - May 10. Apart from regular lessons and fitness sessions, children were taught how to fashion handicrafts from waste materials. Aurolab organised an exhibition on May 20 at the conclusion of the course to showcase the children's talents.

The AMC Food and Nutrition Department facilitated an awareness programme on nutritious diet for healthy living on July 18.

A talk on work culture was given by Mr. Kavidasan, Director-Roots Industries, Coimbatore on November 28.

For the first time, Aurolab organised CTE (Continuous Technical Education) programme from October 10 - 11 for production staff in which they were briefed about new products, sterilisation, waste elimination, cleaning and functioning of the marketing department.

A visitors' waiting shed was built for the staff to relax during leisure time with their friends and family. It was inaugurated by Professor. Fred Munson and Mrs. Mary Munson on January 29. The senior team of Aravind planted several trees around the shed during the function.

Recreational Events

Aurolab conducted Auroutsav on its premises for the first time. It proved to be a weeklong celebration of creativity and innovation that brought out the latent creative and organising talent in the employees and infused a sense of harmony among them.

Aurolab conducts a monthly in-house cultural event called Kalakkal Saturday, that provides a forum for employees to bring out their latent talents in performing arts.

A two day tour to Coutrallam and Thenmala, ecopark in Kerala was also organised for the employees.

Auroutsav celebration



Awards and Recognitions

It is gratifying and at the same time motivating for Aravind Eye Care System that its compassionate eye care services are acknowledged worldwide as is evident from the successive international recognition it receives.

AECS was awarded for the renowned Hilton Humanitarian Prize for the year 2010, the largest humanitarian award in the world. The award is presented to an organisation that is doing extraordinary work to alleviate human suffering and carries a cash prize of \$1.5 million.

AECS was chosen one among the Ten Top International Organisations nominated to participate in the social sector leadership programme run by the Thunderbird School of Global Management and American Express Foundation. Dr. R. Venkatesh, Aravind-Pondicherry and Mr. Venkatesh Kannan, Division Head-Pharmaceuticals, Aurolab are invited to attend this programme.

Aravind was listed as Innovation-All Star by Fast Company, the most creative business magazine today while honouring the world's most innovative companies.

Gold Medal by Indian Intraocular Implant and Refractive Society (IIRSI)

Dr. R. Venkatesh, Aravind-Pondicherry has been awarded Gold Medal for the year 2009 by the prestigious Indian Intraocular Implant and Refractive Society (IIRSI) for his contributions to ophthalmology.

Best Paper Presentation Award

Ms. Preethi Pradhan, Senior HR-Manager

 HR practices influencing employee satisfaction: A comparative study of Government Eye Hospital and NGO Trust

During the Hilton Humanitarian Prize ceremony





Dr. R. Venkatesh receives IIRSI Gold Medal for the year 2009

Eye Hospital at the International Conference on Indigenous Management hosted by Department of Business Administration of Annamalai University, Chidambaram.

Lumera Film Festival Award

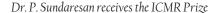
A video film on Safe and Effective Technique to Tackle Lens Induced Glaucoma in the developing World made by Dr. R. Venkatesh, Dr. S. Kavitha and team has been selected as the winner in the Complex Case Category at the 2009 OPMI Lumera film festival on Eyetube.net.

ICMR Award

Indian Council of Medical Research has selected Dr.P.Sundaresan for "ICMR Prize for Biomedical Research for scientists belonging to underprivileged communities" in recognition of his significant contributions in biomedical research.

Mr. R.D. Thulasiraj becomes a member of the Global Agenda Council on Social Entrepreneurship

Following an invitation from World Economic Forum, Mr. R.D. Thulasiraj was appointed member of the Global Agenda Council on Social Entrepreneurship.







Mr. Ganesh Babu receives the eINDIA award



Aravind Eye Care System received the eINDIA 2009 Award for the IT initiatives undertaken in the vision centres. Aravind's nominated project 'Health Management Research Initiative' has been declared the winner of eINDIA 2009 Award in the category of 'Innovative Grassroots Telecentre of the Year'.

International Gold Award of COS

The Chinese Ophthalmological Society awarded Mr. R.D. Thulasiraj the International Gold Award of COS for his outstanding contribution and support in the field of eye care in China.

Pushpagiri Vitreo Retina Institute's Foundation Award

Pushpagiri Eye Institute, Secunderabad honoured Dr. P. Namperumalsamy with the inaugural "Pushpagiri Vitreo Retina Institute's Foundation Award" in recognition of his contribution to the development of



Dr. P. Namperumalsamy receives Pushpagiri Vitreo Retina Institute's Foundation Award

eye care services in India especially in the field of Vitreo Retinal diseases.

Dr. P. Namperumalsamy receives "Pride of South Tamil Nadu" Award

Dr. P. Namperumalsamy, Chairman, Aravind Eye Care System received the "Pride of South Tamil Nadu" Award for 2009 from Mr. M.M. Rajendran, former Governor of Orissa on 22nd November, 2009 on behalf of Aravind Eye Care System. The award which carries Rs. One lakh in cash and a citation was conferred by Velammal Education Trust in recognition of Aravind's high quality eye care services and achievements.

NASSCOM - CNBC IT User Award 2009

Aravind Eye Hospital won the NASSCOM CNBC IT user Award for the year 2009. The Award Jury was tremendously impressed by the pro-active and holistic approach to IT adoption at Aravind Eye Hospital and the seamless alignment of IT with the business strategy.

Mr. R.D. Thulasiraj receives the International Gold Award from Dr. Xiaoxin Li



NASSCOM CNBC IT User Award 2009



Partners in Service

Aravind Eye Care System expresses its gratitude for the consistent support of its well-wishers, friends and several organizations and acknowledges their role in Aravind's development. With Aravind's continuous growth, we are fortunate to have a growing network of such organisations with all of them providing inspiration, technical and material support to go ahead with its noble mission.

For Service Delivery, Training and More

- Acumen Fund, USA
- Adopt-a-Business, UK
- Alcon Laboratories Inc, USA
- Canadian International Development Agency, Canada
- Carl Zeiss Meditec, Germany
- CBM International, Germany
- Combat Blindness Foundation, USA
- Essilor, India
- Friends of Aravind, USA
- Fred Hollows Foundation, Australia.
- Google Foundation, USA
- Indian Institute of Management, Bangalore, India
- Indian Space Research Organisation, India
- International Federation of Eye Banks, USA
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