



# Eye Treatment The Future is Here

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An eye test to find out if the patient is suffering from arthritis, hypertension or AIDS sounds a little futuristic. However, ophthalmologists at the Chennai-based Sankara Nethralaya say it is possible because most diseases affect eye tissues; AIDS leads to ocular lesions while arthritis creates dryness in the eyes. It is cutting-edge treatment like this that has become the hallmark of this eye hospital.

Sankara Nethralaya, a charitable not-for-profit institute, was started in 1978 by a young eye specialist, Dr. S.S. Badrinath. He had a dream of establishing an eye hospital where the latest equipment and technology would be available and the poor would have access to state-of-the-art facilities.

Now, the hospital “treats about 1,500 patients every day and more than 100 surgeries are performed each day in the 22

*Above: An ophthalmologist at Sankara Nethralaya examines a patient with a slit lamp biomicroscope, which provides a magnified image of the back of the eye.*

operation theaters,” says Dr. Badrinath. Adding that about one-third of the patients are treated free of cost, Dr. Badrinath explains the philosophy behind Sankara Nethralaya—those who can afford to should pay and the poor should get the benefit of a subsidy.

Sankara Nethralaya accepts financial help from contributors so that it can continue to offer free treatment and expand its operations. The nonprofit Sankara Nethralaya Ophthalmic Mission Trust, based in Rockville, Maryland, was set up in 1988 to generate funds in the United States for the hospital.

One of its founder trustees and honorary treasurer is an Indian American, S.V. Acharya, who raised about Rs. 90 million from donors in the United States. Acharya, who oversees the budget for the



S.V. Acharya (left), an Indian American who raised about Rs. 90 million from donors in the United States for Sankara Nethralaya, received an award from the hospital in October 2006. It was presented to him by U.S. Consul General David T. Hopper (right).

A. MOHAN/Courtesy Sankara Nethralaya



*Left: About one-third of the patients are treated free of cost at the hospital.*

the hospital. According to Dr. Badrinath, the Indian Council of Medical Research recognized Sankara Nethralaya as a research center in the field of medical science in 1978, the very first year of its operations. Now experts at the institute are working on cutting-edge technologies. In August 2006 it started building a new research center, the Rs. 360 million National Institute for Research in Visual Sciences and Ophthalmology, which Dr. Badrinath expects to be functional by the end of 2007.

“This new facility will take care of all the research work in Sankara Nethralaya,” says Dr. H.N. Madhavan, vice president and research director of the Vision Research Foundation at Sankara Nethralaya.

Researchers at the Sankara Nethralaya are already working on nanotechnology and stem cell research. Once the new institute becomes operational there will be more extensive facilities for research in these fields as it will have well-equipped stem cell and nanotech research laboratories, Dr. Madhavan says.

The institute’s researchers say they have been able to develop a cornea from stem cells in such a way that it is not rejected by the body. “The cornea has been successfully transplanted into a rabbit. Now advanced trials are being planned,” says Dr. Madhavan. Speaking about the work on nanotechnology, he says, “Nanotech can give us custom-designed medical machines made from particles 50,000 times smaller than a single strand of human hair and these machines would be able to save our vision.” 

Public Defender Service office in the District of Columbia, received an award from the hospital trust for this work and it was presented to him by U.S. Consul General David T. Hopper in Chennai in October 2006.

Many doctors at Sankara Nethralaya have studied or worked on research projects in the United States. Dr. Krishan Kumar, who is involved in a nanotechnology project, was at the University of Southern California on a research fellowship from April to December 2000. Dr. K. Lily of the microbiology department received a six-month fellowship in 2006 from Alcon, an eye care company based in Fort Worth, Texas.

There has been institutional cooperation as well. The National Eye Institute, based in Bethesda, Maryland, has provided funds for several collaborative projects. When Sankara Nethralaya started a School of Optometry in 1985, Jay M. Enoch, dean emeritus of the School of Optometry at the University of California, Berkeley, helped it design the course content.

The hospital ensures that it stays up to

date as far as equipment and facilities are concerned. A retina scanning machine that can detect the minutest of problems was acquired in March 2006 at the cost of Rs. 4.3 million. Dr. Badrinath cites the use of a YAG (yttrium aluminum garnet) laser for surgical procedures in 1982 and photorefractive keratectomy eye surgery in 1993 as other examples.

Besides providing routine clinical services, the institute is engaged in education, training and research as well. About 75 postgraduate students are being trained at



Dr. S.S. Badrinath, who started the Sankara Nethralaya in 1978, says that the hospital treats about 1,500 patients every day and more than 100 surgeries are performed each day in the 22 operation theaters.