Dr. Savita Pahwa Honored for Her Work Fighting HIV/AIDS

AIDS Society of India bestows Lifetime Achievement Award

Savita Pahwa, M.D., had certain expectations for the recent AIDS Society of India meeting in New Delhi. She would give a talk, hear from other researchers and connect with old friends and colleagues. She was not expecting an award.

“My presentation wasn’t on the first day, but I got an email urging me to come to the opening ceremonies,” said Dr. Pahwa, professor of microbiology and immunology and director of the Miami Center for AIDS Research (CFAR) at the University of Miami Miller School of Medicine. “That’s when they surprised me with a Lifetime Achievement Award.”

The award was meaningful on several levels. Dr. Pahwa grew up in India and graduated from Lady Harding Medical College, an elite medical school in New Delhi. Though she has been a U.S. citizen for decades, she still has ties to India. But mostly, she is grateful to be honored for her many years of hard work.

“I've been conducting AIDS research since the beginning of the epidemic, and it's been incredibly important for me, both personally and professionally, to make headway against this horrible disease,” Dr. Pahwa said. “To be recognized for this
work by a professional society in the country of my birth – that was special.”

The Early Nightmare

Savita Pahwa, M.D.

When highly active anti-retroviral therapy (ART) was introduced in the 1990s, AIDS became a manageable disease. But Dr. Pahwa well remembers those early days when there were no treatments and nobody even understood the cause.

A pediatrician, Dr. Pahwa came to the U.S. to study with noted immunologist Robert Good, M.D., at Memorial Sloan Kettering. Later, she was directing the immunology program at North Shore University Hospital in Long Island when the first pediatric AIDS cases came through.

“I started seeing children with this disease that didn’t have a cause and didn’t have a treatment, and it was a death sentence,” Dr. Pahwa said. “In those early days, we just wanted to understand what was happening. Sometimes their mothers died, and the grandparents became the guardians. It was rough.”

She established North Shore’s Pediatric HIV Program, which became a site for the Pediatric AIDS Clinical Trials (now called IMPAACT). Her group participated in the early trials for AZT, showing the drug could prevent mother-to-baby transmission.

“The trial showed that if we could bring the mother’s viral load down, we could prevent HIV transmission,” Dr. Pahwa said.
“That laid the groundwork for future trials, and now there are hardly any babies born with HIV in the U.S.”

**Miami Center for AIDS Research**

After coming to the Miller School, she established the Miami CFAR in 2007. One of 19 such centers around the country, CFAR jumpstarted HIV research in South Florida.

Over the years, Dr. Pahwa’s research has evolved from helping people survive to helping them live better. While ART can transform AIDS into a chronic disease, there are long-term impacts.

“We all face problems with aging, and these are compounded for people with HIV,” Dr. Pahwa said. “Their biologic aging seems to progress faster than their chronologic aging.”

Dr. Pahwa is also active in several international collaborations. In Chennai, India, she is working with a team studying immune system dysfunction. In Mozambique, they are investigating children born to HIV-infected mothers. She and colleagues are also working with a European consortium called EPIICAL, studying immunology in children with HIV.

**From Death Sentence to Potential Cures**

Patients on ART must remain on the therapy for the rest of their lives — with a small handful of promising exceptions. Some AIDS patients, who also suffered from leukemia, have been given stem cell transplants, and a few have received cells without the CCR5 protein, which helps HIV enter cells. Some of these patients have, apparently, been cured. Dr. Pahwa was involved with the third such case.
“The patient said she was going to go off therapy,” Dr. Pahwa said. “Usually, when people do that, the virus comes back fast. But it’s been more than 18 months off ART, and she is still AIDS-free, with no evidence of the virus. This is proof she is in long-term remission and, most likely, is cured.”

Nobody fully understands the mechanisms associated with these cures, but researchers are thinking gene therapy might replicate this effect and provide more widespread relief. In the short term, however, Dr. Pahwa believes the best hope is preventing the virus from spreading.

“We have a national goal to reduce the spread of HIV by 90% by 2030,” Dr. Pahwa said. “Our CFAR is very engaged in education and other approaches like pre-exposure prophylaxis (called PrEP) to help reach this goal. My focus continues to be on immunology. We still have a lot more to learn about the disease and how the human immune system responds to it. I’m hoping I get to see the end of AIDS in my lifetime.”