

WATCH

OUT

Armed with strong technical experience and training, supportive mentors, passion and determination, three Mudders make a difference.

WORLD



The world's challenges daunt us: war, famine, disease, financial instability, environmental degradation and more. Where to begin? That's it. Simply begin. Start with what you know, learn from others, collaborate. Together, take hold of one of those global challenges and, with that well-honed technical expertise, wrestle it into submission or, better yet, drive it toward extinction. These Harvey Mudd alumni did not start out trying to save the world, but that's what they're doing in ways both large and small.

providing treatment for nearly 30,000 newborns. The first Firefly units in Africa were en route to Ghana. A hundred more were in production, helping to bring DtM and its partners closer to the goal of distributing at least 1,000 Firefly devices and treating more than 500,000 infants.

Johansen has seen firsthand how babies and families benefit. She describes meeting the parents of a newborn treated with Firefly phototherapy at St. Paul Hospital in Hanoi. Ten years earlier, their older daughter had been born with severe jaundice. That infant underwent an exchange blood transfusion, a dangerous

procedure that requires removing and replacing all of a baby's blood.

Johansen says, "They didn't have another child for 10 years because of this. With Firefly, their newborn was treated safely in three days. The parents were so thankful that they invited us to their house. They were excited to put jaundice in their past. Thinking about how many newborns Firefly affects motivates me." ■

The Firefly Newborn Phototherapy device has overcome barriers to saving newborn lives.



• A Vision for Africa

Written by Chris Quirk
Photo by Margarita Corporan

YOU COULD BE FORGIVEN for wondering if Mahesh Kotecha '70 harbored ambivalent feelings toward the country where he was born and raised.

"Uganda was a great place to grow up. We lived in Jinja, on the banks of Lake Victoria, at the source of the White Nile," Kotecha recalls. He came to the United States in 1966 to study engineering and physics at Harvey Mudd as one of the first international students at the College.

"Harvey Mudd was really wonderful. It was small, dynamic and allowed me to investigate a broad range of subjects. We had fascinating conversations."

Not long after Kotecha graduated in 1970 as a double major in physics and engineering, his life was thrown into turmoil. Idi Amin seized power in Uganda in a coup, and Kotecha's parents were forced out of the country—part of a systematic expulsion of Asians in 1972. His parents emigrated to England; still in the United States, Kotecha tried to renew his Ugandan passport. Uganda denied his application, leaving him a man without a country at the age of 24, compelled to seek political asylum in the United States.

"I struggled with this question only a little," explains Kotecha. "It wasn't the people that kicked my family out, it was one madman. What was important was that Africa needed help, and I understood Africa."

A cordial man who speaks in a matter-of-fact tone occasionally broken by an engaging laugh, Kotecha is the founder and president of Structured Credit International Corporation. He has



also served on the advisory panel of the East Africa Development Bank for more than 30 years.

In that capacity and in his professional career, he has discovered innovative ways to secure needed development capital for African nations, resulting in concrete improvements in the everyday lives of many Africans.

"Young Africans, like myself, had been sent to the U.S. to learn what we could and come back to help build our countries. That was our charge," Kotecha says. It was a charge he honored, but from abroad. He obtained U.S. permanent residence in 1975 and citizenship in 1982, and in another major life change, made the switch from ►

▶ the sciences to finance. “When I traveled back to Uganda as a junior, I realized there weren’t many good physics or engineering jobs to work on. Arnold Ruskin, my advisor at Harvey Mudd, who had a great influence on me, convinced me that I could have a bigger impact in business.”

After earning a master’s from the Sloan School of Management at MIT, he worked at the U.N. Fund for Population Activities before heading to the Federal Reserve Bank of New York, and in 1979 joined the ratings agency Standard & Poor’s.

He had a crucial insight that would help funnel needed investments to his home continent. “The ratings agencies are the gatekeepers for capital. For investment to come in, we had to get African nations and other borrowers rated.” The ratings would provide potential investors with an objective benchmark that was lacking, one they could use to assess and compare risks rationally.

It was a novel notion. Most countries were not rated at that time, and no African nations were. He faced some resistance from within S&P, and despite the promise of the idea, Kotecha needed

some wiles to convince many of the African and other governments he was trying to assist. “All these countries wanted AAA ratings. That wasn’t going to happen, so we used a subterfuge.” Instead of formal ratings, Kotecha and his associates issued what they dubbed “assessments” of countries. Over time, the countries realized the potential benefits and bought into the plan, and slowly the funding for needed projects began to arrive.

Jannik Lindbaek, former head of the Nordic Investment Bank and the IFC (World Bank Group’s private sector arm) and a colleague on the advisory panel of the East African Development Bank, knows Kotecha’s work well. “He is a very respected specialist in the field. He’s an excellent advisor, especially for the African sector.”

Despite increasing capital flows, Africa faces an annual funding gap of nearly \$40 billion per year for infrastructure alone, and perceptions can still be an obstacle. “You have to break the risk down into perceived and real. Some people think Africa is all bad—corruption and coups—some of

which are there, and are not going away,” Kotecha concedes. “But that’s not the whole story. Africans have done an incredible amount of hard work to make things better, and there are a lot of positive signs. There is growth momentum.” In March, one of Kotecha’s clients, Africa Finance Corporation (AFC), received an investment grade rating of A3 by Moody’s Investors Service, a major international rating agency, making AFC the second-highest-rated financial institution in Africa and the third-highest-rated entity on the continent (behind African Development Bank and Botswana). The AFC expects to channel more than \$1 billion dollars annually into African projects over the next decade.

While the switchback course of Kotecha’s career could not have been predicted, it has been remarkably focused from within. “Little things fell together in my life,” he reflects. “But that doesn’t happen unless you have a vision of where you are going.” ■

• The Magic Link

Written by Shari Roan
Photo by Julie Woodward

IF ANDREW LEES '75 COULD WAVE a magic wand and prevent the millions of vaccine-preventable deaths that occur each year, he would. Instead, he’s using his expertise in chemistry and his innovative company to conjure up a remedy that is effectively reducing this statistic.

Helping emerging-market companies manufacture affordable childhood vaccines has become Lees’ passion. He helps create sophisticated “conjugate vaccines” and has worked with companies and institutes internationally to instruct others on how to produce these lifesaving medicines. These vaccines are typically used to immunize babies and children against bacterial infections, such as meningococcal diseases and streptococcal pneumoniae.

It takes complex chemistry—something Lees excels at—to make conjugate vaccines, which require the chemical linking of a protein and a sugar polymer (polysaccharides) in order to be effective. The polysaccharides are derived from the long chains of sugars that coat certain bacterial pathogens. Antibodies to these polysaccharides provide protection against the pathogen, but the

