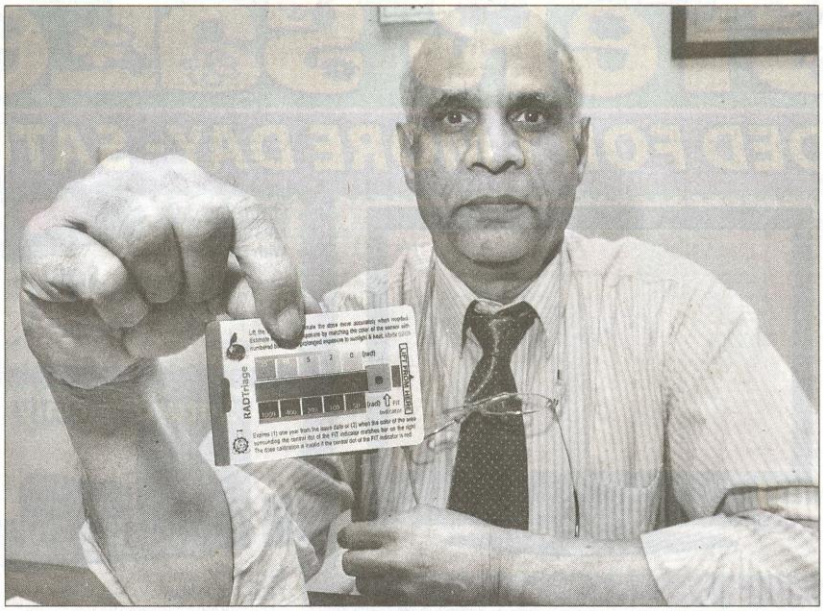


ED PAGLIARINI/STAFF PHOTOGRAPHER

Gordhan Patel is the president of JP Laboratories in Middlesex Borough.

Small lab performs critical research

By ERICA LAMBERG
CORRESPONDENT

With more than 50 patents to his name, Gordhan Patel, president of JP Laboratories in Middlesex, has been working on a variety of research and development projects for about 25 years.

Patel came to the United States in 1973, as a post-doctoral researcher at Baylor University in Waco, Texas. One year later, he went to work for Allied Signal (now Honeywell) where he spent eight years in research and development.

In 1983, he opened JP Laboratories. He credits the U.S. Small Business Administration's Small Business Innovation Research (SBIR) grant program with helping him obtain millions of dollars in research grants from federal agencies interested in new technologies.

"We are a small lab with a narrow focus in research, chemistry, physics and metallurgy," Patel said. "Over the years, the SBIR program has helped us to grow."

Fast forward to 2007, Patel found himself coming back to the SBA for assistance.

Over the past four years, Patel has been busy developing SIRAD (Self-indicating Instant Radiation Alert Dosimeter) a small plastic card that can determine a person's exposure to radiation. His first thoughts were that this is a product that could help fight the war on terror. The SIRAD could detect the amount of radiation that soldiers and first responders can be exposed to from nuclear and dirty bombs.

"The affordable and simple to use dosimeter we have developed will minimize the panic and worry of the users in an event of a dirty bomb and give them peace of mind that they are not exposed to harmful high dose of radiation," Patel said.

Despite receiving a contract from the Department of Homeland Security's Combating Terrorism Technology Support Office for U.S. soldiers and first responders to wear the SIRAD on the battlefield, Patel thought he needed some advice on how to bring his product to market. That's when he turned to the SBA's SCORE program.

The SCORE team went over manufacturing procedures and accounting practices to make certain that Patel's company had the capacity to meet production demands of the SIRAD and that he could turn a profit.

Further, Patel believes that SIRAD can be successfully marketed to the military, law enforcement, civilian emergency first responders, hospitals and nuclear power plants. The card is useful in detecting harmful levels of radiation. When the card is exposed to radiation, a chemical reaction changes the strip from clear to blue; the darker the blue, the more exposure to radiation.

Beyond the military, Patel hopes first responders and hospital personnel will benefit from SIRAD.

"The medical market is very interesting," Patel said. "Hospital workers and patients exposed to radiation from X-ray machines and CT Scans can determine how much radiation they have been exposed to."

Patel said he finds his work both rewarding and challenging.

"I am in a unique business of high tech innovation/R&D and play at the frontier of the science," he added. "It is a super high-risk business for an individual innovator. I accept failing 99-plus percent of the time and learn lessons every time, built foundation on the failings, to succeed less than 1 percent of the time. I like learning those lessons and love that 1 percent success to forget the pain of 99 percent failings."

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LOCAL BUSINESS

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