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Weapon for America's war against terror, with love from Mehsana

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AHMEDABAD: Dhaniben had never heard of one Sir Isaac Newton. But her intuition told her that we are all like the great physicist — finding pebbles even as an ocean of knowledge lies undiscovered in front of us.

This instinct of an illiterate woman from a nondescript village in Gujarat's Mehsana district is helping the US take a step forward in its war against terrorism.

For, it was Dhaniben's insistence that led her son Gordhan Patel to migrate to the US and go on to develop a safeguard against terror attacks — the Self-Indicating Instant Radiation Alert Dosimeter (SIRAD). Put simply, this is a credit card-size detector with a radiation-sensitive strip which turns blue when exposed to radiation emitted by dirty bombs.

When a rattled US government sent its Technical Support Working Group on a talent-scouting mission for anti-terrorism gadgets after September 11, it received some 16,000 proposals. And, it was Patel's dosimeter that made it to the list of 120 that the US Department of Homeland Security found useful.

"The journey that began as a dream in the eyes of my illiterate mother in Manund, a village in Mehsana, has finally borne fruit, a dream that fired me to do something for mankind, to make this world a better place to live in," says the 61-year-old inventor of the dosimeter.

The project, developed in his warehouse-turned-laboratory, was supported by grants worth \$1.5 million from the US government. Patel's JP Labs — named after his children Jessica and Paresh — has contracts to the tune of \$105,000 from the US Department of Homeland Security to supply thousands of cards and is negotiating a multimillion-dollar contract with the department of defence while exploring manufacturing opportunities in the US and India.

But Patel, who opted for post-doctoral studies in Bristol University after his PhD from the Sardar Patel University, feels he would not have seen this day but for his "Gujarati instincts". "I was happy working in the R&D wing of Allied Signals, which is now Honeywell. But I decided to

quit and start my own company. Probably, like a true Gujarati, I could not escape the desire to make money,” says the researcher, who lives off research grants and royalties.

“Terrorists can attack with a new weapon called the dirty bomb, an ordinary explosive packed with radioactive material. In case of a nuclear attack, soldiers and civilians can use this card to learn about their exposure to radiation.

It will also benefit those working with radioactive substances on a daily basis such as researchers and hospital workers as well as those living near nuclear power plants. The device would cost the military \$5 and civilians and medical personnel could buy it for \$5-7,” says Patel.

“When exposed to radiation, the SIRAD’s sensory strip turns blue instantly and the colour intensifies as the dosage increases. It will provide the wearer instantaneous information on cumulative radiation exposure.

People who have not received a high dose would not have to rush to hospitals. This will minimise the panic and people who have received a high dose would be treated first,” he adds.

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