

HawaiiBusiness

SEPTEMBER 2008

UPload

PROMOTION

► The Quarterly Journal for Science and Technology in Hawaii



Cellular Bioengineering Inc is one local tech company forging new horizons for Hawaii.



Scientist Garry Edgington has spun off multiple versions of a hydrogel that can clean everything from nuclear radiation to household grime.

GENIE IN A BOTTLE Cellular Bioengineering Inc.

The wellspring of innovation can be a strange and quirky place. Moiliili-based Cellular Bioengineering is a master at mining the well, finding "Aha!" moments even in an "Oops!" The company got off the ground in 2003 with its bioengineered corneal tissue. That project is well on its way to helping the world's 10 million people with corneal blindness.

In the meantime, the folks at CBI noticed certain properties in the corneal hydrogel — they transmogrified it and created a new material that cleans radioactive uranium in wounds. Then they created another version that sops up radioactive and nuclear contamination at nuclear power plants and research labs. Existing standard procedure for spills is often soap and water, Windex or duct tape — so the folks at CBI think they're onto a good thing. This gel contains and cleans up toxic contaminants, while sterilizing down to the microscopic level.

Then, one morning, researchers came into the lab to find a bottle of the gel had tipped over (Oops!) spilling its contents on the floor. Cleaning up, they noticed the floor was super clean (Aha!). So, they worked some more and created yet more versions.

As it turns out, the nonsmelly, user-friendly, wipe-on, peel-off hydrogel can deal with the leavings of everyone from terrorists to toddlers. It has been shown to be effective against the drug-resistant "superbug" MRSA, which can be a life-threatening problem in hospitals, as well as against chemical and biological agents that could be used in a terrorist attack.

The commercial version of the gel, which has the internal code name of GenieGel, works on stained boat hulls, algae, red dirt, mold; it even cleaned a bathroom at McKinley High School that had been trammled by decades of dirt.

Division general manager Roberto Mandanas sees a market for the hydrogel family in homes, hospitals, industries — and a bottle of it next to every fire extinguisher in every public building across the country.

The patents have been filed and the hydrogel is already available in the rad-nuc market, where the market potential is about \$5 billion a year just for the Department of Energy's decontamination and decommissioning projects. CBI is also talking with distributors and nearing commercialization for other markets.

It's probably not surprising that the team is spinning again, this time with a spray that creates a barrier against would-be permanent stains. Taggers, be warned.

The Triple Bottom Line

Encouraging signs have emerged in recent months that Hawaii's sci-tech industry is on the move. A new study from the Hawaii Science & Technology Council shows the industry outpacing the rest of the economy.

"Hawaii's tech sector is expected to outpace the general economy by nearly 50 percent over the next decade," says HSciTech president Lisa Gibson. "This projection is based on an analysis of historical data and projections by EMSI, a nationally recognized economic modeling firm. This is the story of hope."

It's the story of hope on many levels. Think people, planet, profit. At the beginning of the 21st century, Hawaii and the world face a convergence of challenges, from our energy and food supplies to the health of our people and our planet. While a robust sci-tech industry can boost the economy, it can also find the solutions to these challenges. Already, Isle innovators are pushing the edge and finding new ways of living in our world. On the next pages, *Upload* features some of the companies that you'll likely be seeing in your future. >>> [continued on page 4](#)

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>>> REVENUE GENERATED BY HAWAII'S TECH SECTOR IN 2007 >>>

\$3
billion