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Hawaii company develops, markets high-tech cleaner

TECHNOLOGY

BY NANEA KALANI
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With an eye for what he calls "disruptive technologies," Honolulu entrepreneur Hank Wuh has entered the commercial market for cleaning nuclear and hazardous waste.

His company, Cellular Bioengineering Inc., has created a cleaning gel that made its way from research and development to the commercial market in approximately two years.

"CBI continues to search the world for significant disruptive ideas which it can nurture and grow into mature products that will change the way the world operates," said Wuh, who founded his company in Moiliili in 2003.

The company now has four divisions that follow a model of rapid research and development and commercial development, including its CBI Polymers division, which created the gel.

Its other divisions are developing products to code pharmaceutical drugs with tiny color chips, grow human cells on the surface of a chip, and manufacture artificial corneas for eye implants.

"The key is focus," Wuh said. "Our singular objective is to get products to market as quickly as possible. R&D must move with speed and deliberation to achieve a superior product, [and] sales and marketing is where the rubber meets the road. Any technology is only relevant if there is significant demand for it in the market."

After a year of laboratory testing and prototyping, Cellular Bioengineering launched its polymers division late last year to focus on commercial sales for the gel.

Wuh says the bright-blue, water-based gel, which can be peeled off, can be spread over or sprayed onto just about any surface to remove everything from mildew and graffiti to radioactive material and hazardous waste.

The company estimates it can generate $200 million in sales annually for its DeconGel product, which already has found 40 customers worldwide, including Mainland research labs, hospitals and universities, and an electric utility in Canada.

A 20-liter pail sells for $700 and a 200-liter drum costs $6,500.

Local clients include Unitek of Honolulu, which used DeconGel to clean up a mercury spill at a hospital lab, and the Pearl Harbor Naval Shipyard, which tested the gel for removal of built-up sludge and oil deposits in shipboard bilges.

How it works:

DeconGel contains binding properties that trap and encapsulate materials and chemicals without the use of water. When dry, the product locks the contaminants into a polymer matrix. The film can then be peeled and disposed of according to local, state and federal regulations.

In laboratory testing, DeconGel has been successful at decontaminating and cleaning such surfaces as concrete, steel, painted or unpainted surfaces and tile. It has been tested in commercial nuclear power plants, on chemical and radiological deposits and spills in manufacturing laboratories, and on nuclear medicine deposits and spills in hospitals.

While the product was created and tested in Honolulu, it is being manufactured in Colorado to avoid the cost of shipping materials to and from Hawaii.

Initial funding for developing the gel came from the Hawaii Technology Development Venture and federal contracts.

Wuh credits Roberto Mandanas, general manager for CBI Polymers, for much of the division's growth. Mandanas previously was the director of business operations at Platinum Computer Technologies of Arizona, where he oversaw annual revenues of $600 million.

"We recruit top executives to each of our divisions to drive each business towards independence and commercial success," Wuh said.

Wuh, an Iolani School graduate, founded Cellular Bioengineering with a focus on regenerative medicine, using $7.5 million from private investors, research grants and federal contracts. He earned a bachelor's degree in human biology, a medical degree from Johns Hopkins University and a master's degree in public health from Harvard, and completed medical training at Stanford University.

nkalani@bizjournals.com | 955-8001