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INNOVATION

A look at innovative organizations, concepts, products and people

Company Knows How to Make It in a Very Competitive World

TECHNOLOGY: Firm Helps Customers Move Ideas to Manufacturing

■ By TOM YORK

When **Argos Therapeutics Inc.** sought out a manufacturing consultant to come up with an automated cell therapy machine for treating cancer, HIV and other diseases, the North Carolina company turned to the San Diego office of **Invetech Inc.**

Teams at Invetech, which has its headquarters in Melbourne, Australia, came up with the first machine to produce personalized immunotherapies from human RNA, what one executive described as a marriage of science and engineering to make immunotherapies more accessible — not to mention less costly — to patients and their insurers.

The device goes into clinical trials this summer. If successful, it will eliminate the need for dozens of clean rooms and costly workers needed to process therapies from a patient's own cells.

It's all in a day's work for Invetech, which has collaborated with a wide variety of customers, ranging from **d-Con**, the popular pest control product, to **Coca-Cola Co.**, the giant soft drinker maker, to **Organovo Inc.**, a local biotech company.

Catching Customers' Attention

For **d-Con** (a brand of **Reckitt Benckiser Group plc**), engineers literally invented a better mousetrap, which is easy to bait and set, and it conceals the dead creature after it's been trapped. For the **Coca-Cola Co.**, teams came up with a vending machine that can mix and pour up to 100 flavors. For privately held **Organovo**, the team created a 3-D "bioprinter," that eventually could harness a patient's own cells to regenerate limited body replacement parts.

"We're a contract service provider that helps companies manufacture new products," said **Dan Schumann**, vice president and operations manager for the San Diego office. "We're known for a pretty innovative and disciplined innovation process, something that has helped us develop some real breakthrough products. The products have ended up being real game changers."

Time magazine called the **Organovo** bioprinter one of the top 50 inventions of 2010, and **d-Con's** "No View, No Touch" device



Photo courtesy of Invetech Inc.

INVETECH INC.

President: Fred Davis.

Financial data: Would not disclose.

No. of local employees: 25 (220 companywide).

Investors: A unit of Danaher Corp.

Headquarters: San Diego, near Sorrento Mesa area.

Year founded: 1986.

What makes the company innovative:

Invetech provides teams of engineers and scientists to create new products for the marketplace, and can take a client's project from inception to manufacturing.

Dan Schumann examines a prototype of a medical device which Invetech developed for a biotech company.

our co-founder and biophysics professor **Gabor Forgacs**," said **Keith Murphy**, CEO at **Organovo**.

"(Invetech) did the design for us," he said, noting that **Organovo** has been happy with the success of the machine in research, and its potential for use in other applications.

"It's a typical Invetech client, where they had a real insight on a market that could exist in this case for organ printing with their really core technology," Schumann said. "They then brought us on board to help develop an instrument that would then express their technology. It has tremendous potential."

Invetech, a unit of Washington, D.C.-based **Danaher Corp.**, also has an office in Zurich.

Schumann estimates that Invetech has worked on more than 5,000 projects over its three decades in business.

Murphy, of **Organovo**, said the \$200,000 machine is already being used to "print" blood vessels and nerve grafts in the laboratory.

"We had a prototype in the lab, but really needed to turn our idea into a unit that could do the high volume of research that we wanted to do, as well as something that had a commercial value," Murphy said. "Invetech was able to help us do that."

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has become the best-selling mousetrap in America.

"We can take a product from a sketch on a napkin all the way through to a manufactured product," Schumann said. "We'll do all steps of the journey with our clients from the original concept work through the product development, such as the mechanical, electrical and software engineering. Then we'll transfer into manufacturing, and actually do the manufacturing, depending on what our client's needs are."

A Winning Team

Schumann oversees 25 engineers locally with whom he works on projects from the concept stage through manufacturing.

For **Organovo**, teams created a "printer-like" model to produce human tissue for repairing a body. The machine might eliminate the need for donors in the future.

"The technology was developed at the University of Missouri at Columbia by