

Philly Inc: Small businesses solving big problems

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Just because some businesses are labeled "small" doesn't mean they aren't trying to solve some big problems.

Consider Radnor-based **Novira Therapeutics Inc.**, which is developing antiviral drugs to treat chronic hepatitis B and HIV infections.

Both are serious conditions. There were about 34.2 million people worldwide living with HIV infection in 2011, including about 1.2 million in the United States.

Hepatitis B infection, which is rare in the United States thanks to infant vaccinations, attacks the liver and is a major health problem in Asia, particularly China. The **World Health Organization** says 2 billion people have been infected with the hepatitis B virus, which is 50 to 100 times more infectious than HIV.

Novira's lead compound is an antiviral drug to treat hepatitis B infection. Its technology aims to disrupt capsid, a protein needed to replicate and transmit the virus, said **Oswaldo Flores**, its president.

With four employees, Novira may be small, but its two founders came from one of the world's biggest drug companies, **Merck & Co. Inc.** Flores and **George D. Hartman** came from an organization that at one time could afford to do everything in-house - from research to manufacturing.

Like other small life-sciences firms, Novira contracts out much of its work. But Flores said the company is "motivated to have the same rigor" as a Big Pharma company in a "small and more cost-effective environment."

Since 2009, Novira had funded operations with capital from **BioAdvance**, the life-sciences economic development group, and three angel groups, **Robin Hood Ventures**, **Mid-Atlantic Angel Group** and **Delaware Crossing Investor Group**.

Last week, Novira received its first round of venture capital. **Canaan Partners** and **5AM Ventures**, both of California, led the financing which totaled \$23 million. Flores said that the money would fund clinical development of its hepatitis B program through Phase 1b/2a studies.

Another local company is trying to tackle the ongoing challenge of detecting pathogens in the nation's food supply. **Invisible Sentinel Inc.** said Tuesday that it had opened a manufacturing operation to make rapid diagnostic test kits.

The need should be apparent. Food producers are in a constant battle to prevent infection and must test to prove to the store chains and other vendors that their products are safe.

Even so, outbreaks of food-borne illnesses routinely make headlines, such as the salmonella outbreak tied to cantaloupe earlier this month.

Invisible Sentinel CEO **Benjamin Pascal** said the food industry spends more than \$1 billion on such testing annually. Dozens of companies and laboratories provide test kits and services to food producers.

"Food safety testing is a white-hot industry for us," Pascal said.

Pascal and his partner, **Nicholas Siciliano**, started their company in 2006 and moved into the University City Science Center the following year.

Its new manufacturing line is capable of producing 2,500 test-kit units a week, Pascal said.

But before the company and its 12 employees do so, Invisible Sentinel must gain approval from the **Association of Analytical Communities** for its diagnostic devices to test for E. coli, listeria, campylobacter and salmonella. Approval of its first test could come during September, Pascal said.

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