

GenTel BioSciences uses biochip in fight against cancer

By Andrea Brossard and Susan Orth

MADISON -- Surrounded by the hospital's cold white walls, you sit quietly with your family. Nobody moves. Nobody says anything.

The doctor enters the room and slowly closes the door behind him. The expression on his face tells you that the tests are positive. You have cancer.

Cancer affects everyone. Whether it's family, friends, or an acquaintance, most people know someone who has or had cancer. Even worse, this awful disease may have affected your body.

While cancer is devastating the lives of many people around the world, a Madison-based company is creating and supplying scientists with the tools to research cancer and many other diseases.

"Our vision is to leverage our unique technology to develop tools that are valuable for the research and diagnosis of important diseases," said Alex Vodenlich, president and CEO of GenTel BioSciences, Inc. This company, founded in 2000, had focused on doing research, but changed its focus in 2003 and GenTel now provides the equipment needed to perform the studies.

One of these tools enables researchers to complete multiple tests at a time, which is typically done one at a time. This tool, biochip, has become the company's key product, which is a plate-like device that "reads" blood. A biochip, more specifically called a microarray, is a device that contains hundreds to thousands of test sites in an area the size of a dime.

The biochips read blood by identifying different proteins. Everyone has proteins in their blood, but it is the variation of these proteins that help make each person unique. Identifying specific proteins involved with cancers and other diseases allows laboratory specialists to detect the patterns of the proteins earlier for more effective diagnosis and treatment of cancers, allergies and other human diseases, according to Vodenlich.

"This powerful new technology allows us to understand the complexity of diseases in order to help accelerate the diagnosis and treatment," said Vodenlich. He continued by comparing our blood to a night sky, "Just like stars fill the night sky, our blood is filled with specific proteins. The biochips allow researchers to find and identify each protein just like astronomers identify stars."

GenTel's team members know and understand the impact of their work. Dr. Bryce Nelson, vice president of research and development for GenTel, has experienced the effects of cancer firsthand. Nelson's father was diagnosed with prostate cancer, and he feels fortunate that treatment has been successful.

Nelson explained the importance GenTel's products in prostate cancer diagnosis, "Researchers are using our products to identify proteins that might be better indicators for prostate cancer." He continued that "others are using this technology to find biomarkers, or disease indicators, for other diseases, like leukemia, or hard-to-identify-until-its-too-late diseases like ovarian or pancreatic cancer."

The company reports that the development of new GenTel products appears promising as they grow and diversify. They will soon be producing unique products that focus on very specific diseases, such as "allergies, autoimmune diseases, specific cancer types, or general oncology research," said Nelson. "We are also now prepared to analyze patient samples sent to us by our customers."

So far, GenTel has attracted about \$2.5 million in private investment and about \$2.2 million in federal Small Business Innovation Research grants in its drive to produce marketable products.

Dr. Robert Negm, vice president of business development, explains the company's commitment to their customers. "We bend over backwards to provide quality products and data, along with a high level of support."

GenTel's customers agree. Dr. Brian Haab, Scientific Investigator at the Van Andel Research Institute, explains, "Their products work great -- good spot quality, low background, and very consistent." GenTel and Van Andel recently entered into an exclusive agreement granting GenTel the right to commercialize a novel microarray technology for measuring variations in the glycosylation of proteins.

While the company focuses on pushing the limits of technology, Negm explains, "At the end of the day, it's about making an impact on health and human services."

Brossard and Orth are students in the UW-Madison Department of Life Science Communications. They are part of an instructional project led by Wisconsin Technology Council President Tom Still.

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