Genome Explorations expands its focus from genetic mapping to human medicine

Jan 15, 2006, 11:00pm CST

Genome Explorations has a new office and a new business structure to go along with two new areas of business.

Along with providing genetic mapping for researchers using animals, the company has completed two studies -- on brain tumors and kidney disease -- that lay the groundwork for expanding into human medicine. The goal is to develop diagnostic tools that can guide the treatment of human disease. President and owner Divyen Patel expects to make a disclosure within six months, which is the first step toward a patent.

Patel had an amicable split from his partner, Arno Justman, and has been beefing up his scientific staff for the new focus. Robert Rooney has been made chief scientific officer, freeing Patel's time in the lab to spend more time developing the business. Keith Parsons has the job of putting himself out of work: Parsons is the chief operating officer who nurtured Luminetx to the point that entrepreneur Jim Phillips could commercialize that company.

Genome Explorations bought the 7,000-square-foot building at 660 Jefferson for $280,000. The building's previous occupant was GI Pathology Partners, which has moved to an industrial park in Midtown. Genome Explorations moved from 1,500 square feet borrowed from the University of Tennessee Health Science Center into a space configured with four isolated labs plus plenty of offices.

A distributor in Bordeaux, France, that already calls on research labs has agreed to sell the company's services in most of Europe; Patel already has a distributor in Dublin that calls labs in the British Isles.

Genome Explorations is a 4-year-old company using technology from Affymetrix, Inc., of Santa Clara, Calif., to sort through 400,000 genes and identify a few hundred which are active in a sample. Patel and Justman started the company after Patel had set up an Affymetrix lab at St. Jude Children's Research Hospital and recognized the commercial potential.

Freed from all of the daily duties, Patel is focusing on recruiting investors and advancing the human medicine initiative. Working With Semmes-Murphey, the company has so far screened 15 brain tumor samples and identified their genetic signatures.

If a brain tumor's origin can be identified, it gives doctors a better idea of the cell type and how to treat it. In a separate study, working with scientists in Cambridge, Mass., Genome did a similar signature study on 15 kidney specimens.

Patel is raising capital to expand both studies, with the inducement that investors would profit from diagnostic tools that grow from the research.

"Instead of reading specimens I get to do actual research again with many types of investigators," Patel says. "At St. Jude it was one project at a time, but now we have 25 a day."

As the company moves into human medicine it has hired endocrinologist Dale Childress as chief medical officer. He splits his time with clinical work at VA Memphis Medical Center. His research background is in cellular genetics. The core technology of the company is still being worked out, he says.

"This micro array technology is the answer to a question nobody knows to ask," Childress says.

One huge potential area that Genome Explorations is eyeing next is using the technology for drug development. Once the target genes are identified, the next step will be to design drugs that go after only those targets, and then validate it with before-and-after studies.

That would dovetail with the need to know about potential collateral damage. In modern clinical studies it's nearly impossible to know how a drug will react in every single person, so one in a million may suddenly die for reasons nobody imagined.

"Right now we have to have the catastrophe before we can parse out the differences," Childress says. "The notion is that at some point in the future we'll be able to identify the side effects in advance."