



From St. Jude Researcher to Entrepreneur

A Local Success Story

Dr. Divyen Patel came to Memphis in 1992 to work at St. Jude. After finishing his postdoctoral training in the department of Pharmacology, Dr. Patel transferred to St. Jude's Hartwell Center where he helped establish the Affymetrix core lab from 1998 to 2001.

In 2001, Dr. Patel used the knowledge and experience he gained at St. Jude to branch out and start Genome Explorations, a company which provides genotyping, gene expression and microRNA profiling services to institutions and companies without access to analysis equipment and facilities like the Hartwell Center. Dr. Patel began this company by entering into agreements with Affymetrix for commercial use of the Affymetrix technology and purchased the necessary equipment. He opened Genome Explorations' doors in midtown Memphis with 600 square feet of space and one employee. The new company began by marketing its services to Memphis companies and universities.

Dr. Patel's business plan proved to be highly successful. Within the first year of operation, the company had provided services to seventy different clients throughout the U.S. with revenues totaling \$1.1M. Today, the company has clients worldwide and has established distributors in the U.K. and France.

Genome Explorations moved its operations to a 7000 square foot property at 654 Jefferson Avenue in 2005 and now employs seven staff members. The company's many academic clients include institutes such as University of Tennessee, University of Texas, Florida Atlantic University, University of Mississippi, Vanderbilt University, Harvard Medical School, University of Maryland, MIT and UCLA.

Dr. Patel is looking for additional funding and planning to spin-out two other companies, one to develop and market genomic diagnostic tools for cancer and the other to cover direct-to-consumer genomics.

More information about the company can be found on Genome Explorations' Web site at www.genome-explorations.com.

One Invention's Journey From Idea to Commercialization



Steve Zatechka, PhD

While working in the laboratory in the department of Biochemistry, Dr. Steve Zatechka, a postdoctoral fellow, developed an idea for a new type of lab rack that would be easier to use for collecting sequential samples from an affinity column. Steve comments, "I've always been an advocate for efficiency in the use of a product or while conducting a given procedure. Current supporting devices for column purification of molecular biological reagent was always cumbersome and "makeshift" to me so I felt that a comprehensive adjustable system would be an efficient and cost-effective improvement. Column purification procedures currently rely upon a stackable set of racks for the support of the upper affinity column and a lower corresponding elution receptacle. This design consolidates the two racks into a height-adjustable single rack that functions using a rack and pinion design and modular rack supports to accommodate a variety of column diameters and lengths."

His next step was to talk with the OTL about his idea. The OTL frequently meets with individuals on an informal basis to discuss their ideas and how they may be developed. As with all ideas that are evaluated, the OTL subsequently required Steve to fill out and return a one page invention disclosure form providing basic information about his idea.

Based on their evaluation, the OTL considered Steve's idea to be promising but speculative. Since Steve had no plans to publish his idea, there was no rush to file a patent application. Under these circumstances the OTL suggested that they look for companies willing to take a confidential look at the idea.

Twenty-five companies providing similar products to the research community were contacted with a non-confidential description of Steve's idea and an offer to provide a more detailed confidential description if the company had an interest in developing this new type of lab rack. Confidentiality agreements with a small number

of companies that expressed interest were executed. Eventually, Bel-Art Products was identified as the company that would give this idea the best chance of becoming a product.

After numerous discussions with Steve and negotiations with the OTL, Bel-Art entered into a license agreement with St. Jude. The license gives Bel-Art the exclusive right to develop a lab rack based on Steve's idea in exchange for a commitment to diligently develop this idea, financial compensation to St. Jude if the product is commercially successful, and support for patenting Steve's idea.

While many license agreements involve a clean transfer of a project from St. Jude to the company, some involve a degree of collaboration during the transition phase. In this case Steve and engineers from Bel-Art collaborated to refine the idea into a functional and economical prototype. Since both St. Jude and Bel-Art employees were instrumental in the development of the prototype design, the patent application covering this design is co-owned by St. Jude and Bel-Art and names two employees from Bel-Art as inventors.

The process of developing an idea into a product requires patience. It has been six years since Steve approached the OTL about his idea. While significant progress has been made, it is expected to take several months for his lab rack to debut on the commercial market.

Steve has gained much insight into the technology transfer world. He states "Science is a field of innovation and given supplementary mentors such as Scott Elmer and Shawn Hawkins, innovative ideas can be turned into tangible and commercial products. I learned a lot about the field of technology development and licensing, and the legal components that are involved in 'business side' of science and engineering. Technology licensing is a valuable and viable extension of science and innovation."

OTL New Location

In January, the OTL offices moved to the 305 Building. Our offices are located at the east end of the building in rooms 1195–1198. The easiest way to our offices is through the door at the east end of the building. The door, which is hidden by shrubbery, faces the main campus and is located just east of the big glass windows. You will need your badge to access the building through this door.

Looking for a local job in the biotechnology industry?

If the answer is yes, you should check out Memphis Bioworks Foundation and Bioworks Place.

The Memphis Bioworks Foundation (Bioworks) was established in 2001 to lead the collaboration between public, private, academic and government entities to accelerate the growth of the bioscience industry in Memphis. By leveraging the regional strengths in the sciences, technology and the academic research environment, Memphis Bioworks strives to build on assets already in the region to create dynamic economic clusters that extend from research to clinic to marketplace. Focusing on research strengths, Memphis Bioworks is building the infrastructure, growing the workforce, and expanding research and entrepreneurial support necessary to impact the growing bioscience sector.

Notable accomplishments for the Memphis Bioworks Foundation have been:

- The Launch and development of the UT-Baptist Research Park, a \$450 M project designed to revitalize the downtown medical center,
- The creation of the Memphis Academy of Science and Engineering, Tennessee's first charter school,
- The launch of InMotion Musculoskeletal Institute, an independent, private, not-for-profit orthopedic research laboratory that translates ideas into treatment,
- The establishment of Innova, an early stage investment fund,
- The creation of over 30,000 s.f. of lab and office incubator capacity designed to support newly created bioscience ventures,
- The creation of Bioworks Place, a career opportunity and professional networking website, and
- The development of Memphis Bioworks Business Association, a strategic leader in advancing the bioscience industry objectives, through education, advocacy and professional growth.

The St. Jude postdoctoral community will be especially interested in Bioworks Place. The Memphis based, online, bioscience community provides members the opportunity to network and share ideas about research, technology and other areas of interest to the bioscience industry. As with other social networking websites, Bioworks Place members can build their own network of people, lead discussion groups, connect with other researchers, search career and professional opportunities while being proactively notified of career positions. The website also provides local bioscience news, a calendar of events and opportunities to work with a mentor or be a mentor. Membership is free. Those interested in joining or obtaining

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additional information may do so on the Bioworks Place Web site at www.bioworksplace.com.

A major undertaking for the Memphis Bioworks Foundation is the oversight of construction of a research park that will eventually contain 1.4 million square feet of laboratory, research, education and business space. The park will provide incubator space for emerging biotechnology companies. One of the first endeavors toward construction of the park was the demolition of Baptist Memorial Hospital's former Medical Center in 2005. Construction of the first building on the site, the Regional Biocontainment Laboratory, will be completed in 2009. The Level III BioSafety Lab will research and develop therapeutics directed toward infectious diseases. In addition, groundbreaking and initial construction of the UT College of Pharmacy has begun on the research park site.

The Memphis Bioworks Foundation continues to push the envelop in the creation, development and growth of the biosciences industry in Memphis and the surrounding region. The research park will have a direct impact on the economic development of the area and provide state of the art facilities for the development of new start-up bioscience companies and add much needed space for established companies to expand, recruit talent and grow their portfolios of new bioscience technologies and products.

Steve Bares, PhD, MBA, president and executive director of Memphis Bioworks Foundation.

Postdoctoral fellows who have left St. Jude for alternate careers

Kevin Boggs, *Director of Technology Transfer and Research Development, FedEx Institute of Technology, University of Memphis*

Michael Dilling, *Sr. Licensing Associate, Baylor College of Medicine*

Eric Gosink, *Licensing Manager, University of Utah*

T. Ling Chwang, *Patent Attorney*

Celine Qian, *Patent Examiner, United States Patent and Trademark Office*

Jerry Walker-Vaughn, *Technical Advisor at Conley Rose patent firm*

Biotech and orthopedic companies located in the Memphis area

- arGentis Pharmaceuticals
www.argentisrx.com/content/show.asp?mne=home
- Greystone Pharmaceuticals
www.greystonepharmaceuticals.com
- GTx Inc.
www.gtxinc.com
- LifeCyte Inc.
www.lifecyte.com
- Lifeblood Biological Services
www.lifebloodbiologics.com
- Medtronic Inc.
www.medtronic.com
- Meridian Life Science Inc. (formerly Viral Antigens)
www.meridianlifescience.com
- Luminetx
www.luminetx.com
- Smith & Nephew
global.smith-nephew.com/master/6600.htm
- Transnetyx
www.transnetyx.com
- Wright Medical
www.wmt.com

Memphis area venture capital funds

- Addison Capital Advisors
<http://www.addisoncapitaladvisors.com/content.php?section=home>
- Innova Inc.
www.innovamemphis.com
- MB Venture Partners
www.mbventures.com
- Mercury Technology Labs
www.mercurytechlabs.com
- SSM Partners.

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