Research Texas

Fall 2008

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"Angel" funding spreads across the state

Emergent funds life science ventures

UT-Dallas, UT Southwestern latest partners

BY *Stephanie Patrick*

Intrigued by technology advances brewing in colleges and universities and convinced America's economic future relies on harnessing its knowledge-based assets, Emergent Technologies Inc. has gone where many venture capital firms fear to invest: into the slow-moving, often-expensive and high-stakes world of life sciences.

"You hear a lot of people talk about finding ways to maintain our greatness as a country and our competitive edge in the world, yet there's very little effort spent on actually commercializing this early stage technology," said Thomas Harlan, Emergent's president and CEO. "My feeling is, the reason that happens is because most companies have become risk adverse to doing all the required research and development efforts, which are necessary to get early stage technology ready for market; it takes a lot of time and money to transition something from science to a useful product or service."

For many years, that meant the 19-year-old Austin-based company, originally a consulting firm, looked north and funded technologies coming out of the University of Oklahoma Health Sciences Center in the late 1990s. Initially, six companies were chosen and Emergent continues to work with five of them. Those companies' products range from immunology tools for diagnostics, drug and vaccine development and high-yield protein production to biopolymers used in formulations for such things as wound healing, cosmetics, osteoarthritis and ophthalmology.

But, as the life sciences industry in Texas has matured and its academic institutions take active roles in the commercialization of their technologies, Emergent focuses closer to home. As of 2008, Emergent has launched 17 biotechnology, biopharmaceutical and nanotechnology companies in total, including 11 in Texas. Emergent has distributed roughly half of its current $27 million fund, its fourth fund.

Among the Texas companies receiving funds are MHC Biologics, based on Texas Tech University Pharmacy School's research of immunology tools aimed at treating breast cancer, and Reveal Sciences, a new personal care company that uses technology from the University of Texas at Austin to provide tailored color changes for consumer products and personalized skin and hair analysis for the cosmetics and personal/home care industries.

Another company, Receptor Logic, uses technology discovered at Texas Tech University and widely is considered Abilene's first biotechnology company. Receptor Logic received a $2 million investment from the Texas Emerging Technology Fund in June, the first Abilene company to receive the investment.

"Most academic institutions, until recently, focused on what they consider to be their primary missions – education and primary research," Harlan said. "Commercialization is outside their primary mission scope, but, I think, what's happening now is that universities are becoming more crunched for revenue, endowment and research money, so they are looking for successful commercialization of their work."

Gregory Pogue, president of Receptor Logic, said Emergent helps manage Receptor Logic's intellectual property, finance, human resources, business planning, strategic marketing and relationship-building with the state, as well as partnerships with market leaders.

"With the support of ETI [Emergent], Receptor Logic has made substantial progress in a very short period of time," said Pogue in a written statement. "Now, with the TETF investment we can continue our rapid development pace and fulfill our business strategy."

Earlier this year, Receptor Logic also announced a licensing and research agreement with Sanofi Pasteur, known as a world leader in vaccine development. The announcement of a licensing agreement with a global leader attracted considerable attention, both nationally and internationally, from the media, biotech scientists and industry partners.

When addressing the state's Senate Higher Education Subcommittee in July at the Senate Finance Higher Education Joint Subcommittee Hearing, Harlan said, "Texas university-technology commercialization is a significant community, state and national economic asset. We encourage academic leaders to engage in technology transfer and commercialization; and for state policymakers to make a priority the support and incentives needed to address current issues, so that a greater number of Texas universities and research institutions can participate.

"That way, our state and its citizens can reap the full benefits of successful technology commercialization."

Texas is home to more than 900 traditional biotechnology, biomedical research, business and government consortia, medical manufacturing companies, and world-class universities and research facilities, according to a recent report by the Office of the Governor Economic Development & Tourism.

Tom Kowalski, president of Austin-based Texas Healthcare & Bioscience Institute, said Emergent is one of the few venture capital firms in the state that understands the potential of life sciences.

"That will hopefully allow our companies to grow, mature and stay in Texas, which is important," Kowalski said.

Harlan said Emergent's success, in part, is because the compa-

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ny also partners with existing, well-established biotech, pharmaceutical and nanotechnology firms to share the risks and expenses associated with developing, distributing and marketing the products. However, Emergent and its partners are selective; of the 380 technologies considered at OU, only six received funding.

"Our potential partners are looking for at least $500 million per year in potential revenue from the application we codevelop with them," Harlan said.

Smaller applications are often not worth pursuing because a small application and a large one often take the same effort in development and launch cost, he said. Sometimes there are ancillary applications that partners will pursue to get some revenue flowing while waiting on the home run application to complete development and launch, but these must have at least $25 million to $100 million in revenue potential. It's mostly the pharma-clinical approval applications that have to show huge upside potential to justify Emergent's investment and warrant an adequate return.

Although each application has to show potential, it may be years after clinical approval that the partner is seeing such financial success, Harlan said.

"Our partners have us under confidentiality agreements and we are not allowed to disclose what their revenue is from our applications, but most all partnerships are proceeding as expected through the various development milestones and are on track for launch," he said.

Harlan also declined to disclose Emergent's financials.

Emergent also has begun funding research still in academic settings. The company bestowed its first Opportunity Texas Proof-of-Concept award to researchers at the University of Texas at Dallas and the University of Texas Southwestern Medical Center at Dallas for work on the StoneMag Kidney Stone Magnetic Retrieval System, which locates and eradicates small fragments of kidney stones that remain in a person after a stone has been fragmented with sound waves.

Market potential was a top criterion for selecting the award winners, and the invention is expected to be a major player in the urology-device market.

"Since we have become active in Texas, we see that some campuses have a more proactive attitude toward commercialization than others and we wanted to give back to the academic community and help raise the visibility of good work being done in the universities," Harlan said.

The award offers a check for $25,000 and another $25,000 for technology commercialization services that Emergent can provide. Bruce Gnade, vice president for research at UTD and a professor of materials science and engineering and chemistry, and Dr. Jeffrey Cadeddu, an associate professor of urology at Southwestern, collaborated with co-inventors Dr. Margaret Pearle of UT Southwestern, and Stacey McLeroy, a UT-Dallas materials science and engineering doctoral student, on the device.

Emergent has funded at least one company a year, but plans to focus more on its R&D laboratory space in the firm's new 23,000-square-foot headquarters in Austin, growing its existing companies, raising their profiles in the international market and possibly selling some of its older companies. However, Harlan said the company won't pass up a possibly lucrative technology.

"There's a lot of wonderful research being done in our universities and research centers," he said. "All we need to do is find them, give them the funding they need and help them reach the marketplace." RT