San Fernando Valley Business Journal – April 28th, 2008

Technology Transfer: A Crucial Biotech Component

By Mark R. Madler

Okay, say you're a scientist with this great new idea that will change the world. Perhaps it's a treatment for a deadly disease or a new way to test for medical conditions. The complicated research is finished; the hours and hours in a lab have paid off.

Well, then what? Then follows is what any inventor faces – turning the idea into a product that in turn finds success in the marketplace and brings in a profit.

In the biotech industry it can take years for the process to travel a path of licensing deals; building a team for the commercialization; finding investors with both patience and deep pockets; choosing a corporate partner; taking the technology from a lab setting to mass production; and maybe even devising an exit strategy. That lengthy development time has both its advantages and disadvantages.

"Once you are ahead it can be difficult to catch you," said Richard Hamilton, president and CEO of energy crop developer Ceres Inc. in Thousand Oaks.

Unique perhaps to biotech is the origins of new research. Rarely have ideas for new drugs or treatments come from self-funded startups. More likely the ideas spring from university labs, or from research paid for by the government conducted by not for profits or small labs.

Taking those ideas to the marketplace begins with the licensing agreement. There are two routes to follow – the quick one is for, say, a university to go to an established pharmaceutical company and get a lot of money in return. Setting up that licensing deal with a small start up opens up a whole other set of decisions that an experienced law firm needs to get involved.

For instance, how will the license be structured and the intellectual property defined. From the start up's perspective the broader the license the better; while the university wants to narrow down the uses of its research. "If they screw that up the company can be dead on arrival," said Joel Balbien, the managing partner with a Calabasas consulting firm.

After a licensing deal is finalized is typically when a start up contacts a company like Designed Polymers Inc. of Newbury Park for testing of the material, a protein for example, they now possess. Outsourcing the tests can save on time and money as building and staffing an on-site laboratory is expensive.

The test results are needed later when applying to regulatory agencies for permission to test on humans or sell to the public, said Greg Cauchon, a former Amgen scientist who founded Designed Polymers three years ago.

"Once they (a start up) license a product what they are typically aiming at is to get to the point as quickly as possible to license out their drug to a large pharmaceutical company," Cauchon said.

Next up is having the right mix of academics and business experience.

The right management

That's where the right management team comes in. With scientists lacking that experience, it is

important to have management in place with a proven track record in taking products into the marketplace.

For one thing, investors may disappear without that experience. "They will not invest in a company led by someone with a pure academic background," Balbien said.

Responding to the absence of scientists with business skills, California State University Channel Islands in 2007 started a dual degree program of biology and an MBA.

The program is among a small number in the nation and the only one on the West Coast, said Ching Hua Wang, chair of the biology and nursing programs and director of the master's biotech program at the Camarillo school. The program draws from senior scientists, managers and attorneys practicing within the biotech industry. "They bring fresh perspectives into the classroom," Wang said.

The business expertise in the management team at Kreido Biofuels eased that company's transition from concept to commercialization. CEO Ben Binninger easily rattles off the career histories of those working for him charged with operations, finances and technology. "All of us have been involved with start ups to world class companies," Binninger said.

Kreido, based in Camarillo, developed an innovative processing system with applications in multiple industries, among them alternative fuels and pharmaceuticals. Kreido will first apply its system to biodiesel production, a use that wasn't considered when the company was founded more than a decade ago.

Holding up placing a modular facility in Wilmington, N.C. to begin making fuel is money. "The plant is built and the site ready to go yet we still have to raise $20 million to finish it out," Binninger said.

Ah, yes, the funding.

Raising capital takes an additional set of skills that a scientist may not have, showing once again the importance of having the right team in place for the commercialization stage. Hitting certain milestones in product development can make a start up attractive to a corporate partner who can provide additional funding. But it is important that the start up not give away the store to its larger partner. "It is a balancing act requiring sophistication," Balbien said.