

Profectus BioSciences here to stay

With Maryland HIV/AIDS cases increasing, this local firm is working toward a vaccine

By Laura Fick

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When renowned researcher and co-founder of the HIV virus, Robert Gallo, was recruited to Maryland in 1996, he knew that his research would one day spin out a company. While the **University of Maryland Biotechnology Institute** and his creation, the **Institute of Human Virology (IHV)**, were fertile settings for basic research, Gallo soon realized they lacked the infrastructure, skill set and bargaining power to take the research to the next level.

To fill this void, Gallo and a set of co-founders established **Profectus BioSciences Inc.** in 2003 to serve, in part, as a vehicle to develop and commercialize select technologies developed at IHV that can be used to treat and prevent viral diseases. Literally meaning "to advance or improve," Profectus' first focus is developing a vaccine for HIV, the causative agent of AIDS.

"It was in our minds from day one that we better spin off things," said Gallo. "There's no way you can develop a vaccine within the university. Profectus is able to do things we cannot do in the univer-

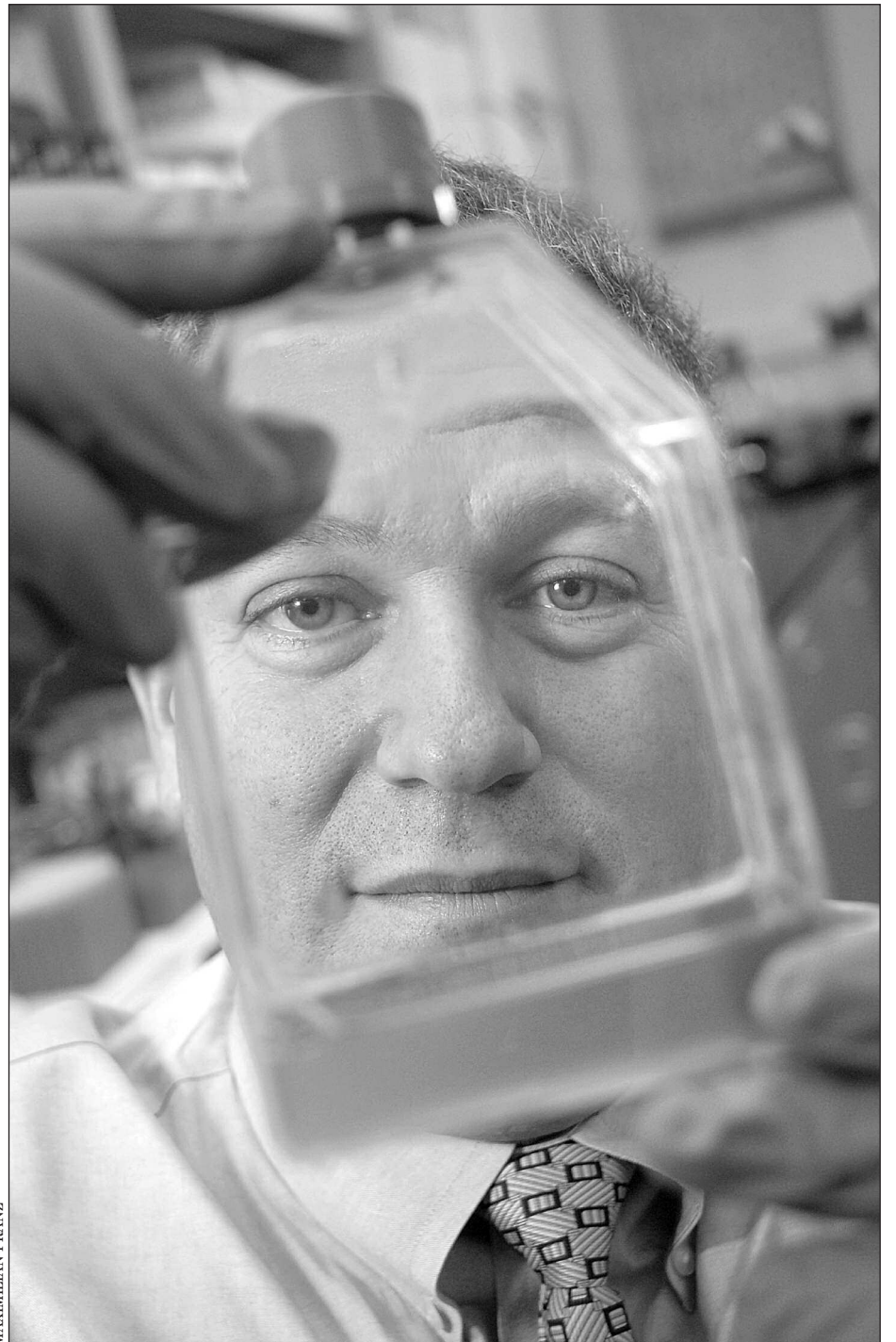
sity setting. It's easier for the large pharma companies to deal with biotech companies than to deal with a university."

Currently, Profectus is beginning collaborations with Wyeth, pursuing the goal of furthering the vaccine to the point of clinical trials and eventually commercializing it for both prophylactic and therapeutic use.

"We think what we have is pretty novel, and we think the relationships we have where we're all using what we do best is unique," said Jeffrey Meshulam, chief operating officer of Profectus. "I think we recognized early on that our [vaccine] is likely to be a major component of something. It takes a lot more in a final product to make this a reality. That's why you need to bring a partner on."

More than 60 million people worldwide have been infected with HIV to date, and more than 25 million of these individuals have died of AIDS. In Maryland, AIDS has been at epidemic levels for the last two decades, with a total of 28,593 AIDS cases and 15,528 deaths among AIDS cases recorded by the state through Sept. 30, 2005.

Current estimates also suggest that 30 to 50 percent of people infected with HIV eventually develop resistance to one or more drug combinations. If new therapies are not introduced soon, this percentage is expected to increase rapidly in the coming years, possibly culminating in a "second wave" of AIDS deaths due to drug failure in the developed world.



Jeffrey Meshulam, chief operating officer of Profectus, says his firm is "thinking outside the box" for an HIV vaccine.

In addition to working on an HIV vaccine, Profectus is also developing cell-cycle agents to be used in HIV therapy. This therapeutic strat-

egy is intended to slow or prevent the deterioration of the immune system as it inhibits viral entry.

"The whole premise is that we're trying to harness the body's own systems ... to make the current therapies better," said Meshulam. "We're reviving some things that didn't work before and hoping to make other things better, and we're thinking outside the box."

So far, the company has received more than \$5 million from venture capitalists and private investors, including Stewart Greenebaum, past chairman of the board of the **University of Maryland Medical System**. Currently employing 11 people, the company expects to increase its staff in the coming years.

"They are not bringing in zillions of dollars, but they are there to stay," said Gallo. "It's exactly what I wanted to see — modest growth with good people. There are a lot of biotech companies that formed, made a lot of noise and went out of business. That's not our purpose. I want it to be long lasting. I want it to grow, and I think it will."



Senior lab technician Dileep Monie attempts to lyse, or break apart, the HIV virus in this laboratory hood.