



May 11, 2008

## Biotech industry boasts potential

By Bruce Stevenson

*"Back where I come from we have universities — seats of great learning — where men go to become great thinkers. And when they come out, they think deep thoughts, and with no more brains than you have."*

— The Wizard of Oz , to the Scarecrow

I truly feel lucky. I have an exciting job in one of the most beautiful cities on Earth, and I am in on the ground floor of something with a big future: life sciences and biotechnology research and development in Hawai'i.

I moved to Honolulu a year ago to become CEO of Pacific Health Research Institute. Local physicians founded PHRI almost 50 years ago to be Hawai'i's first medical research organization. I am honored to be responsible for protecting and enhancing its hard-earned reputation for research excellence.

I came to PHRI from the Salk Institute for Biological Studies in San Diego — a world-famous center of biomedical research. San Diego is ranked among the top biotech business centers in the world, based on the new companies and jobs it generates and its success in developing and marketing biotech products.

More than 40,000 people work for San Diego biotech enterprises. In comparison, the Department of Business, Economic Development and Tourism reports that Hawai'i's biotech sector is less than 10 percent of that size — about 3,000 people employed. The magnitude of potential benefits from growth in biotech becomes clear when you compare the \$67,000 average biotech salary in San Diego with the average annual wages in Hawai'i's tourism industry of just over \$19,000.

So, can Honolulu's biotech sector be as successful as San Diego's? Based on my experience, I believe the answer is "yes."

San Diego's biotech success has its roots in the 1950s, with the founding of the University of California at San Diego and the arrival of Dr. Jonas Salk, fresh from developing the polio vaccine. With the support of the March of Dimes, Salk aimed to build a health research institute with a highly collaborative environment. The city of San Diego donated 27 acres of pristine oceanfront property on which Salk built his dream.

UCSD and Salk Institute formed the nucleus of San Diego's life sciences community. The area's first biotechnology firm opened in 1978 and its alumni went on to create more than 40 additional biotech firms. San Diego's success grew from there.

The explosion of research, innovation, and wealth creation could not have occurred had it not been nurtured with continuing public investments in education and research infrastructure. If Hawai'i is to have similar success, we must make similar investments.

The University of Hawai'i medical school's \$150 million biomedical research center was an important first step. The recent approval of \$12.5 million to continue work on a biocontainment laboratory in Kaka'ako brings us even closer to critical mass. And, discussions are in progress to build another first-rate facility in Kaka'ako — the Asia Pacific Research Center.

These are strong signs of commitment. Additional investments in infrastructure will be necessary —

but they will not be sufficient in themselves. To compete effectively, we need not only cutting-edge facilities, but also a workforce prepared to work in them.

Today, the quality of education and research is measured on an international scale. If we are going to compete at that level — which we must — excellence is the standard to which we must hold ourselves. But the difficult truth is that our public schools are ranked near the bottom in science education. The National Assessment of Educational Progress ranks Hawai'i eighth-graders 48th out of 52 jurisdictions in science proficiency. And, while the University of Hawai'i has pockets of excellence where researchers are producing work of high quality, it is not yet considered a top school in biomedical research on a par with UCSD.

We are making headway. The recent appointments of Virginia Hinshaw as UH-Manoa Chancellor and Jerris Hedges as dean of the John A. Burns School of Medicine, both leaders in their own fields of biomedical research, are extremely encouraging. We must continue this progress and commit ourselves to providing excellent public education in Hawai'i at every level.

As a community, we must support the best teachers and researchers with competitive salaries and continually invest to upgrade school facilities at every level. And, we must hold our educators responsible for results.

Recent job losses in the visitor industry remind us how important it is to diversify our economy. If we can sustain our efforts, my experience in San Diego makes me confident that our investments in the life sciences and biotech sector will produce major returns for Hawai'i. We are laying a foundation for success. Let us continue to ensure our efforts do not fall short.

*Bruce Stevenson is executive director and CEO of the Pacific Health Research Institute. He wrote this commentary for The Advertiser.*

---