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Health research a sure way to better Isle lives, economy

By Bruce R. Stevenson

No one doubts that health research is important to improving our health and healthcare. What many don't realize is that health research is also critical to Hawai'i's economy — providing the kind of employment opportunities and economic diversification that is vitally needed in these turbulent times.

Studies have shown that every dollar of funding coming into our state from the National Institutes of Health has a "multiplier effect" — for every dollar expended on research, a second dollar is spent in successive rounds of economic activity. This means that the \$70 million coming into Hawai'i from NIH alone provides a \$140 million boost to the local economy. That same \$70 million of NIH funds also supports more than 1,100 jobs with average wages of approximately \$50,000, generating a total of \$55 million in state income.

A recent report, *Innovation and Technology in Hawai'i: An Economic and Workforce Profile*, issued by the Hawai'i Science & Technology Council, states that there are almost 8,000 jobs in Hawai'i in the overall biotechnology and life science sector, with average earnings of \$54,532. This is nearly double the average earnings of \$29,680 in the accommodations and food services sector, and significantly more than the \$45,963 average of all Hawai'i industries. In total, Hawai'i's biotech and life sciences job earnings contribute almost \$435 million directly to the local economy, before any multiplier effect.

Biotech and life sciences are growing in Hawai'i at a rate of 2.3 percent over the last five years, faster than the 1.4 percent growth of the same sector in the U.S. as a whole, but slower than Hawai'i's overall technology sector (3.3 percent over the last five years) and the overall Hawai'i economy (2.5 percent).

If biotech and life sciences are to be an important part of our growing technology economy, what is holding it back? Why hasn't Hawai'i's health research community reached critical mass?

There are several factors. Thirty years ago, our nation ranked third among developed nations in the ratio of college students graduating from science and engineering programs; the U.S. now ranks 17th. In Hawai'i, public education, particularly science education, continues to struggle, and the recently proposed government cuts to public education, the University of Hawai'i, and libraries will not help.

NIH funding is declining in real terms, down more than 13 percent against inflation in the last five years. Consequently, NIH dollars are harder to get, and when grant applications are successful, the funding levels are lower. Tightened funding reduces the potential for healthcare improvements at a time when the medical issues of our aging population are becoming more pressing. In turn, this

hinders the cost savings that health research and healthcare improvements bring.

These cost savings are real. For example, it is estimated that the development of the polio vaccine averted over a million cases of this dreaded disease and saved \$180 billion that would have been spent treating affected children. A total investment by NIH of \$56 million over the last 17 years into research on testicular cancer resulted in improved treatments and survival rates, saving \$166 million annually. NIH research has developed treatments for diabetic retinopathy that now reduce the incidence of blindness by 90 percent, saving another \$1.6 billion every year. And these are only three examples of the multitude of NIH-funded health research studies.

It will take a renewed commitment and fresh perspective to bring the full potential of health research to Hawai'i. We need to encourage our congressional delegation and leaders at the national level to increase federal support for biomedical research because it's critical to our health and our nation's future. We need to increase, not cut, our funding in the areas of science and mathematics education. And we need to support health research organizations that bring funds into our state and provide the kind of jobs we want our children to grow into. These same jobs will also attract Hawai'i citizens who left the state but want to return home.

A thriving, sustainable and internationally competitive health research community will only be achieved through maintaining a standard of excellence. We must be competitive in national and international funding opportunities, and we must blend this funding with additional revenue streams, including local government support; robust fundraising; and strategic partnerships that leverage the strengths found in local research institutions, private industry, hospitals and academia.

Yes, health research will ensure better medical care for our Islands' population, but it will also boost our economy. Hawai'i can contribute to the entire nation's health, prosperity and future while making the state a more sustainable place to live.

Now is the time for a bigger vision.

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