

East Bay Business Times Entrepreneur

January 23, 2004

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Science pays off for Zyomyx co-founder

BY LESLIE MLADINICH

Growing up in Germany, Zyomyx Inc. co-founder Peter Wagner was always fascinated by science. So when he completed a multitude of academic degrees within the field, he knew what he wanted to do.

"I had an interest in creating something that didn't end up in a drawer," he said from the biotech company's headquarters in

Peter Wagner

Title: Senior vice president and chief technology officer
Company: Zyomyx Inc.

Education: Ph.D., biophysics, ETH Zuerich; M.S., biochemistry, Freie Universitaet; M.S., chemistry, biology, University of Stuttgart-Hohenheim
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Hayward. "I wanted to create something that would be useful to someone."

With products barely a year on the market, Wagner and Zyomyx are heading toward this goal, gaining a prestigious nod from the international entrepreneurial community.

This year, Wagner was named one of the World Economic

Forum's "Technology Pioneers," an honor conferred on entrepreneurs across the world in biotechnology and health, energy and information technology. The forum is a corporate-funded independent organization that seeks to further economic growth while improving worldwide problems.

Foster City's John C. Martin of Gilead Sciences Inc. was another recipient of the award this year in biotechnology.

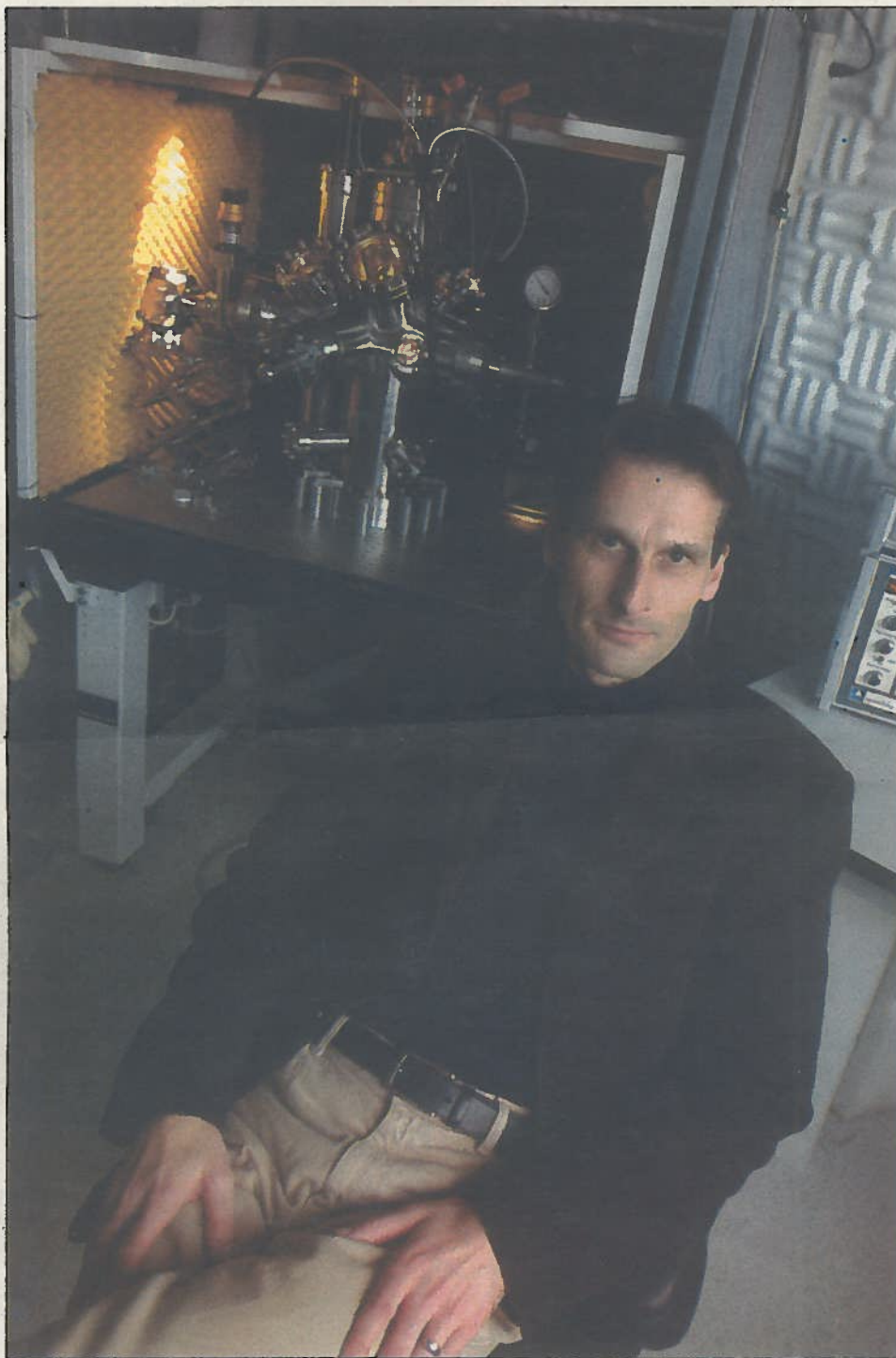
"A criterion for selection is leadership, and the prior experience of Dr. Wagner and the management team was considered during the selection process. However, the bulk of the selection process falls on the company, particularly its technology," said Sohini Chowdhury, the program's senior community manager.

Award recipients are recognized for their innovation, proof of concept, potential impact and growth.

This month, Wagner will be among 2,100 participants at the World Economic Forum conference in Davos, Switzerland. The attendees will include 30 heads of state and government leaders, 75 cabinet members and high-profile American executives such as Dell Computers Inc. CEO Michael Dell and Hewlett-Packard Co. CEO Carly Fiorina.

Zyomyx was singled out, Wagner points out, for its ability to put proteins and other biomolecules onto surfaces of materials like glass, gold and silicon so the proteins can be read and analyzed in their most natural state. The tests that Zyomyx creates can be used to detect other proteins that might identify healthy versus unhealthy tissue.

"This award is as much about the company as it is about me," says Wagner, 40, sitting next to a wall-size erasable white board full of handwritten scientific equations and formulas. It is about the team.



STEPHANIE SECREST EAST BAY BUSINESS TIMES

Zyomyx's Peter Wagner will be among the entrepreneurial technology pioneers honored by the World Economic Forum in Switzerland this month.

That may be true, but the vision behind Zyomyx was formed by Wagner when he did postdoctoral work in the same country he will receive the award. Twenty years ago, at the Swiss Federal Institute of Technology in Zurich, Wagner worked with chemists and other scientists to produce the first single molecule measurement of an antibody attached to a surface using an atomic force microscope.

He had been warned by colleagues that his approach to marry different branches of science to create a multidisciplinary operation

that would tackle for the first time the difficulties of controlling and analyzing individual protein molecules could be challenging at best. But Wagner remained undaunted.

"I was always into multidisciplinary challenges," he says.

The idea of starting an original biochip company that would use all of these sciences originated at Stanford in 1997. At the university's medical school, Wagner, with the physics and chemistry departments, developed new methods of studying molecular

Armed with science

Zyomyx uses many branches of science, including biology, chemistry and physics. Among its techniques:

- The ability to attach proteins and other biochemicals onto surfaces without inactivating them
- Developing protein assays, or tests, in a micromanaged chip.
- Making devices with micrometer-sized features.
- Many detection processes Zyomyx has designed, built and used

motor proteins attached to novel surfaces.

In 1998 when the scientific community and mainstream media were just beginning to build excitement around the sequencing of the human genome, Wagner co-founded Zyomyx to delve into the realm of proteins and nanotechnology. Since then, Zyomyx has raised \$92 million in venture capital. One of the biggest challenges the company faced was not having a model to improve upon or twist into a different fashion.

Wagner compares the Zyomyx biochip system to music compact discs. As music is recorded on CDs, Zyomyx records antibodies on a chip. The tests work on several levels of proteins, detecting amounts of known and unknown proteins.

Wagner believes the "blockbuster drugs as we know them" are getting rarer and that biotechnology companies like his will help pharmaceutical companies create more targeted drugs that work on specific areas of human biology and physiology.

With the Zyomyx Protein Profiling System and the Zyomyx Human Cytokine chip used by big pharmaceutical companies such as GlaxoSmithKline PLC and Aventis SA, Wagner is still getting used to the transformation from being a scientist with a vision to a senior vice president and chief technology officer for a privately owned company with 85 employees. To be successful in these roles, he has to hold on to the vision, but understand the complexity of customers' problems.

"You can be a really good scientist and an awful entrepreneur," he says. "In fact, that is really common. I see myself somewhere in between."

Running the company requires Wagner, who is married to a patent attorney, to work 15-hour days, including commuting from his home near Woodside.

What a good entrepreneur has to answer, Wagner says, is "what are your problems, and how can we be a solution to your problems?" Mladinich is a contributor to the Business Times.

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Former cable guy now runs a \$6.5M company. See page 25

Clinic counts on corporate funders. See page 25

Chamber leader joins town's biggest employer. See page 26