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# HARTFORD BUSINESS JOURNAL

August 2, 2004

COVER STORY



## Business is in his genes



*Gualberto Ruano, physician scientist and entrepreneur, is the founder and CEO of Genomas, a biotechnology firm that is partnering with Hartford Hospital to set up a laboratory of health genetics.*

PHOTO: STEVE LASCHNER

## Genomas puts a price on information people are born with

By Anusha Shrivastava

**H**is third company in 10 years is less than a year old, and he is already talking about his fourth. The fast-talking Dr. Gualberto Ruano, founder, president and chief executive officer of Genomas, is certainly a man in a hurry.

It's as if he has multiple projects that need to be taken care of, preferably all at once, so that he can make his contribution towards saving mankind. "I have a good track record in pointing out what the next trend is," says Ruano, a Puerto Rican, who came to Johns Hopkins University in Maryland in 1981 with the idea of becoming a medical scientist. "I realized that if I wanted to impact society, maybe medicine was not the best way to do it."

Ruano says that medical research is too slow in getting devices and solutions to the market and to the consumer, adding that personalized medicine where ideas and

products move quickly from the laboratory to a clinic is the route he prefers. "I'm a businessman driven by the mission of medicine," Ruano says.

Business plans, medical terms and the importance of creativity, fitness and longevity — all tumble out of this 45-year-old scientist, who has an M.D. and a doctorate from Yale University, and whose entrepreneurial spirit is almost contagious, colleagues say. "It's the way the guy is wired," says Dr. Paul D. Thompson, director of preventive cardiology at Hartford Hospital. "We point out something to him and talk about having it published, and he says, 'Let's patent it first.' He is the perfect entrepreneur, always optimistic, always charged up with all burners on, and a lot of fun to be around."

Thompson is working with Ruano on his current project: finding out how a person's genes affect his or her metabolism, so as to

figure out what diet and exercise regimen will be most effective in preventing heart disease, or at least, minimizing damage caused by it. "He is the business angle of this project," Thompson says.

The business, operating out of the Florence Crane building on Jefferson Street in Hartford Hospital, is at the seminal stage with a handful of employees, computers and equipment entirely financed by Ruano and a plan that can, at best, be described as early stage. With money raised through venture capital in the fall, Ruano hopes most parts of the plan will be firmed up and that the business will begin paying off by 2005. His projections include \$30 million in revenue by 2009 and profit in the range of \$15 million to \$20 million by that time. "Genomas could turn profitable as early as 2006," Ruano says.

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In the first stage, the company will make money through the sale of “physiotypes” (a term trademarked by Ruano.) These are products made from the combination of all genetic, physiological or clinical markers that Genomas has discovered to be significant determinants of individual response to diet and exercise routines, according to the company’s Web site.

The company’s target demographic for the \$500-range blood test that would include a DNA analysis is the 50-year-old, “educated individual” who is concerned about his health, has discretionary income and is “motivated to change, but has failed to do it with traditional diet and exercise modifications,” Ruano says.

The fee would also include a recommendation to a doctor about the treatment most effective for an obese, diabetic or heart disease patient.

Additional income will be generated through contracts to discover physiotypes for customers in the health care industry.

In the long term, the company says, money will be generated through licensing revenue from “physiotype intellectual property drawn from technology partners, diagnostic companies and mass marketing of physiotypes.”

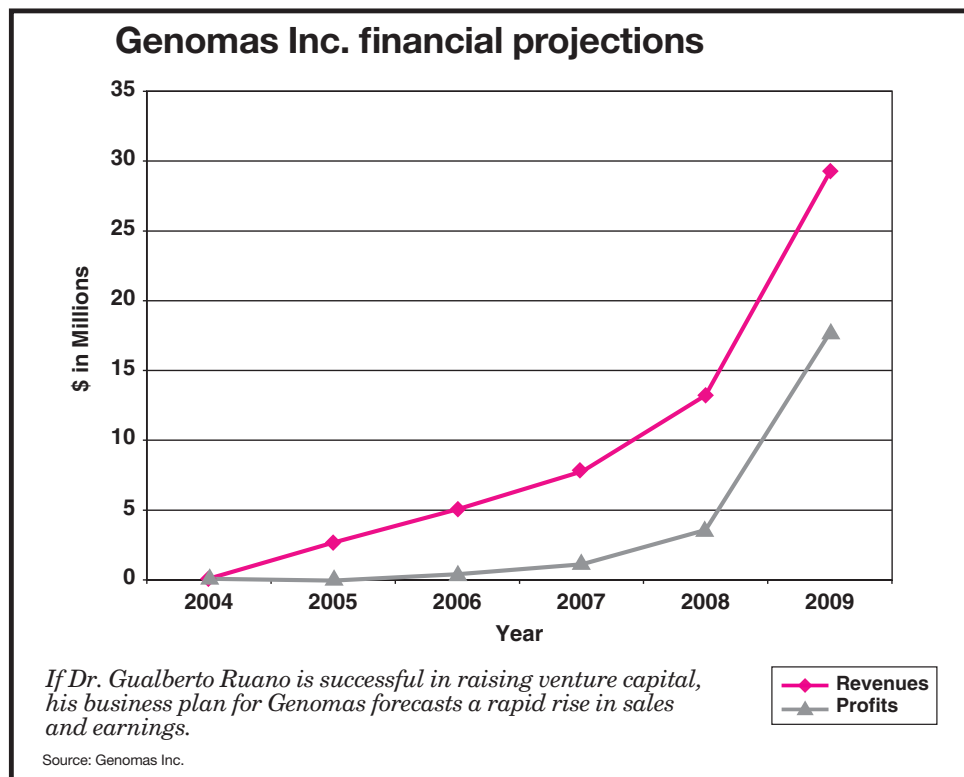
“We would see the benefits of our partnership within a year,” says Kevin Hannifan, executive vice president and chief operating officer of Hartford Hospital, who counts the recent step-up in the hospital’s status as a clinical staging area for Ruano’s work as a positive factor.

Ruano says he chose the hospital over New Haven institutions, where he had been based for the past 22 years, because of the work being done by Dr. Thompson.

“It would have been good for New Haven if he stayed,” says Professor Ted Holford, professor of biostatistics at Yale University, “but I guess a space opened up for him in Hartford and with the Internet and all, it really hasn’t hurt our collaboration with him.”

Hartford Hospital’s reputation as an institution where clinical applications are more easily accepted than in academics-oriented hospitals, as well as its large network of physicians, helped make the decision, too, Ruano says.

The ground rules for Ruano’s area of work are just being established, according to Professor Alan Goldstein, chairman of the department of biochemistry and molecular biology at the George Washington University School of Medicine and Health Sciences in Washington, D.C., where Ruano works as an adjunct professor. “He is an expert in the field of personalized medicine and brings the perspective of a physician and scientist to the



clinic,” says Goldstein, referring to Ruano’s latest attempt to commercialize medicine through an effective diagnosis, based on genetics.

Goldstein points out that the cost of reading genomes is prohibitively expensive, but Ruano is among a bunch of people trying to bring it down to the \$1,000 range. This would help pharmaceutical companies and others in the health care industry by reducing costs related to prescribing medicines that would not be as effective.

Personalized medicine could easily be the next “big thing” and Ruano is slotted as one of the leading authorities in the area.

Whether he can translate this into money in the bank remains to be seen, but Ruano himself is very confident of his success. “The alignment of stars is in good shape,” Ruano says. “Obesity is a major problem in society that needs personalized attention, and we can deliver in a short time.” He says that the biotech industry has been hampered by the lag between research and a deliverable product in the market, adding that he has bypassed that problem in the Genomas model by first having a product and then going to the market and directly to the consumer with it.

“People spend a lot on diets and exercise equipment, and they will be ready to spend on a customized solution for them,” he says.

Reminiscing about his first two companies, Bios and Genaissance Pharmaceuticals, he says the first was a pick-and-shovel business where he sold medical products from a catalogue and was “too removed” from medicine. The second, where gene marking was first commercialized, was “ahead of its time.”

Now, with Genomas, Ruano thinks he has everything lined up, and hopes to get venture capital because the business is already in gestation. Venture capital is no longer “adventurous,” Ruano says, and goes after less risky businesses. It is Ruano’s contention that the genomics sector’s financing was hard hit when the high-tech market imploded in 2000 and secondary finances were cancelled. He says that if the market had remained strong, venture capital and biotech companies would have had to tread less carefully.

For him, Genomas is well-suited to the changed climate because the revenue sources are in place, there is a well-defined targeted audience, and demand for personalized medicine can only grow.

His confidence is probably not misplaced. “Dr. Ruano has had one successful venture and we believe that he has more than one in him,” says Victor Budnick, president and executive director of Connecticut Innovations, the first institutional investor in Genaissance. Budnick says he would “entertain” a discussion about funding Genomas because he thinks the fact that Ruano’s technique does not require FDA approval and can be readily adopted by enthusiastic people who want to improve their lifestyle and health could be a success.

“After this, we will have to tackle the effect of genes on mental health,” says Ruano, a five-foot-ten 145-pounder, who says he gets his best ideas during his daily seven-mile run along Long Island Sound. “That’ll take another five years or so, and will be my next company.” ■