



◀ **Special delivery.** Antonio Giordano (*left*) shows off a lab to one of his backers, pizza magnate Mario Sbarro.

PROFILE: ANTONIO GIORDANO

'Dr. Hustle' Sells His Dream For Italian Medical Research

After making his mark in the United States, an Italian cancer researcher with a knack for raising private money seeks to inject new life into biomedical science back home

It may not look like much now, but a dilapidated mansion in the green and hilly region of Umbria, far from any major research university or institution, is being touted as the future birthplace of an Italian renaissance in biomedical science. That's the dream of Antonio Giordano, who 20 years ago left Naples to make his scientific name in the United States. Giordano now runs his own cancer research institute in Philadelphia, thanks in part to a relentless pursuit of support from corporate and private donors. The magazine *Philadelphia* even dubbed Giordano "Dr. Hustle" in a profile that detailed how he obtained a large donation for his institute after wooing a pizza magnate during weekly strolls.

By supplementing grants from the National Institutes of Health (NIH) with privately raised money, the 44-year-old Giordano has gained some freedom in the United States to pursue his own research agenda; he even established a private foundation that funds graduate students and postdocs at his institute. Now, after securing commitments for more than €60 million from Italian financial services institutions, Giordano would like to help a generation of young Italians back home pursue biomedical research. And by offering an alternative to the charity and governmental funding systems that he believes are narrow-minded and stifle Italy's science, Giordano hopes to persuade many of his protégés to stay there. "In

Italy, there are not many possibilities for research, and many Italians ... look at me not only as an example but [also] as a person that can help them," he says.

Giordano's reputation in Italy is such that when politicians in the Umbrian town of Terni, 108 kilometers north of Rome, heard of his plans to set up a biomedical research institute, they called to offer a city-owned mansion. The building, currently being refurbished, should open its doors in 2009.

"[Giordano's] personality makes it possible to integrate the picture of research into something that is sellable."

—Paul Fisher,
Columbia University

That wasn't fast enough for the impatient Giordano and his sponsors, however. So an interim laboratory is being built not far from the mansion. This fall, 20 to 30 students and postdocs should be working there. When the mansion is ready, the new institute will ultimately provide lab space for another 50 young researchers to work, primarily on cancer, but on cardiovascular disease and diabetes too. It will also include a facility to

treat cancer patients, run trials of therapies, and develop research in cancer prevention.

Paul Fisher, a cancer researcher at Columbia University in New York, notes that what really set Giordano apart from other good scientists are his entrepreneurial spirit and capacity to exploit nontraditional avenues of funding. "His personality makes it possible to integrate the picture of research into something that is sellable," says Fisher.

Breaking the mold

Giordano initially set his heart on a career in medicine. But while training at the University of Naples back in the 1980s, he had second thoughts. "I realized that medicine can be very routine [and] that there were too many devastating illnesses that needed more ... research work," Giordano says. After earning his medical degree in 1986, Giordano decided to swap medicine for genetics and cancer research.

In 1987, he came to America to be a postdoc, at New York Medical College in Valhalla, and then under Nobel Prize winner James Watson at Cold Spring Harbor Laboratory. There he won recognition for isolating the cyclin A protein, a cell growth regulator. That discovery, says Giordano, provided "the first physical evidence of a link between cell division and cancer."

Since then, Giordano has had other successes, including cloning the *Rb2/p130* tumor-suppressor gene, which was subsequently found to be involved in many cancers. He's had "an outstanding career with some very exciting findings ... that really helped launch a number of fields within cell cycle research," says Fisher.

Giordano moved in 1992 to Temple University in Philadelphia, Pennsylvania, and set up a 10-person lab conducting cell cycle and cancer research with an initial 3-year NIH grant. It quickly became clear to him, however, that private sources of support were also needed. "I saw colleagues, also very good, who disappeared because they didn't realize how it was important to be independent and search for your own funding," he says.

As Giordano began to envision a research institute of his own, he got lucky. His wife-to-be, whom he met during his time at Cold Spring Harbor, lived in the same New York neighborhood as the owners of Sbarro, a U.S.-based chain of fast-food restaurants

CREDIT: SBARRO HEALTH RESEARCH ORGANIZATION

that sells pizza and Italian dishes. Giordano soon encountered fellow Neapolitan Mario Sbarro and after almost a year of Sunday-morning walks on Long Island won from him an initial donation of about \$1 million to create the Sbarro Institute for Cancer Research and Molecular Medicine. Sbarro says he was impressed by Giordano, particularly his vision of “creating an environment where talented [young] people ... could work together ... free of bureaucracy.”

To retain control of his private money, Giordano felt he needed to break free from the university’s authority. But he also wanted the university’s administrative support and infrastructure to keep nonresearch costs minimal. Convincing Temple to go along was not easy. In fact, in 1994, Giordano moved his lab to Thomas Jefferson University, also in Philadelphia, where he was offered an agreement that included the university matching Sbarro’s donation. “After 2 years, my lab had tripled in number of people and space,” Giordano says. But nearly a decade later, in 2002, Giordano returned to Temple after securing, in his words, “complete independence” in administering the funds, staff, research programs, and patent rights.

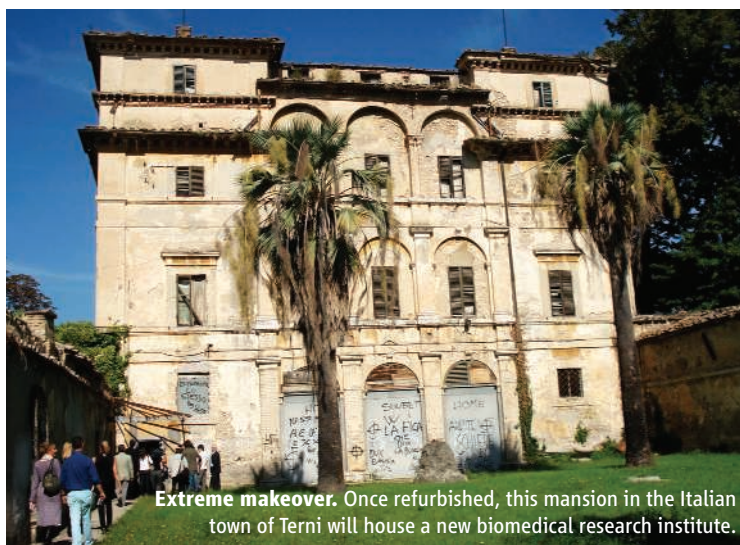
Giordano’s return also marked the launch of a nonprofit organization—the Sbarro Health Research Organization (SHRO)—to collect additional private funds for the institute. Sbarro, who had continued to support Giordano’s work, kicked in another \$200,000 a year for 3 years as seed money. To date, Giordano has raised \$3 million in private funding, supplementing about \$27 million that he and other investigators at his institute have obtained through NIH grants and earmarks from the state of Pennsylvania and the Department of Defense, which has also just awarded SHRO \$2 million a year for 2 years for breast cancer research.

The private money raised by SHRO comes with fewer entanglements than those attached to NIH grants, contends Giordano. As a result, he’s free to dedicate a great part of these private research dollars to risky projects, such as the development of a novel gene-therapy approach for the treatment of lung, liver, and ovarian cancers. SHRO mainly funds young scientists, through research grants and 1- to 3-year fellowships of \$25,000 a year for students and between \$35,000 and \$40,000 for

postdocs. Although SHRO has an external scientific advisory board, Giordano has largely decided which areas are investigated and who gets funded. But then, he says, “we want these people to ... pursue their own independent ideas and careers.”

Going home

With the project in Terni, Giordano is extending his reach into Italy, hoping eventually to use it as a springboard to fund scientists across Europe. He had in 2000 started to use his privately raised money to fund graduate students and postdocs in a few labs at places such as the University of Siena, University of Rome “La Sapienza,” and the University of Naples. As in Philadelphia, the universities offer the researchers access to equipment and other infrastructure.



Once SHRO was established, it became Giordano’s avenue for distributing funds abroad. SHRO’s money is welcome because it is more difficult to find funding for cancer research in Europe than in the United States. In 2002–03, the whole of Europe spent €1.43 billion on public cancer research with the 25 E.U. Member States disbursing only one-seventh the per capita amount spent by the United States, according to the European Cancer Research Managers Forum. “European minds are excellent,” says Giordano, but they often do not flourish until they get to America, where there is better support.

By creating the Terni institute, as well as a new nonprofit, the Human Health Foundation (HHF), Giordano says he’s throwing a lifeline to researchers in Italy, where only a few institutions—“oases,” he calls them—typically receive money from the country’s major research funding bodies. Already, HHF has collected €60 million from two

Italian financial institutions, the Banca Popolare di Spoleto and Spoleto Credito e Servizi. Giovanni Antonini, the president of the Spoleto bank, has even agreed to head HHF; Giordano will head its scientific committee. By funding HHF, says Antonini, his bank hopes to encourage “the return of the Italian minds who were constrained to leave Italy to improve their professional careers.”

Fifteen million euros will be used to refurbish the Terni mansion. The remainder of the HHF money will go directly into research projects and the creation of additional labs. And Giordano stresses that the foundation’s funds will be awarded through a transparent process involving peer review. By this summer, between 10 and 15 early-career scientists will start working on HHF-funded projects in Siena and Philadelphia while the interim lab in Terni, which will cost €500,000, gets up and running.

At the moment, Giordano supports about 100 young researchers across Italy and the United States together. About 70% of the students and postdocs Giordano has trained or funded so far, a network that today counts more than 250, are Italian. He has been able to aid that many in part thanks to complementary national and European funding programs.

Giordano “acts as a role model and mentor,” says Alessandro Bovicelli, 39, who came to the Sbarro Institute in 2000 for a postdoc in gynecological oncology and still col-

laborates with Giordano. “He is ... very focused on the objectives that the young doctor would like to pursue.” Now a faculty member at the Department of Obstetrics and Gynecology at the University of Bologna, Bovicelli says that Giordano’s continuous encouragement was vital.

Normally confident, Giordano admits uncertainty about whether he will be as successful in his new project as he’s been in the United States. “In Italy, there is not the infrastructure there is in the U.S.,” he says, and building an institute from scratch is a major undertaking. Giordano notes that his mother asks why he can’t be satisfied with what he has already done on the U.S. side of the Atlantic. His answer is simple: “I owe this to Italy. This is where I grew up and was trained.”

—ELISABETH PAIN

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