# The Trials and Tribulations of Building a Lab in the South

PORTO CONTE, SARDINIA—Unless you are a connoisseur of European beaches, you have probably never heard of this tiny village, set in a picture-postcard bay on Sardinia's northwestern coast. But a small group of geneticists has big ambitions to put Porto Conte firmly on the world's scientific map. They hope to turn a new laboratory complex here into a world-class research center and a European hub for scientific meetings.

The Porto Conte Research and Training Laboratories (PCRTL) campus is well on the way: Although it only opened last summer, it is already known to its fans as "Warm Spring Harbor." But it has been a struggle to get this far. Indeed, PCRTL's tortuous history illustrates many of the obstacles to building a top-level research facility in southern Europe. And its future is far from assured. The lab's director, population geneticist Marcello Siniscalco, says that European-level initiatives designed to help the region's scientists, such as the European Molecular Biology Laboratory's (EMBL) planned "regional groups" program (see main story), will be crucial to its development. "If PCRTL doesn't become part of an international network, it will die," he says.

**Bold plans.** Marcello Siniscalco hopes to turn Sardinia's Porto Conte lab *(foreground)* into a "Warm Spring Harbor."

Creating a truly international center in Sardinia would be a major task in the best of circumstances, given the island's isolation some 380 kilometers off Italy's west coast. But PCRTL has been hit by the closure of its main sponsor, the Ministry of the Mezzogiorno, which was responsible for developing Italy's poor southern regions. As a result, Siniscalco and the 16 researchers who have so far joined him in Sardinia are in limbo—uncertain when they will see the first installment of the $4.5 million pledged by the ministry to see PCRTL through its first 5 years.

This setback is just the latest twist in a long saga. The PCRTL campus was conceived 10 years ago as a center for agricultural meteorology and marine biology, and built at huge cost, mostly with aid from the European Union (EU). But no leading scientists in the field could be convinced to move to Sardinia, and the building lay abandoned—"a classical cathedral in the desert," says Siniscalco. To salvage the investment in the lab, Antonio Milella, the project's local cheerleader and rector of the nearby University of Sassari, offered the space in 1987 to Siniscalco, then at the Memorial Sloan-Kettering Cancer Center in New York. Siniscalco was already well known in Sardinia as "the madman of August," who took over friends' labs every summer while they were off vacationing. The magnet for him was the island's isolated large families, ideal for genetic mapping studies. (Indeed, Siniscalco's Sardinian DNA collections have given the island a permanent place in the history of human genetics.)

In 1987, money still flowed readily from the Mezzogiorno ministry, and within 2 weeks, $8 million was earmarked to convert the untouched space into molecular biology labs. But the subsequent refit became a succession of disasters—not least because the local construction company hired for the task had never built a lab. By the time the work was finished, in summer 1993, the ministry had been shut down for inefficiency. And while the Italian National Research Council has agreed to honor more than half of the ministry's commitment to PCRTL's operating costs, it has yet to release any money.

PCRTL has at least got off to a running start in its role as a conference center, however. In the first few months after construction was completed, the lab hosted six events, including a first in European science education: a one-week, hands-on course on human genetic diversity for high-school teachers from all over the continent, developed jointly with staff from Cold Spring Harbor's DNA Learning Center and the Wellcome Trust's "Science for Life" exhibition in London. And plans are now underway to convert an abandoned prison on the campus into a public education center and science museum.

The real measure of PCRTL's success will be the strength of its research program. One positive sign is that Italy's Genoa-based National Tumor Institute has launched a satellite lab at PCRTL. But the main challenge is to lure top researchers from abroad. One of Siniscalco's strategies is to target young expatriate Italians looking for a rare chance to return home and work independently. Another is to woo leading scientists from outside Italy into part-time affiliations.

This second tactic is already showing results. Luca Cavalli-Sforza, the eminent Stanford University population geneticist, has just signed on to spend half of 1994 at PCRTL starting a group and helping the lab become a European focus for the Human Genome Diversity Project, a worldwide effort he helped to initiate. And Hans Lehrach of the Imperial Cancer Research Fund in London—where Siniscalco maintains a lab part-time—is seeking funds to set up a human gene mapping group at PCRTL that would take over part of his London lab's "map your clone" service for European researchers. "I really want to set up something which isn't only for Italians, but for Europe," says Siniscalco. Finally, Yale University's Stephen Dellaporta will establish a biotechnology group. One goal: to produce transgenic plants carrying genes for enzymes that help remove heavy metals from soil.

This work may have local applications—and perhaps open the door to funding from local government or industry—for Sardinia's now-abandoned copper mines have left some of the surrounding countryside in dire need of a clean-up. But realistically, Siniscalco says that long-term survival depends upon winning international funds that won't get tied up in Italian bureaucracy.

While the prospects for significant international support may look grim in light of Italy's quarrel with EMBL, Siniscalco remains upbeat. For a start, EMBL's member states may yet alleviate some of Italy's concerns, and that could open the way for PCRTL to host a regional EMBL group. Then there are research grants from the EU, already an important source of funds. After what PCRTL has already been through, however, Siniscalco has few illusions about the uphill struggle that lies ahead. "I have enormous patience," he says, "and I can stand anything."

**–Patricia Kahn**

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