cent exploratory findings. "We no longer know the overall composition of the ocean crust," Dick says.

Specialists in other disciplines see similar opportunities. Geophysicist Mark Zoback of Stanford University says the depth, core recovery, and instrument-placement capabilities of OD21 would help answer fundamental questions about fault conditions at the major oceanic subduction zones and shed light on earthquake mechanisms. Marine geologist Kozo Takahashi, of Hokkaido Tokai University, is excited by the chance to recover shafts of sediment with sufficient integrity to form a long-term record of environmental changes and to study the evolution of such climatic phenomena as the Asian monsoon. And micropaleontologist Hisatake Okada, of Hokkaido University, says the enhanced core-recovery capabilities of the OD21 vessel would provide a "new tool for studying the paleogeographic climate" through the recovery of molecular fossils going back to the Jurassic period.

But geologist James Kennett of the University of California, Santa Barbara, worries that the high cost of OD21 will restrict it "to doing what it does best"—drilling deep into the continental margin—and limit exploration elsewhere in the world's oceans. That would be a disaster to science, he says, if the United States and other countries were to end support for the current drilling program.

To encourage full coordination between the two efforts, ODP and JAMSTEC officials have separately proposed rearranging JOIDES and placing both vessels under the same scientific advisory structure. James Briden, a geologist at University of Oxford and current chair of the JOIDES executive committee, says "a joint planning office is needed" to get the most out of both vessels. Hajimu Kinoshita, director of deep-sea research for JAMSTEC, expects synergy from the fact that both vessels would be trying "to solve problems in earth sciences." But one thorny issue is how to collect and split operational costs. The ODP program throws all financial contributions into one pot, a system that might prove difficult for two ships based in different countries.

Ultimately, however, the relationship between ODP and OD21 will hinge on whether the international community will be able to support two vessels. "We have a responsibility to the U.S. science community to see whether we can make it work," says NSF's Purdy. But his crystal ball is hazy. "We've got some tough decisions to make in the next 1 to 3 years," he says.

–Dennis Normile

BIOMEDICAL RESEARCH

Gallo's Institute at the Last Hurdle

Political leaders in Maryland regard biomedicine and particularly AIDS research as a growth industry. The state is already home to the National Institutes of Health (NIH) and ranks third in biotech employment after California and Massachusetts. That helps explain why the Maryland legislature is about to commit $20 million over 5 years and part of a $50 million state-owned facility to a new center in Baltimore run by AIDS researcher Robert Gallo, formerly of the National Cancer Institute (NCI). The project—the Institute of Human Virology (IHV)—ran into some opposition last year because of Gallo's controversial past, but it is expected to win final approval from the legislature in mid-March, according to state representative Howard Rawlings, chair of a key appropriations committee. Says Rawlings: "It's a done deal."

Gallo's plans for the institute—and the state's expectations for it—have emerged in legislative hearings and planning documents over the past few months. The project began last year when Gallo and two colleagues, Robert Redfield, a former U.S. Army clinician and AIDS vaccine developer, and William Blattner, an epidemiologist who was also at NCI, offered themselves to potential sponsors as a "dream team" in AIDS research. They were courted by Maryland, Pennsylvania, South Carolina, and Virginia. Maryland's governor clinched a deal with Gallo last May (*Science*, 26 May 1995, p. 1119).

State planning documents indicate that IHV—which will be an adjunct to the University of Maryland, Baltimore—will expand from an initial state-supported staff of about 46 to around 70 by 1999, and 200 by 2001. The IHV's interim staff director, James Jennings of the Hill and Knowlton public relations firm in Washington, D.C., has more ambitious plans: "We expect to have 100 to 150 people on board by the end of the year, and our objective is to have 350 in 3 to 5 years."

The sponsors anticipate big returns on the state's investment in the institute, which will develop new therapeutics for AIDS, other viral diseases, and cancer based on natural products of the immune system. During hearings on this plan in December, state finance analyst William Ratchford noted that Gallo's patent on an HIV test has generated $40 million in income for NIH, and he said Gallo "has expressed confidence that the institute will generate research findings not unlike his previous efforts at NIH." Ratchford added that IHV will help fill local hotels by bringing hundreds of AIDS researchers to international scientific conferences, and he said the state anticipates the team will draw patients from around the world, generating "significant revenues" for the University of Maryland hospital in Baltimore.

> **"No information has been forthcoming that would justify us not going ahead."**
>
> **—Howard Rawlings**

Ratchford said that by 1999, IHV is supposed to "generate sufficient external funds so as to be largely self-supporting." Patents on IHV inventions will be held by the university, but net revenues will be split 50–50 between the university and the inventors. A spin-off company in Baltimore called Omega Biotherapies Inc.—directed by the three IHV principals and Jennings—will get first rights to IHV's discoveries. IHV will also receive some funding from federal grants, according to Jennings, and from sponsored pharmaceutical company projects and charitable contributions.

Critics of the venture tried to derail it in December. Among those who spoke against it in state legislative hearings were Suzanne Hadley, a former investigator who worked for Representative John Dingell (D–MI) and looked into allegations of scientific misconduct against Gallo. William Hagins, an NIH researcher, also denounced the proposal as "politically mandated" and "big science–big business run amok." Hagins objected that past controversies involving Gallo, including allegations that he refused to share reagents, would make it hard to attract top scientists to IHV or start international collaborations. At the hearings, Gallo called such comments "innuendoes and allegations" and a "frightening aspect of political intervention into science."

Key Maryland legislators have endorsed Gallo's plan individually and in committee. They have, however, added a clause to the bill funding the IHV asking the University of Maryland to issue a report giving its assurance that high ethical standards will be maintained at the institute. But they see no reason to waver in their support for the project, says Rawlings: "No information has been forthcoming that would justify us not going ahead."

–Eliot Marshall