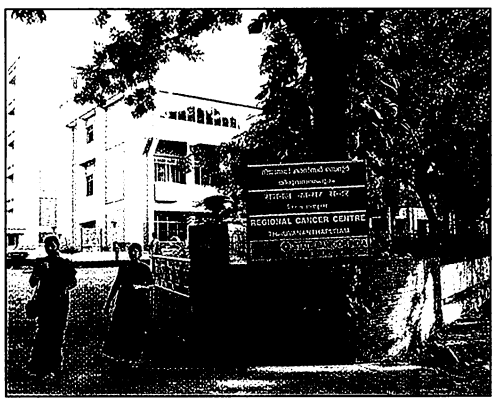
These steps by the Ministry of Health and Family Welfare in New Delhi follow a 300-page report submitted earlier this month by an independent panel investigating a trial that RCC ran in collaboration with Johns Hopkins University in Baltimore (*Science*, 10 August, p. 1024). The report, which remains confidential, concluded that there was no



Stoppage. India has suspended clinical trials at the RCC for 6 months.

"violation of human rights or use of any banned drug" but that not all of the required regulatory procedures were followed. In particular, it said that the RCC failed to obtain necessary approval from the Drug Controller General of India and clearance from the Health Ministry's Screening Committee for collaboration with a foreign agency in studying M4N, a methylated extract of the creosote bush being tested against oral cancers.

"The report highlights irregularities in the way research was being conducted at RCC," says Indian health minister C. P. Thakur. "We are now going to insist on a procurement of permission from the central government for all new drugs, whether for experiments or for their marketing." The RCC's director, Krishnan Nair, acknowledged in an interview with *Science* that the center had not fully followed regulatory procedures.

Along with the 6-month suspension, the ministry has ordered the institute to reconstitute its Institutional Ethical Committee along guidelines issued last fall by the Indian Council of Medical Research (ICMR) in New Delhi (*Science*, 3 November 2000, p. 919). In addition, it said that a representative of ICMR must sit in on discussions of proposed clinical drug trials.

The government has also decided that all medical research institutions must abide by those guidelines, which currently apply only to ICMR institutions. A second inquiry, by the Kerala branch of the Indian Medical Association, concluded earlier this month that although there was "no evidence of exploitation, ... it is doubtful whether all the [RCC] patients understood that they were participating in a human experiment." **–PALLAVA BAGLA**

CREDITS: (TOP TO BOTTOM) P. BAGLA; INSTITUTE FOR ANTHROPOLOGY, VIENNA

FORENSIC ANTHROPOLOGY

For Ice Man, the Band Plays On

BOLZANO, ITALY—Researchers threw a grand bash here last week to celebrate the 10th anniversary of the Tyrolean Ice Man's famous emergence from an Alpine glacier. But instead of giving Europe's oldest mummified human a cake with 5310 candles, they feted him with new insights into his origins as well as plans to compare his desiccated remains with those of South American mummies.

Ever since two hikers spotted his wizened head and shoulders sticking out of the ice on 19 September 1991, the Ice Man—nicknamed Ötzi by the Austrians because he was found in the Ötztaler Alps—has been the Copper Age's biggest celebrity. In the early 1990s, Austria and Italy waged a custody battle over the remains until precise measurements showed that the find was made on the Italian side of the border. That led to an amicable agreement that opened up scientific study. Perhaps the most sensational find came just a few weeks ago: Computed tomography scans revealed what appears to be an arrowhead lodged in the Ice Man's left shoulder, suggesting that he may have been a victim of foul play (*Science*, 3 August, p. 795).

A decade of work has painted a clearer picture of the Ice Man's roots. For starters, scientists have used isotopic analyses to pinpoint his place of origin. The ratio of strontium-87 to strontium-86 in his tooth enamel indicates that he grew up eating plants grown on soils derived from gneiss and schist, the same kind of soil found in the South Tyrol region of Italy—and unlike Austria's limestone-based soils, says geochemist Wolfgang Müller of the Australian National University in Canberra. In addition, preliminary analyses of oxygen isotopes suggest that the Ice Man lived at a higher altitude as an adult, Müller says. This is consistent with the idea that the Ice Man came from Juval, a Copper Age site in South Tyrol.

Ongoing projects aim to use nondestructive techniques to examine the provenance and manufacturing methods of the Ice Man's copper ax; biopsy his prostate to learn about cancer in prehistory; and possibly try again to amplify his Y chromosomal DNA after one failed attempt. (This may contain clues to the spread of ancestral populations across Europe.) Some scientists also would like to dissect his shoulder to inspect the putative arrowhead—a decision that will be made after consideration in a future international forum, says Horst Seidler, scientific director of the Ice Man project.

Behind the headline-grabbing news, Ice Man researchers have forged new bonds with archaeologists who study Peruvian mummies. At the meeting, Seidler unveiled an agreement with the Leymebamba Museum in remote northcentral Peru. The museum, which got half of its initial funding from the Austrian government, opened in May 1998 to house about 220 16th century mummies from the Chachapoya tribe. Lessons gleaned from the Ice Man in how to preserve ancient tissue can be applied to these mummies, Seidler says, and can also boost investigations into the genetic and cultural heritage of modern Peruvians. Up to four of the mummies may be shipped to Bolzano in 2003 in hopes of revealing something about the Ice Man himself.

Seidler also announced a partnership with Chilean researchers working with the Prince of El Plomo. This Incan mummy was an 8-year-old child sacrificed near Santiago 400 years ago, then preserved in ice.

New findings can't come too quickly for Bolzano, where the Ice Man has lent his name or image to a phone card, a postage stamp, a gelato flavor, and a musical called *Frozen Fritz*, which premiered a week before the conference. Linking up with the South American researchers should help broaden the region's scientific strengths, says Seidler: "Bolzano should be much more than just a place where the Ice Man is displayed." But a decade on, Ice Man fever here is more passionate than ever—and unlikely to subside any time soon. "In 100 years," says archaeobotanist James Dickson of the University of Glasgow, "we may be arguing over what time he sat down to his last meal." **–BEN SHOUSE**

Cold warrior? A pathologist probes a wound near the putative arrowhead that may have killed the Ice Man.