ever, when the second of four key guidance systems failed. "I would have bet good money that it was the end for the mission," says Hertz. But a team of engineers and scientists from NASA, industry, and Johns Hopkins University used electromagnets in the satellite and Earth's own magnetic field to keep the spacecraft oriented. Engineers had theorized that they could use a magnetic field to steer a satellite, but the approach had never been tried. "I am thrilled that the FUSE team proved me wrong," says Hertz.

The team is still fine-tuning the new guidance system, which allows controllers to lock onto guide stars for accurate pointing. In the meantime, researchers are thrilled that an old friend has regained its good health. "I am very excited to have FUSE back," says George Sonneborn, a project scientist at NASA Goddard Space Flight Center in Greenbelt, Maryland. **–ANDREW LAWLER**

SPAIN

New Cancer Center Makes a Big Splash

BARCELONA—When Mariano Barbacid returned home in 1998 to establish a cancer research center, his compatriots lauded him as a lodestar for a wayward scientific community. In a few weeks, Barbacid will march his growing staff at the National Cancer Research Center (CNIO) from temporary quarters into a new $32 million facility in the heart of Madrid. Supporters commend Barbacid for putting together an impressive team that, they say, will anchor CNIO in the world's firmament of stellar cancer centers. Others, however, complain that CNIO has had an unfair advantage in winning government support and worry that it could devour scarce resources.

Barbacid built his reputation at the U.S. National Cancer Institute (NCI) branch in Frederick, Maryland, where in 1982 he led one of three teams that independently reported the first isolation of a human oncogene. Promised a free hand in creating Spain's own NCI, Barbacid left a management position at the drug giant Bristol-Myers Squibb and moved back to his birthplace.

Once home, Barbacid lured back several top Spanish researchers from elsewhere in Europe. Last year, for instance, he recruited Luis Serrano, head of the Department of Structural Biology and Biocomputation at the European Molecular Biology Laboratory in Heidelberg, Germany, to start a similar department at CNIO that will focus on drug design. CNIO now employs 130 scientific staff members, a figure that will swell to 450 after the move.

The new center starts life with a silver spoon. Among its high-tech accoutrements, CNIO can generate its own DNA chips, each studded with more than 7000 genes, that researchers will use to study how to design treatments based on tumor gene expression patterns. CNIO will also maintain the National Tumor Bank Network, a young project that so far has accumulated a stockpile of 3000 tumor tissue samples.

Although researchers are pleased at the new peak on their country's research landscape, some are bothered by the shortcuts taken to get there. The center was conceived without input from the scientific community or from Parliament, says medical oncologist Francisco Real of the Municipal Institute of Biomedical Research in Barcelona, and Barbacid himself boasts that Prime Minister José Maria Aznar has personally guaranteed CNIO's progress free of stumbling blocks.

Waiting game. Mariano Barbacid and his team are weeks away from moving into their new National Cancer Research Center.

CREDITS: CNIO

The health minister, Celia Villalobos, persuaded a trade group representing 300 drug companies to donate $26 million a year from 2001 to 2004 to help fund, among other projects, CNIO and a second new facility, the Spanish Cardiovascular Research Center. In return, says molecular biologist Pere Puigdoménech, director of Barcelona's Molecular Biology Institute, the government pledged not to cap drug prices over the next few years.

The government has promised to foot 60% of CNIO's $28 million annual budget —a hefty share of the $140 million that Spain spends each year on biomedical research. Most of the rest, says Barbacid, will come from competing successfully for public grants. However, some researchers outside Madrid feel they are operating at a handicap. "Our capacity to compete with him will always be lower," says oncologist Josep Baselga of the Hospital Vall d'Hebrón in Barcelona. For that reason, Baselga argues, Barbacid has a responsibility to Spain's cancer research community at large. Acknowledging that debt, Barbacid says he hopes several more topflight cancer centers will be built outside Madrid to even out the playing field. **–XAVIER BOSCH**

Xavier Bosch is a science writer in Barcelona, Spain.

NEUROSCIENCE

Neurons Weigh Options, Come to a Decision

Some decisions you can make in a snap. For others, you have to weigh the options and mull them over for a while. Monkeys in a new study wrestled with the latter type of task while researchers measured a sequence of neural activities involved in making such a decision.

Previously, neuroscientists had observed operations necessary for some types of decision-making. For instance, they can monitor neurons encoding sensory information, comparing stimuli, and preparing commands to move. In the 14 March issue of *Neuron*, a team reports tracking a crucial step: neurons' ability to keep a trace of recent events in memory while making a comparison. Ranulfo Romo and colleagues at the National Autonomous University of Mexico in Mexico City observed the complete unfolding of a decision-making process as reflected by the activities of neurons in a brain region called the medial premotor cortex (MPC).

"It's the first time somebody has done that," says Michael Shadlen of the University of Washington, Seattle. "To make a comparison you have to hold the first stimulus in memory somehow, and this [study] involves this very special step."

The MPC is primarily involved in preparing body movements, but Romo and other researchers have suggested that it is also involved in sensory processing and is capable of holding fleeting memories. Romo and his colleagues suspected that this combination of powers would enable the MPC to participate in making decisions. To test this idea, the researchers applied a vibration to monkeys' fingertips for half a second using a pencillike probe. They waited 1 to 3 seconds and then applied a second vibration at a different frequency. The animals learned to press a button to indicate which of the vibration frequencies was higher, and researchers tracked the firing of single neurons in the trained monkeys' MPCs as the animals mulled over which button to push.