nents of the new institute point out that an office lacks the grantmaking powers of a center or an institute, and the director has a relatively free hand in setting its budget.

Bryan said that he left NIH in large part out of frustration with the roadblocks that its structure posed to imaging research. He predicted that OB3 "will have to do what I did—pass the hat" among other institutes to obtain adequate funding. The current NIH structure also forces scientists to "artificially tailor their proposals to create the appearance of disease- or organ-specific research," says Bryan. Even then, he says, institutes may well "recast the research to fit their own missions."

Having an institute will allow imaging and bioengineering researchers to chart their own course, proponents argue. "Cancer people have no interest in talking to the lung people" about their findings, says Reed Dunnick, chair of radiology at the University of Michigan and a former NIH researcher, who also testified before the Commerce panel. "Nothing short of an institute will be effective in stimulating and coordinating biomedical research to the extent that is needed."

Yet the need for improved coordination is exactly why Varmus opposes the new institute. Before he left in December to become president of Memorial Sloan-Kettering Cancer Center in New York City, Varmus proposed a dramatic overhaul that would collapse NIH into a half-dozen institutes of similar size organized around major research themes. "The proliferation of institutes is hampering the overall function of NIH," he says. "Everyone wants an institute, and NIH has become too cumbersome for any director to manage."

Yet Varmus sees no sign that the trend toward disaggregation is abating. He predicts that, within 5 years, the residents of the new institute will demand a divorce into separate quarters for radiologists and bioengineers. And he guesses that, even if the bill fails this year, it will probably pass in the next Congress. "Once the train has left the station," he says, "there's no turning back."

–KATHY FISHER

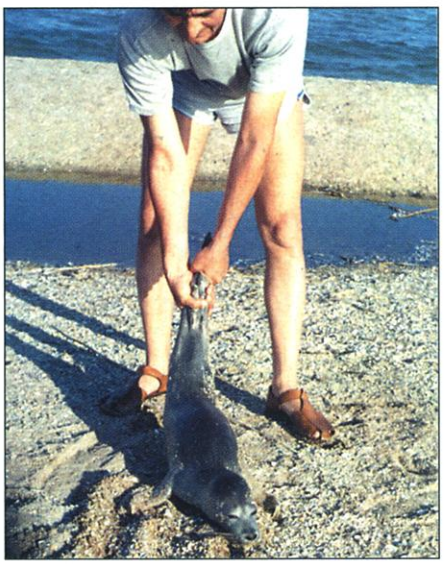
Kathy Fisher is a free-lance writer in Alexandria, VA.

VIROLOGY

Canine Virus Blamed in Caspian Seal Deaths

Canine distemper virus (CDV) has been identified as the most likely cause of a die-off of thousands of seals in the Caspian Sea earlier this year. Although the findings by two independent research groups allay fears of a threat to humans, they heighten concerns about the survival of the imperiled species.

Dead and dying seals began washing ashore in mid-April near the mouth of the Ural River in Kazakhstan, one of five countries bordering the world's largest landlocked sea. Normally shy, the small, mottled-gray seals would swim up to boats, rub their noses against the hull, and bark oddly, as if gasping for air, says Anatoly Beklemishev, a molecular biologist with the State Research Center of Virology and Biotechnology (VECTOR) near Novosibirsk, Russia. The first victims were pups, but as the die-off accelerated, the disease began to claim adults, too. Fearing that a presumed pathogen might be transmissible to people, Kazakhstan dispatched soldiers in body suits and gas masks to collect carcasses for incineration.



Grim day at the beach. Russian scientist prepares to take tissue sample from ailing seal.

Environmental groups immediately pointed a finger at oil companies in the region that were operating the Tengiz offshore oil field and exploring the Kashagan field. They claimed that sulfur dioxide discharges were corroding the animals' lungs. In June, Kazakhstan's environment minister asserted that pollution from the oil fields and pesticides were degrading the seals' health, citing recent studies showing high levels of DDT, an organochloride pesticide, in Caspian seal blubber. But the companies have denied the charges, and scientists say that DDT alone could not account for the seal deaths despite the fact that organochlorides have been implicated in lowered immune function in seals.

Working with tissue samples from 16 seals, a team led by Seamus Kennedy of the Department of Agriculture and Rural Development in Belfast, U.K., found lung tissue and epithelial cells riddled with microscopic lesions characteristic of morbillivirus infection—the viral group that includes CDV and a pathogen recently discovered in seals, phocine distemper virus. The researchers nailed canine distemper using a polymerase chain reaction (PCR) test specific for the

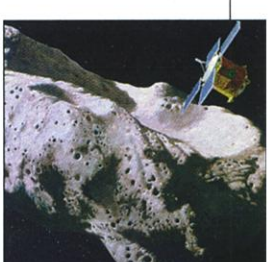
CREDITS: (TOP TO BOTTOM) VECTOR; NASA

ScienceScope

Sue Them All! There's a surprise twist in a long-expected claim for damages filed this week in the death of Jesse Gelsinger, an 18-year-old volunteer in a gene therapy trial. Paul Gelsinger, Jesse's father, seeks unspecified compensation from the University of Pennsylvania (which hosted the trial), the director of Penn's Institute for Human Gene Therapy, several clinicians, and a biotech firm. But the suit, filed in Pennsylvania state court, also names a prominent ethicist at Penn, Arthur Caplan, who advised the researchers.

Gelsinger's attorney, Alan Milstein of Camden, New Jersey, says that Caplan was named because he helped to shape the trial and the consent document that Gelsinger signed. But Caplan says his involvement was purely informal. "It's standard in such cases to name as many people as possible and let judges and juries sort it out," Caplan notes, adding, "I worry that this may intimidate bioethicists from talking to their colleagues." Penn has already acknowledged "weaknesses" in its oversight of the trial, but says they "did not contribute to Jesse's death." The university is negotiating with Gelsinger on a settlement.

The End Is NEAR NASA officials have told controllers of the NEAR-Shoemaker spacecraft that they can send their charge on a suicidal plunge to the surface of asteroid Eros. Running short on fuel and money, the $125 million craft will execute a "controlled descent" to the surface on 12 February after spending a year orbiting Eros. In return for obtaining the most detailed pictures ever of a celestial body other than Earth's moon (see pp. 2085–2104 for the latest from Eros), mission scientists will follow the lead of Lunar Prospector, which was intentionally crashed into the moon last year in a search for water deposits.



Never designed to touch down anywhere, NEAR-Shoemaker will be pulled into a final embrace with the 34-kilometer-long asteroid just before Valentine's Day, hitting the surface at the speed of a brisk walk. Controllers will listen for a day or two for any word of how the "landing" went, but "there is nothing planned after that," says mission scientist Andrew Cheng of Johns Hopkins University's Applied Physics Laboratory in Laurel, Maryland, where the spacecraft was built and is now controlled.

SPACE SCIENCE

Europe Set to Work on Hubble's Replacement

NASA scientists and engineers working on the Next Generation Space Telescope (NGST) got a boost from across the Atlantic last week. On 15 September in Paris, the European Space Agency's (ESA's) top science advisory committee recommended that the agency become a major partner in the project. The recommendation puts NGST—along with a handful of other missions the committee also endorsed last week—one short step away from officially becoming part of Europe's space program.

"We couldn't be happier," says Bernard Seery, NGST project manager at NASA's Goddard Space Flight Center in Greenbelt, Maryland. ESA's involvement is "critical to NASA's being able to achieve the objectives of NGST," agrees Rick Howard, NGST's project executive at NASA headquarters in Washington, D.C. In the past, funding problems have threatened to curtail European participation in the space telescope (*Science*, 31 January 1997, p. 606). But now, says ESA's science director, Roger Bonnet, "it is clear that both the Americans and the Europeans are very keen on this mission."

The NGST, an 8-meter optical and infrared telescope scheduled to be launched around 2008, is on NASA's drawing board as a replacement for the aging Hubble Space Telescope. ESA's contribution would consist of a Near Infrared Multi-Object Spectrograph, an instrument for measuring the distance to remote galaxies, and a midinfrared camera-spectrometer to be built by several European countries. The agency will also help construct and operate the spacecraft itself.

Such active participation is a "must for astronomy in Europe," as it will secure European access to NGST, says Giovanni Bignami, science director of the Italian Space Agency. ESA plans to spend 180 million euros (about $150 million) on the telescope, but individual countries are expected to chip in additional money, Bignami says. The 180-million-euro figure is the maximum that ESA rules allow the agency to spend on any of its "fleximissions"—projects that the agency develops simultaneously and only later schedules for launch. ESA introduced fleximissions a year ago as a cost-cutting measure (*Science*, 1 October 1999, p. 21).

Along with the NGST partnership, three other fleximissions won approval from ESA's Space Science Advisory Committee (SSAC) in Paris. LISA, another NASA collaboration, is an orbiting laser interferometer for detecting gravity waves. Solar Orbiter will study the sun from a close-in orbit. Eddington, a satellite designed to search for extrasolar planets, is a "reserve mission" to be launched if future funding and the schedules of NGST and LISA permit. Two other fleximission candidates—MASTER, a planned study of Mars and asteroids, and STORMS, a satellite designed to monitor storms in Earth's magnetosphere—were turned down but may still win approval later. In addition, the SSAC selected the next two "cornerstone missions" in its Horizons 2000 science program: Bepi-Colombo, a spacecraft that will orbit Mercury, and GAIA, a mission to determine the positions of stars with high precision. The projects, budgeted at 550 million euros (about $470 million) each, are scheduled to be launched in 2009 and 2012. All the proposals still need the go-ahead from ESA's Science Program Committee, which will meet on 11 and 12 October. In the past, the committee—made up of representatives of European governments—has generally approved projects recommended by the SSAC.

Hot prospect. Solar Orbiter is one of six missions a European Space Agency panel approved last week.

CREDITS: ESA

—ALEXANDER HELLEMANS

Alexander Hellemans writes from Naples, Italy.

EUROPEAN SCIENCE

Research Behemoth Slated for Overhaul

BRUSSELS—Disaffection with the European Union's (E.U.'s) flagship research effort has found a sympathetic ear in the program's upper echelons. Last week, the E.U.'s top two research officials said they are pushing for big changes in the successor to Europe's 5-year, $17 billion Framework 5, including stronger efforts to coordinate research across the conti-

ScienceScope

Attractive Facility Their darling faces no competition, but congressional supporters of the National High Magnetic Field Laboratory in Tallahassee, Florida, are pulling out all the stops to win another 5-year grant from the National Science Foundation (NSF). Last week a Senate spending panel dropped a heavy hint favoring renewal, exploding a normally secret review process.

"The committee strongly supports the laboratory and hopes that the Foundation continues its support," lawmakers wrote last week in a bill that sets the agency's 2001 budget. Although the bill notes that NSF is reviewing the request this fall, a Senate aide says the panel wasn't trying to "influence the decision. But it's a popular project." And lab director Jack Crow says he "had nothing to do with this," although he has encouraged other scientists to write legislators on behalf of NSF's budget because "if NSF does poorly, then I know what will happen to us."

The lab, created in 1990, is asking for a 30% hike in its current 5-year, $88 million grant to accommodate a 60% growth in users. "It's an incredible facility," says physicist Chuck Agosta of Clark University in Worcester, Massachusetts. Agosta heads the lab's user group, which has lobbied for more funding. "But it's a political entity, too," he adds.

Genome Giveaway Does the human genome sell magazines? *Prospect*, a British monthly for intellectuals, thinks genes are so marketable that it has pasted a CD-ROM of the entire "rough draft" onto the cover of its current issue, out this week.

"This is not a scientific publication.... It's just a gimmick," says Tim Hubbard, head of human genome analysis at the Sanger Centre in Hinxton, U.K., one of the world's top DNA sequencing institutions. At the magazine's request, Hubbard helped squeeze the data onto a single CD-ROM and created browsing software that allows users to "click on a chromosome and jump to that bit of DNA," he says. The CD-ROM also contains information on the provisional identification of 10,000 human genes.

Prospect marketing chief Hugh MacLeman, who came up with the idea, says the magazine wasn't aiming for a scoop. "We wanted to get [the genome project] into the public sphere," he says, because "people who don't work in science have little idea about what has been achieved. It may also help sell more copies of *Prospect*."

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