RANDOM SAMPLES

edited by LISA SEACHRIST

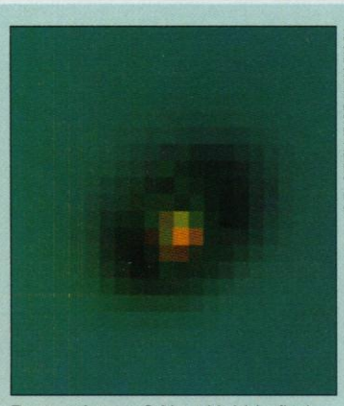
Rosenberg Regains Funds

National Institutes of Health (NIH) cancer researcher Steven Rosenberg last week won back $275,000 from an NIH advisory panel that last year axed the funds from his controversial gene therapy trials. The money, however, will fund research on new, non–gene therapy treatments.

The National Cancer Institute Division of Cancer Treatment's Board of Scientific Counselors originally withdrew the funds when Rosenberg was unable to prove that his gene therapy was working (*Science*, 5 March 1993, p. 1391). Although board members say they still have concerns about those experiments, Rosenberg presented promising data to them last week from non–gene therapy research that convinced them to release the funds.

Rosenberg reported that his team has identified, cloned, and sequenced a gene coding for a protein that helps the immune system recognize melanoma tumors. Researchers have known that the immune system sometimes attacks and destroys melanomas, but were mystified by how some immune cells appear to be able to distinguish tumors from normal tissue. With the tumor-specific antigen, called Melanoma Antigen Recognized by T Cells-1 (MART-1), Rosenberg hopes his team has found a way to take standard lymphocytes from a patient's blood and selectively grow the ones that are most likely to home in on tumors. This is a different tack from his gene therapy work, which involved modifying cells called Tumor Infiltrating Lymphocytes (TIL) to secrete a tumor-killing chemical. But he has not yet shown the board data demonstrating that those modified TILs attack tumors in patients.

Rosenberg says that lymphocytes selected and sensitized to the new tumor antigen appear to be "50 to 100 times more potent than TIL in vitro" in this respect. The board released the money to allow Rosenberg to screen and grow enough of the lymphocytes to treat 16 patients over the next year.



C.R. O'DELL/RICE UNIV./NASA

Proto-planets? New Hubble find.

Hubble Finds Planetary Cradles

The flood of data from the repaired Hubble Space Telescope continues to rush in, and NASA has been quick to tell the world. Last week, C. Robert O'Dell of Rice University was the latest to brief the press with new images of young stars surrounded by disks of gas and dust that astronomers believe can become planets.

O'Dell and colleague Zheng Wen of the University of Kentucky analyzed pictures of the Orion Nebula, a massive star-forming cloud of gas 1500 light-years away from Earth. In 1992, O'Dell used Hubble to observe Orion and spotted dusty disks, which he dubbed proplyds. The new, sharper pictures provide a clearer view of the objects and should dispel lingering suspicions that proplyds are shaped like shells, not planet-forming disks, says O'Dell. He also notes that at least 56 of 110 stars surveyed in the nebula have these proplyds, a ratio that jibes well with observations made of other star-forming regions.

Orion provides a unique opportunity to study such disks, say astronomers, since a few hot stars flood the nebula with ultraviolet photons that ionize gas and set it glowing. These stars "allow these disks to be seen in a completely unanticipated way," says Suzan Edwards of Smith College. For example, in one Hubble photo (above) the dark silhouette of an elliptical disk around a cool star is visible against the blue background of the glowing nebula.

By measuring the light filtering through the dust, astronomers estimate the disk has a minimum of seven terrestrial masses. With images like this, says O'Dell, "you can start to do physics."

Money for Whistleblower

For Russian whistleblower and chemist Vil Mirzayanov, the ideological battle may be over but the financial war has just begun. Three months after the Russian government dropped the charges that Mirzayanov revealed state secrets about chemical-weapons research, the chemist won a 30-million ruble judgment against the government on the grounds that he was prosecuted unjustly.

Mirzayanov's saga began in October 1992, when the Soviet Security Ministry (KGB) indicted him for revealing secret information about a nerve gas development program at his former workplace—the State Union Scientific Research Institute for Organic Chemistry and Technology (SIOCT) (*Science*, 25 February, p. 1083). Mirzayanov was arrested after detailing the program in Russian newspapers and to the *Baltimore Sun*.

Last January, the Russian government held a 3-week-long closed trial during which it jailed the chemist. No one is saying what happened behind closed doors, but the result was that the three-judge panel kicked the case back to Russian prosecutors, who dropped the charges on 11 March.

Last month, Mirzayanov filed a suit in Moscow's Perovskii Municipal Court seeking 40 million rubles ($22,000) as compensation for suffering inflicted by the KGB interrogations and his imprisonment. Earlier this month, the Court ordered the Russian Procurator's Office (similar to the U.S. Attorney General's office) to pay Mirzayanov 20 million rubles and SIOCT to pay him 10 million rubles. As *Science* went to press, observers expected the government to appeal the verdict. But it wasn't all bad news for the government: The Court absolved the KGB's successor, Russia's Security Ministry, of any liability in the case.

NIH Funding

Although Congress won't be as generous to biomedical research as the President wanted to be in 1995, the legislators are starting to shape a budget that won't hurt much, either. The first vote in a long season of bill writing—taken on 14 June by the House appropriations subcommittee for Labor and Health and Human Services—would give the National Institutes of Health (NIH) an overall increase of about 3.5% next year. This is less than the increase the administra-

1995 NIH Funding ($ millions)

Institute	Admin. request	House subcommittee	Increase over 1994
NCI	1968	1919	(3%)
NHLBI	1267	1260	(3%)
NIDR	164	163	(3%)
NIDDK	732	727	(3%)
NINDS	630	627	(3%)
NIAID	543	536	(3%)
NIGMS	882	877	(3%)
NICHD	517	513	(3%)
NEI	292	290	(3%)
NIEHS	268	266	(3%)
NIA	434	431	(3%)
NIAMS	228	227	(3%)
NIDCD	167	166	(3%)
NINR	48	48	(3%)
NIAAA	183	181	(3%)
NIDA	292	290	(3%)
NIMH	545	542	(3%)
NCRR	286	295	(9%)
NCHGR	152	152	(20%)
FIC	14	15	(19%)
NLM	135	123	(7%)
OD	234	220	(8%)
OAR	1379	1338	(3%)

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tion sought (4.9%), but will keep NIH abreast of inflation. If Congress follows the subcommittee's lead, most NIH institutes will receive an increase of only 3%. A few—such as the National Center for Human Genome Research, which benefits from a 20% increase this vote—may get special treatment. Staffers say that subcommittee chairman Neal Smith (D–IA) wants the genome project to grow rapidly.

There was also good news for universities. The subcommittee rejected an administration money-saving proposal for a "pause" that would withhold indirect cost payments greater than $10 million per year per institution.

Flemish Biotech Plans Draw Fire

Fighting has erupted again over the blood-red poppy fields of Flanders, scene of some of the most horrific carnage of World War I. This time, however, it's not lives and territory that are at risk but plans by Flemish premier Luc Van Den Brande to make the Belgian region a world leader in biotechnology. He is urging the Flemish government to allocate some $130 million over the next 5 years to meet that goal.

Far from causing universal celebration among Flemish biologists, however, Van Den Brande's proposal has generated protests from biologists in Brussels and Antwerp. The reason? The lion's share of the new money is earmarked for the universities of Ghent and Leuven. University of Brussels immunologist Raymond Hamers claims the proposal will lure most of Flanders' young biologists to Ghent and Leuven, damaging groups elsewhere.

Van Den Brande plans to use two thirds of the money to create a Flemish Institute of Biotechnology—a confederation of groups led by transgenic plant pioneer Marc Van Montagu and molecular biologist Water Fiers in Ghent and human geneticist Herman Van Den Berghe and thrombologist Désiré Collen in Leuven. The remaining funds would support a handful of "satellite groups" throughout Flanders and be used to help bring any discoveries to market. The proposal's critics, however, want to fund a wider network of labs and are lobbying hard to get Flanders' council of ministers to alter the proposal.

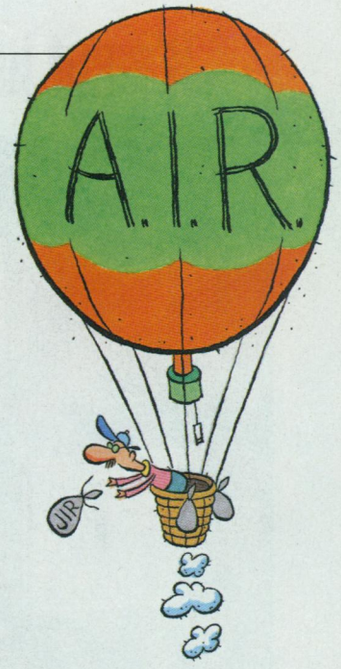
The four scientists selected to lead the project claim critics are missing the point. The ultimate goal—boosting industry—will best be achieved by concentrating resources on Flanders' top biotech research groups, says Van Montagu. "If it were watered down, it would yield very few tangible results," agrees André Van De Voorde, research director of the Ghent-area company Innogenetics.

So far, it's unclear what line Flanders' ministers will take when they debate the proposal next month. But some researchers are already urging a cease-fire—just in case the politicians decide to redirect the money to some other, less fractious group.

Mutiny on the Joke Journal

The question is an obvious one. Is a magazine devoted to "irreproducible" research itself irreplaceable? According to Marc Abrahams, the answer is no.

Abrahams is the *former* editor of the popular monthly science humor magazine *Journal of Irreproducible Results* (*JIR*). He, the magazine's staff, and its regular contributors, including a number of Nobel Laureates, have left *JIR* to form a new humor publication, the *Annals of Improbable Research* (*AIR*). The original founder of *JIR*, virologist Alex Kohn, has also joined the exodus: He will be chairman of the editorial board and even coined the new name. Abrahams says



everyone is excited about being called *AIR*heads.

Those close to the magazine say the surprise move stems from Abraham's dissatisfaction with support from *JIR* publisher Blackwell Scientific Publications. Abrahams had tried to buy the rights to *JIR* from its owner, George Scherr, but was never able to agree upon a satisfactory price. Blackwell will publish their last issue of *JIR* in July, but an official there says that Scherr plans to somehow continue the magazine; *AIR* is expected on newsstands in the fall. And Abrahams assures *JIR* readers that *AIR* will take up sponsorship of the annual IgNobel awards honoring science of the most dubious sorts.

One past *JIR* contributor can hardly wait for the new magazine. "I do think it's important to send the message that science is fun," says chemist and Nobel Laureate Dudley Herschbach of Harvard University. Herschbach told *Science* he's writing an article detailing his quantum interpretation of intelligence (The QI of IQ) that explains why smart people sometimes act dumb and how temperature fluctuations drive IQ up and down. When asked whether his theory meant global warming would make the world smarter, he said he would have to go do the calculations.

Darkness Receptor Cloned

The cure for jet lag came one step closer earlier this week thanks to a new finding from a team from Harvard and Yale University's Medical Schools. They've cloned the coding region of the receptor gene for melatonin, a hormone that helps ensure that daily rhythms like sleepiness and wakefulness stay in synch with the external cycle of night and day.

Chronobiologists Steven Reppert and Takashi Ebisawa report in Tuesday's issue of the *Proceedings of the National Academy of Sciences* the sequence of the melatonin receptor protein from the skin pigment cells of frogs. The nocturnally-secreted melatonin hormone governs yearly rhythms including breeding, molting, and antler growth as well as daily sleep cycles. Although researchers had known about melatonin's behavioral effects, until now chronobiologists had remained in the dark about its impact at the cellular level.

Reppert predicts that cloning the receptor will help illuminate the intracellular mechanisms by which melatonin trips daily and annual rhythms. The next step is to clone the receptor—a member of the G-protein linked receptor superfamily—from the mammalian body. Reppert plans to look in "the body clock"—a tiny knot of neurons at the base of the brain called the suprachiasmatic nucleus. If the body clock is destroyed, an animal will sleep, wake, breed, and shed its coat at random times during the year.

Not surprisingly, drug companies are wide-eyed about the possibilities. Because the receptor transmits the body's "physiological signal for darkness," chronobiologist Joseph Takahashi of Northwestern University in Evanston, Illinois, expects drug makers will use the receptor to screen for drugs to treat jet lag and sleep disorders. "We've been approached by several pharmaceutical companies," confirms Reppert.