BRAZIL

Society Seeks Legislative Aide Fellow

RIO DE JANEIRO—Brasilia is far from the scientific centers of Brazil, but as the nation's capital it is the nerve center of government. The country's scientific establishment wants to stimulate the central synapses with a fellowship program that would begin to provide legislators and federal officials with the scientific expertise they need to carry out the nation's business.

The new program is the brainchild of the Brazilian Society for the Advancement of Science (SBPC), a membership organization

Science search. SBPC's Glaci Zancan seeks a "special person" to work with national legislators.

CREDIT: BRAZILIAN SOCIETY FOR THE ADVANCEMENT OF SCIENCE

with a small staff based in São Paulo. Modeled after the long-running congressional science fellowship program run by the American Association for the Advancement of Science (which publishes *Science*), it's seen as a way to inject a scientific viewpoint into political debates without the taint of personal gain.

"Yes, it's lobbying, but in the right sense," explains Aldo Malavasi, SBPC's secretary-general, using a word that is traditionally associated here with under-the-table payoffs. "The idea is to provide legislators with information that will help them make decisions that involve aspects of science and technology," says Malavasi, a researcher at the Institute of Biosciences at the University of São Paulo.

The society is hoping to find a senior scientist willing to spend a year away from research, in Brasilia, responding to legislative queries and filing quarterly reports. The concept has been endorsed by the parliament's Commission on Science and Technology, says SBPC president Glaci Zancan, noting that the commission would like to have additional expertise on hand during debates over scientific and technical issues.

The society is offering a stipend of $2000 a month and a generous travel allowance. Zancan hopes to select someone next month and have that person on the job in March, but she acknowledges that it might not be easy to find the right candidate. "We are looking for a senior researcher with a great capacity for communicating science to legislators and the public," says Zancan, a researcher with the Department of Biochemistry and Molecular Biology at the Federal University of Paraná. "It will take a special person." **–CASSIO LEITE VIEIRA**

Cassio Leite Vieira is a science writer in Rio de Janeiro.

MEDICAL RESEARCH

NIH Kills Deal to Upgrade Heart Data

BOSTON—What was heralded as a new model of public-private collaboration in medical research suffered a surprise reversal last week. A controversial plan to use private capital to upgrade a valuable public database collapsed amid concerns that it would cede too much control to a for-profit company. Boston University (BU), which runs the venerable Framingham Heart Study, and the National Institutes of Health (NIH), which funds the 52-year-old effort, instead will try to put together a nonprofit consortium in the coming year to modernize the massive database.

The decision, announced in a 26 December joint letter to the study participants, deals a mortal blow to Framingham Genomic Medicine Inc. of Framingham, Massachusetts, which was raising money to organize, digitize, and analyze the Framingham data. The company planned to repackage and sell data to the pharmaceutical industry (*Science*, 30 June 2000, p. 2301). The NIH decision also is a disappointment to BU, which was instrumental in forming the company. But the participants knew it would be risky: "There just wasn't a precedent for doing this," says Aram Chobanian, dean of BU's medical school.

The study has monitored the health of more than 10,000 people in the small town of Framingham during the last half-century, and it offers a treasure trove of data for researchers. But much of it is stored in boxes or file cabinets. NIH has been reluctant to put up the millions of dollars needed to update and upgrade the database, so BU hit upon the idea of getting a private company to do it instead. Its proposal, announced to the Framingham participants in April, raised tough ethical issues, ranging from questions about how outside scientists would get access to the revamped data to whether personal medical data collected with public money should be sold to private companies.

Ultimately, negotiations between BU and the National Heart, Lung, and Blood Institute foundered on how to balance scientific access to the data with the company's proprietary interests. "BU was under some pressure from the company to reach an

ScienceScope

Defining Animals Biomedical science backers and animal-welfare groups are preparing for a congressional scuffle over research rodents. Last year, the U.S. Department of Agriculture moved to regulate the use of **laboratory rats, mice, and birds,** which constitute 95% of all research animals, after activists won a lawsuit. But Congress temporarily blocked the rules at the behest of some research groups, who said regulation would be too expensive (*Science*, 13 October 2000, p. 243). Animal-welfare groups are mobilizing against a push to permanently block the rules. Predicts one congressional aide: "The fur is going to fly."

Help Wanted France is looking for a **new director of research.** The main man behind the scenes at the French research ministry, geophysicist Vincent Courtillot, says he plans to quit soon. In a note to his staff, Courtillot explained that after nearly 4 years of "passion, joy, and stress," it was time to return to his Paris laboratory at the Institute of the Physics of the Globe.

Forecast: Cloudy More fights over food and climate are coming. Last month, an expert panel formed by the European Union and the U.S. recommended stricter regulation of **genetically modified (GM) foods,** and its report could help make GM food safety reviews mandatory, rather than voluntary, at the U.S. Food and Drug Administration. The group also urged labeling GM foods, but it's unlikely the Bush Administration will go along. Still, market forces may rule: Already, some U.S. grain processors are separating crops so they can sell non-GM products in Europe.

Meanwhile, the new Administration is also unlikely to support international efforts to put teeth into the Kyoto global warming treaty. Negotiations collapsed last year after the U.S. objected to demands by European nations to stiffen emissions-trading requirements.

Boosting Science In Japan, science planners will launch **a drive to raise government R&D spending** from 0.7% of gross domestic product to 1%. The increase, which an advisory group calculates would cost about $218 billion over 5 years, would bring Japan's public-sector spending more in line with that of the U.S. and Europe, says Hiroo Imura, a key government science adviser. The target has not been formally adopted by the government, says Imura, "but we're hopeful."

Contributors: The *Science* News staff

agreement which gave them close to exclusive access to the data," says Claude Lenfant, the institute director. "We could not go along with that." He says that the institute was willing to make concessions, such as giving the company exclusive rights to data for the first 2 years, but this proved insufficient. Company officials could not be reached for comment. "The rationale was good, but the methodology was not," says Jay Lander, a Framingham attorney and vice chair of Friends of Framingham Heart Study, which represents participants.

Now, the challenge is to find a new way to pay for the database. Lenfant envisions a cooperative agreement among companies, nonprofits, and other interested groups. He said he intends to draft a plan this year, after BU's contract to conduct the study is renewed in the next couple of months. But he insists that the raw data should be available to everyone, and that only refined data should be private property. Chobanian agrees that that approach is now the way to go. "It's a slower and less effective way," he adds, "but probably better in the long term." **–ANDREW LAWLER**

ASTROPHYSICS

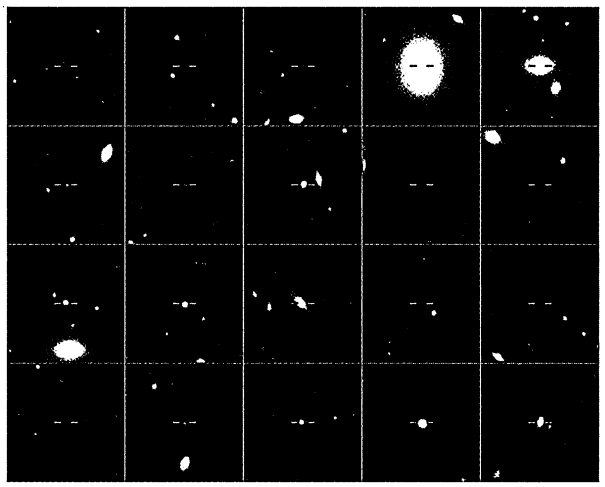
Ravenous Black Holes Never Say Diet

AUSTIN, TEXAS—As more and more observations confirm that supermassive black holes stud galactic centers like celestial Starbucks, astronomers are starting to puzzle out the dark giants' life cycles. Now, a pair of new methods for probing the secret hearts of galaxies, presented here at a recent meeting,* is overturning a widely held assumption that supermassive black holes stopped growing after forming in the early universe. And the new methods could soon enable astronomers to tell the entire life story of a black hole.

For years, astronomers could estimate the mass of a black hole only by laboriously clocking the motion of individual stars in the surrounding galaxy. Six months ago, however, teams led by astronomers Karl Gebhardt of the University of Texas, Austin, and Laura Ferrarese of Rutgers University in New Brunswick, New Jersey, made a crucial discovery: The mass of the black holes, as determined from individual star motions, is exactly proportional to the *overall* motion of the stars in the galaxy's central bulge.

"It is a perfect line," Ferrarese says. For nearby galaxies, astronomers can calculate that overall motion, or velocity dispersion, by studying the Doppler shift of light from the bulge. "It just takes an hour on a ground-based 4-meter telescope," Ferrarese says. Then the linear relationship makes it easy to weigh the black hole.

Unfortunately, the oldest, most active supermassive black holes lurk in host galaxies too far away for astronomers to measure their velocity dispersions. So Gebhardt has calibrated a previously suggested way to calculate mass at even greater distances, by studying the light from quasars—the unimaginably powerful energy fountains that issue from many galactic black holes.



Bright idea. Light from x-ray sources reveals black holes.

Gebhardt starts by creating a "reverberation map" that relates the daily fluctuations in a quasar's brightness to corresponding flickers in light reflected from clouds orbiting the black hole. From the time delays between the arrival of the quasar's light and the reflected cloud light, he calculates how far the clouds are from the quasar. Combining that distance with Doppler measurements of the reflected light tells how fast the clouds are orbiting the black hole. That velocity, in turn, reveals the black hole's mass.

When Gebhardt compared his reverberation-map estimates of black hole masses with velocity-dispersion measurements from several nearby galaxies, they agreed beautifully. "Right now, we are confident we can measure the black hole mass within a factor of 2," Gebhardt says, "and that should soon improve to an accuracy of 30% to 40%." Because the method works for even the most distant quasars, Gebhardt hopes to use it to map the entire growth history of supermassive black holes. "This opens a region far beyond the reach of stellar dynamics," Ferrarese agrees.

Not all the action is in the distant universe. As many as 10% of the black holes in neighboring galaxies are still gobbling up gas and putting on weight, a team of astronomers led by Amy Barger of the University of Hawaii, Manoa, reported here last week. To find the active black holes, Barger's team first pointed the Chandra X-ray Telescope at an empty patch of sky, where they found 20 new high-energy x-ray sources. Follow-up optical observations showed that the x-ray sources came from a larger group of hundreds of optically bright galaxies. Applying a variation of the mass-velocity dispersion relationship that says the optical luminosity of a galaxy is proportional to the black hole's mass, the Barger team concluded that the unusually bright nearby galaxies contain supermassive black holes.

To produce so many dust-penetrating x-rays, the resident black holes must be chowing down on galactic gas, the team reports. Extrapolating from the researchers' sample, Barger concludes that as many as 10% of all supermassive black holes are still active today.

"They have done a beautiful job," says astrophysicist Andy Fabian of the Institute of Astronomy in Cambridge, U.K. But 20 galaxies aren't enough to convince Fabian and others that so many supermassive black holes are still active, and eating, today. Barger's team expects to glean more examples from Chandra observations scheduled this year. **–MARK SINCELL**

Mark Sincell is a science writer in Houston.

INDIA

Scientist Restored to Top Agriculture Post

NEW DELHI—The Indian government's top agricultural scientist has regained his post after being removed during an inquiry into financial irregularities at his agency (*Science*, 24 November 2000, p. 1477). The move is being applauded by scientists, who felt that the government's action against R. S. Paroda, director-general of the Indian Council of Agricultural Research, was unwarranted.

Paroda was taken off the job on 16 November as part of a probe into the diversion of computers purchased on a World Bank–funded technology project. On 24 December, Agriculture Minister Nitish Kumar said that Paroda was being reinstated because he "is not related to the matters on which the inquiry was ordered."

Scientists had been particularly upset that the action came just before the annual Indian Science Congress, a megaevent held in early January over which Paroda is presiding. It was the first time that a secretary of any of the science departments had been removed so abruptly in a matter involving possible corruption, and also the first time the government had reversed itself so quickly. **–PALLAVA BAGLA**

CREDIT: A. J. BARGER AND L. L. COWIE, INSTITUTE FOR ASTRONOMY (UNIVERSITY OF HAWAII)/CHANDRA

* Texas Symposium on Relativistic Astrophysics, 10 to 15 December 2000.