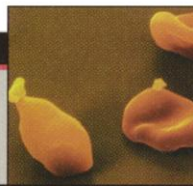


Keeping
bioweapons
at bay



Malaria and
agriculture:
deadly
combination?



Profile: The
man behind the
archives



NIH officials who would inherit the program are confused about the proposal. "The program has been very productive and accomplished many things, and it has in place the mechanisms to evaluate vaccines in underdeveloped countries," says Edmond Tramont, director of the Division of AIDS at the National Institute of Allergy and Infectious Diseases (NIAID). "The world cannot afford to let that collapse. The question is how to save it." (Tramont, who started the military's AIDS research program in 1985, took the NIH job last week in a move unrelated to the proposed shift of the program.)

NIAID director Anthony Fauci met with the current head of the program, Colonel Deborah Birs, to discuss the implications of the proposal. "It was unclear even to her what they were considering," says Fauci. "My experience with the Army's efforts in HIV/AIDS is that they have been and still are an important player in this whole scene. I think this is an important part of their mission."

Burke of Johns Hopkins, who regularly had to defend the military's AIDS research program from superiors who questioned its worth, says President George W. Bush's new Administration needs to be educated about the program's value. Indeed, Army Secretary White endorsed the proposal to eliminate it less than a month after he started his job on 31 May.

The education process began in earnest this week. On 17 July, as *Science* went to press, DOD was planning to hold a high-level meeting to air criticisms and support of the proposal. A final decision is expected by the end of the month. —JON COHEN

ASTRONOMY

Nearby Galaxy Breaks The Black Hole Chain

An invisible star has not been seen, and astronomers are taking notice.

According to a report published online this week by *Science* (www.sciencexpress.org), the center of a nearby spiral galaxy, M33, seems to have no black hole—unlike all of its larger, more bulging brothers. The finding may help scientists puzzle out the so-far-murky sequence of events by which galaxies assemble themselves.

Elsewhere in our celestial neighborhood, black holes rule. In the center of our own Milky Way galaxy, for example, squats a hungry black hole as massive as several million

suns. Although the supermassive black hole itself is invisible to telescopes, astronomers have figured out its position and mass by measuring the velocity of stars wheeling wildly around the monster.

And our galaxy is not the only one that has a black heart. Nearby Andromeda has a 50-million-solar-mass black hole at its center; indeed, astronomers have begun to believe that a supermassive black hole lies at the center of every bulging galaxy. "So far, in every [bulging] galaxy where people have looked, they find a supermassive black hole," says Laura Ferrarese, an astronomer at Rutgers University in New Brunswick, New Jersey, and a co-author of the report.

In general, the bigger the galaxy's bulge, the bigger the black hole at its center. However, nobody really knows how these black holes formed, or how they are connected with the bulges. Do the black holes help form the galactic bulges, or vice versa? Or do they form at the same time? And what about flat galaxies that lack bulges—do they harbor black holes as well?

To help clear up at least the last of those questions, Ferrarese and two colleagues pointed the Hubble Space Telescope at nearby M33, a small spiral galaxy about 2.5 million light-years away that doesn't have a bulge. With Hubble's Space Telescope Imaging Spectrograph, the team measured the light spectra from stars near the galaxy's center. By looking at how much the spectral lines are redshifted or blueshifted, the astronomers figured out how quickly the stars at the core of the galaxy were moving.

Sure enough, the stars very close to the center of the galaxy weren't moving much faster than those farther out, as one would expect if a supermassive black hole squatted in the center of the galaxy. If there is a black hole at all, it must be puny compared to its supermassive cousins. "How big a black hole can you hide in there?" asks Ferrarese. "About 3000 solar masses."

"In part, it answers the question of

whether black holes are absent in bulgeless galaxies," says Luis Ho, an astronomer at the Observatories of the Carnegie Institution of Washington in Pasadena, California. "It's nice. Now there's one datum, though we'd like to get a lot more." According to Ho, the lack of an apparent black hole at the

center of M33 implies that the supermassive black holes in the centers of galaxies form "during or after bulge formation."

Astronomer Karl Gebhardt of the University of Texas, Austin, whose team has analyzed the same Hubble data and come to the same conclusion about M33, agrees. "The process that forms the bulge might form the black hole," he says. If so, careful analysis of galaxies with different-sized bulges will give astronomers snapshots of supermassive black

holes at different points in their evolution. That information may enable scientists to figure out how supermassive black holes form, and why there's no invisible star at the center of M33.

—CHARLES SEIFE



Missing. Nearby galaxy M33 has no supermassive black hole at its center.

CLINICAL RESEARCH

Procedures Faulted in Fatal Asthma Trial

BALTIMORE, MARYLAND—Eight weeks ago, a young lab technician at Johns Hopkins University in Baltimore died after participating in a clinical study of asthma. The university delayed initial disclosure of the death of the volunteer—Ellen Roche, a 24-year-old employee of the Hopkins Asthma and Allergy Center, which ran the study (*Science*, 22 June, p. 2226)—but this week it made public a 32-page internal report on the case and answered a barrage of questions from the press.

The seven-member inquiry, chaired by cardiologist Lewis Becker, criticized some aspects of the study but found no major flaws. "We will never know the exact cause of her death," said Edward Miller, the CEO of Johns Hopkins Medicine and dean of the medical