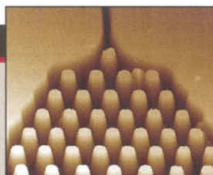


Letting viruses loose on bacteria



Cut-price sequencing



Virtual reality meets the genome



protons). Velkovska says that perhaps a pariton flying away from a collision somehow “knows from the beginning that it’s going to be a baryon.” But both admit that these are wild guesses at the moment.

James Thomas of Lawrence Berkeley National Laboratory in California, who works with the RHIC detector called STAR, says that data due to be collected in 2004 will reveal whether a similar pattern holds with heavier baryons and mesons, such as the lambda baryon and the K meson. The next RHIC run, however, will collide deuterium with gold and protons with protons—a lower energy regime than gold-on-gold collisions. If the anomaly disappears under these lower energy conditions, physicists will be much more confident that this effect and others stem from the formation of some sort of dense plasma, rather than from partons traversing the nucleus. —CHARLES SEIFE

NATIONAL SCIENCE FOUNDATION

White House Concerns Block Doubling Bill

Call it a case of double or nothing. Legislators thought they had worked out a deal to authorize a 5-year doubling of the National Science Foundation (NSF) budget, a cherished goal of science lobbyists, as part of a comprehensive bill covering myriad NSF programs. But a last-minute objection from the White House sent lawmakers home last week with nothing to show for their efforts. Angry legislators from both parties accuse the Office of Management and Budget (OMB) of sabotaging the long-awaited agreement, which lobbyists hope can be salvaged when Congress returns after the

5 November elections.

The money to run an agency comes from appropriations bills, most of which are still pending 1 month into the 2003 fiscal year. But authorizing legislation provides detailed and binding instructions on how an agency should operate. The House of Representatives passed its version of the NSF authorization bill (H.R. 4664) in June, a 3-year blueprint with annual increases intended to put NSF’s current budget on a doubling track. Last month two Senate panels approved a different version (S. 2817) that provided for a full doubling, to nearly \$10 billion, by 2007. In addition, the bills require NSF to publicly rank proposed major research facilities and give greater hiring and budget autonomy to the National Science Board, NSF’s presidentially appointed oversight body. NSF Director Rita Colwell had previously raised strong objections to both items (*Science*, 27 September, p. 2187).

Although the full Senate has yet to vote on the measure, on 10 October House and Senate negotiators resolved their remaining differences and prepared for a pro forma vote by each body on identical bills. But on 16 October Senator Jon Kyl (R-AZ) raised a parliamentary objection, blocking a vote in the Senate. Sources say that his “hold” reflects OMB’s concerns that a 5-year doubling is arbitrary—a point science adviser John Marburger has made repeatedly—and runs counter to the Administration’s long-term budget strategy. Congressional aides nevertheless feel that they were blindsided; they say the Administration never formally objected to the provisions. “It came up at 11:59 p.m.,” says one frustrated staffer. “And now it’s 12:01.”

Congress is now weighing an OMB counterproposal that shortens the bill to 3 years and removes the word “doubling” from its title. But although that might be acceptable to some members, it rankles others. “It’s a doubling bill,” says one aide. “And it’s not a random increase; we were very careful to spell out our priorities.”

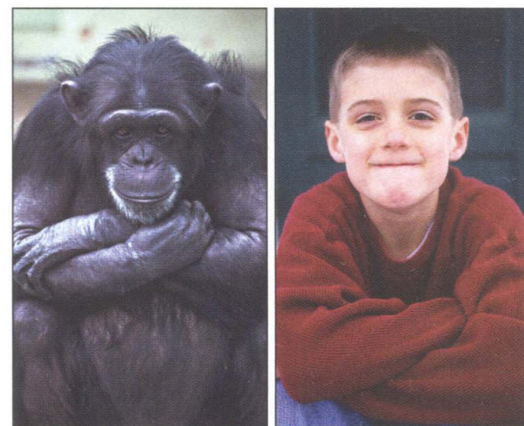
In fact, the 91-page bill discusses several NSF programs in great detail. The annual ranking of proposed research facilities, for example, is intended to clear up the community’s confusion over the status of various projects that the board has approved but for which NSF has not requested funding. And the science board provisions are meant to ensure that the NSF director does not wield undue influence over the board. “The board can

certainly live with the provisions in the authorization bill,” says board chair Warren Washington, a climate modeler at the National Center for Atmospheric Research in Boulder, Colorado. Washington says that the board is already developing a ranking of pending facilities projects and hopes to polish the list at its 20 November meeting. —JEFFREY MERVIS

EVOLUTIONARY GENETICS

Jumbled DNA Separates Chimps and Humans

BALTIMORE, MARYLAND—For almost 30 years, researchers have asserted that the DNA of humans and chimps is at least 98.5% identical. Now research reported here last week at the American Society for Human Genetics meeting suggests that the two primate

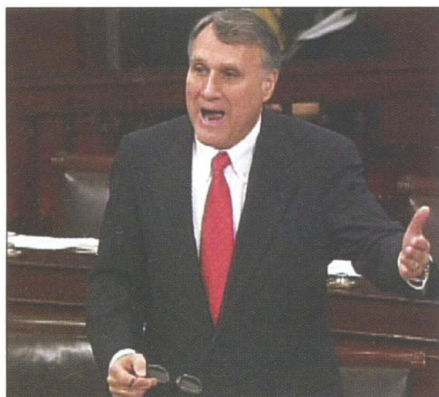


Loosened family ties. Gene-chip studies reveal previously unrecognized differences between these two species.

genomes might not be quite as similar after all. A closer look has uncovered nips and tucks in homologous sections of DNA that weren’t noticed in previous studies.

The results are quite exciting, says Michael Conneally, a human geneticist at Indiana University Medical Center in Indianapolis. With this research, “we can really find out so much more about evolution,” he predicts.

In the past 3 decades, biologists have used all sorts of biochemical methods to assess differences between genomes, particularly those of humans and chimps. As more DNA sequence became available over that time, many researchers began to look at short stretches of DNA and count the number of single bases that didn’t match the equivalent bases in another species—



Hold on. Senator Jon Kyl (R-AZ) is apparently in no hurry to double NSF’s budget.

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