

Gingrich's Daunting Exchange House Speaker Newt Gingrich, a Georgia Republican, is a science junkie. The onetime college history professor is fascinated by space odysseys and science fiction. He has trudged along on archaeological digs and littered dinosaur bones around his congressional digs, and in his latest book, *Lessons Learned the Hard Way* (Harper Collins, 1998), he touts "the enormous potential of new scientific discoveries and their accompanying technologies." Despite all that, science advocates point out that the first victim of Gingrich's Republican revolution in 1995 was the Office of Technology Assessment, a small agency dedicated to supplying Congress with nonpartisan data and analysis on science and technology issues (see PHYSICS TODAY, October 1995, page 53).

But two years later, Gingrich commissioned Representative Vernon Ehlers of Michigan, vice chairman of the House science committee and a former research physicist, to conduct a science policy study that, when completed this month, is expected to provide a sensible defense for government funding of academic science (PHYSICS TODAY, December 1997, page 49). Meanwhile, Gingrich watched senators grab the lead in proposing to double the Federal R&D budget. First, Phil Gramm, a Texas Republican who is still rankled by the demise of the unfinished Superconducting Super Collider in his home state, introduced the National Research Investment Act (S. 1305), which would double R&D funding in ten years. Backed by only 18 other senators, the bill languished. Into the void stepped Bill Frist, a Tennessee Republican, and John D. Rockefeller IV, a West Virginia Democrat, who serve together on the Senate science subcommittee. They concocted a substitute bill (S. 2217) that would double the expenditures by providing an annual increase of 2.5% above the inflation rate (presumed at 3% per year) for a dozen years.

Not to be outmaneuvered, Gingrich pledged in three commencement speeches delivered over three days in June, at Georgia Tech, Ohio University and the University of California, San Diego, to double science funding over eight years. His message was similar in each talk: "Investing in our future ought to be our second highest priority after winning the war on drugs, and we should shape our appropriations bills accordingly." This will need to be done, said Gingrich, "within a framework of priorities . . . so that we can create the ideas and jobs of the future, and lead the world in scientific research, economic productivity and the quality of human life." He called on scientists to come up with programs and projects that will help justify the financial outlays—an entreaty not much different from one delivered by Franklin Raines just before he left the job of director of the White House Office of Management and Budget (PHYSICS TODAY, July, page 46).

While Gingrich was in San Diego, he attended a reception at the Scripps Institution of Oceanography, where, after arriving an hour and a half late, he schmoozed for four hours with scientists on the deck of the director's office. The discussion ranged across disciplines—from molecular genetics to computational microbiology to paleontology to global climate change. As Mark Thiemens, an astrophysicist who chairs UCSD's chemistry and biochemistry department, recalled the lengthy conversation, "Gingrich said in different ways: 'If you want me to fight for your programs in Congress, you need to assert clearly what matters most on the forefront of science.'" Thiemens said, "I was surprised and impressed by his science literacy and his sincere interest in knowing more about the interdependence of various fields and the horizons of science. He seemed vitally engaged. I found it a daunting exchange."

"Gingrich's principal theme was that he was putting the

scientific community on notice to keep Congress and the agencies informed about the impending grand challenges," added Ed Frieman, Scripps's director emeritus. "He expects us to provide timely responses." Even before Gingrich's visit, UCSD and Scripps had organized the San Diego Science and Technology Council. Its main purpose is to devise ways and means to raise public confidence in research.

Westinghouse's Farewell to Physics The announcement on 26 June that Morrison Knudsen Corp and its partner, British Nuclear Fuels Ltd (BNFL), had agreed to buy the nuclear business of Westinghouse Electric, in a deal worth about \$1.2 billion, sounded the death knell of Westinghouse for anything to do with physics. Westinghouse was once a mighty conglomerate, the rival of General Electric in producing everything from light bulbs, radios and television sets, refrigerators, transformers and radar systems, up to nuclear reactors. It organized one of the first industrial research laboratories back in 1906—six years after GE, which by then had acquired Thomas Edison's lab in Menlo Park, New Jersey, along with his failing company.

After World War II, Westinghouse "attracted hundreds of fine physicists," recalled John K. Hulm, the company's former chief scientist and director of corporate research. Hulm, who got his PhD in physics at Cambridge University and taught at the University of Chicago before joining Westinghouse in 1954, said the company's physicists were deeply engaged in developing cathode-ray tubes and designing and building pressurized water reactors, mainly for Admiral Hyman Rickover's nuclear Navy. To historians, the firm is remembered for its association with Nikola Tesla, the eccentric Croatian inventor who was paid \$1 million by George Westinghouse for his alternating current patents. But to physicists, the company made its name in nuclear science and technology, having built the first nuclear power plant in the US at Shippingport, Pennsylvania, in 1957. Even today, Westinghouse technology accounts for one-third of the world's nuclear reactors.

Now that tradition will be gone—along with the company's name. After buying CBS in 1995, Westinghouse decided to adopt the name of the radio and TV network. By then, there was little left of its electrical operations. Westinghouse had sold its appliance business to White Consolidated in 1975. Throughout the 1980s, it had entered into joint ventures with foreign firms such as Asea Brown Boveri, Siemens and Mitsubishi Electric, and in 1994 it spun off its electrical distribution and controls business to Eaton Corp. In 1996, the company handed over its radar and defense electronics to Northrup Grumman. "The company was dismantled bit by bit, along with its great laboratory," Hulm lamented.

Nonetheless, it is ironic, observes Roland Schmitt, once GE's senior vice president for science and technology, that as CBS, Westinghouse still competes against GE, owner of rival broadcasting network, NBC.

But Senate Armed Services Committee chairman Strom Thurmond finds nothing funny about the impending sale. Thurmond is worried about the transfer of critical defense technologies to foreign firms and the implications of the sale for the Department of Energy's Savannah River nuclear production site, now managed by Westinghouse. He believes his committee should conduct hearings on the wisdom and legality of the transaction. In June, DOE selected Savannah River to provide mixed oxide (MOX) fuel fabrication and irradiation services for dealing with excess plutonium. BNFL is anticipating its acquisition of Westinghouse's nuclear operations and is already assembling a team to produce MOX. The team includes Babcock & Wilcox, the Bechtel Group and GE. **IRWIN GOODWIN ■**