Even related processes may be vulnerable to an attack by Cetus, such as a constant-temperature method of DNA amplification being developed by several companies.

There are, however, a few skeptics who argue that even if Cetus does prevail, it will find that PCR is not the golden egg the company expects it to be. Although it will clearly continue to be a key technique in research and in forensics, PCR might not turn out to be a diagnostic bonanza, partly because other methods are coming along that may provide stiff competition. According to Siegel, "The issue...in terms of human diagnostics is how fast can you develop an accurate but sensitive and user-friendly format to diagnose human diseases and genetic conditions. I do think there will be some competition in this area."

So, whatever the verdict, there will remain many unknowns about how Cetus will fare. Patent disputes cost millions, and Cetus, with austerity measures in place after its interleukin-2 debacle, is not the kind of financial giant that can afford to take on every challenger. The same could be said of many fledgling biotech companies, which is why so many eyes in the industry are now turned to San Francisco.

■ MARCIA BARINAGA

British Science Under the Ax—Again

British scientists, who have been squeezed by tight budgets for the past several years, got more bad news last week. The Science and Engineering Research Council (SERC), the chief source of funds for academic research, announced that it will slash the number of new grants it will fund next year by 50% and cut the number of studentships by 15%. These reductions are part of a plan to balance SERC's books in the face of spiralling cost increases and a budget that council chairman Sir Mark Richmond describes as "lousy."

SERC's problems arise primarily from larger than expected pay awards, which resulted in a projected shortfall of £40 million (about $76 million) in the 1991-92 financial year, which begins in April. And the government added insult to injury by giving the council a budget increase of only 3% for 1992-3—much below the rate of inflation, which is currently running at around 9%. Faced with these dismal prospects, SERC last year asked each of its four subject boards to identify savings of 10%, and the council last week announced where the ax would fall.

Some boards found the task relatively straightforward, though painful. The Engineering Board spends 85% of its budget on research grants and studentships (see table). SERC agreed that it should cut these by 10%.

The Science Board had more trouble. It agreed to postpone a planned European high-power laser, a decision that Richmond said suited the other European partners in the project. More significantly, it currently supports two important neutron sources, ISIS at the Rutherford Appleton Laboratory outside Oxford, and the Institut Laue Langevin in Grenoble, France. It cannot afford both, but it could not decide which to abandon. So it proposed a "thoroughgoing review" of the need for neutron factories in coming years. That will take the best part of a year, during which the combined costs of ISIS and ILL will be met by cutting grants and studentships within the science board.

The Astronomy and Planetary Science Board is in a somewhat different position from the other three boards as much of its money is tied up in long-term projects. The board will make its promised contributions to the 8-meter telescope proposed by the U.S. National Science Foundation, though it will delay payments for 2 years, and it will continue to participate in the SOHO/Cluster mission of the European Space Agency, a solar satellite due for launch in 1995. But it may not be able to contribute to many other planned projects. The international Polar Cap Radar, due to be built above the Arctic Circle in Spitzbergen, and the joint Anglo-German Gravitational Wave Observatory have been cut, and British contributions to a U.S.-ESA ultraviolet satellite called Lyman/FUSE and the Polar Platform Earth Observatory are in jeopardy.

Spectrum X, a Soviet-led mission to map the cosmos in wavelengths from far ultraviolet to hard x-rays due for launch in 1993, is also in doubt. The first component of the x-ray telescope, being built at Leicester University, arrived from the USSR at London's Heathrow airport last week on the day before the SERC council meeting. One council member quipped that it was a pity Iraqi terrorists had not blown the shipment up; that would have cured at least one of their financial headaches. Though SERC now has no money in its budget for Spectrum X, it will be politically difficult for Britain to pull out of the venture because it is the subject of an intergovernmental agreement.

Intergovernmental agreements have proved especially troublesome for the Nuclear Physics Board's efforts to find ways to cut its spending. Of its £80 million budget, £48.5 million goes to membership of CERN and another £11.5 million provides grant support for British scientists at CERN. "If you're paying £50-odd million to join the club, you've got to pay the money to play the game as well," explains Sandy Donnachie, chairman of the Nuclear Physics Board. The SERC council ruled out any changes in the board's dealings with CERN, which left just £20 million from which to find a cut of £8 million. Donnachie offered to sacrifice the world-renowned Nuclear Structure Facility at Daresbury, near Manchester, which costs about £7 million a year.

The SERC council decided not to accept the offer, for the time being. "The work being done by the nuclear structure facility is first class," said Richmond, a sentiment echoed in more than 500 letters received since news of the threatened closure leaked out 2 weeks ago. And, because SERC would have to make substantial severance payments to lay off workers at Daresbury, closure of the laboratory would save little over the next 2 or 3 years. Instead, the facility will continue to operate at least until 1992 while Richmond tries to extract additional funds from the government for nuclear physics. "He has a very good case," said Donnachie, "but it's also a very high risk strategy." Richmond denied he was taking a gamble by bankrolling the Daresbury lab for another year. The alternative, he pointed out, would be unthinkable: Nuclear Physics could "save £5 million almost instantly by not awarding grants."

■ JEREMY CHERFAS

HOW SERC SPENDS ITS FUNDS

BOARD	TOTAL BUDGET (million pounds)	DISTRIBUTION (% OF EACH BOARD'S TOTAL)				
		GRANTS	STUDENT-SHIPS	CENTERS	INTER-NATIONAL	OTHER
ASTRONOMY AND PLANETARY SCIENCE	73.2	20.3	2.7	37.1	39.0	1.3
ENGINEERING	123.8	62.5	23.3	9.0	0.0	5.2
NUCLEAR PHYSICS	78.0	8.7	2.0	26.6	62.2	0.5
SCIENCE	128.4	40.2	22.1	25.8	9.9	2.0

* each row may not add up to 100 because of rounding