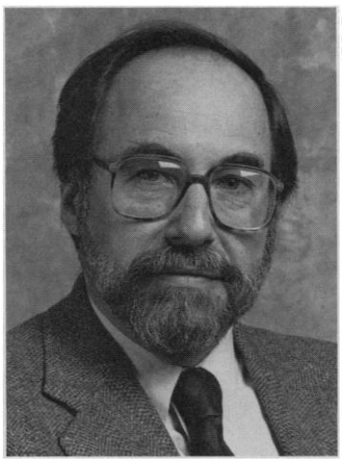
David Baltimore's Final Days

Trapped between an irate faculty and a stubborn board of trustees, the renowned molecular biologist became a figure out of Greek tragedy—complete with the flaw of hubris

DAVID BALTIMORE ACCEPTED THE PRESIDENCY of Rockefeller University with his eyes open. "I was certainly aware that I was walking into a situation where there was significant opposition," Baltimore said during an interview with *Science* on 25 November. But on that day, barely a week before he was to turn in his resignation, Baltimore adopted a confident and upbeat tone: He expressed optimism about the changes he had initiated at one of the country's premier—albeit troubled—biomedical research institutions. And he even offered an olive branch to critics on the university faculty who were about to make his position untenable. Remarkably, he sounded like someone settling in for the long haul, not a man who was under intense pressure and about to throw in the towel.



WHITEHEAD INSTITUTE

David Baltimore

"[When I was appointed] I felt there was enough support to carry forward the plans, to do what seemed necessary to do," he said in his airy office. "And that has turned out to be true. And I think that's more important than all those statements about how many people are on one side or the other. New people are coming to the campus. A tremendous amount of money has been raised; more will be raised. People are working together in a very effective effort. And we can talk about our differences, and perhaps that's as important as anything."

But for all the positive sentiments Baltimore expressed during that interview, the clouds that had been following him were gathering for a final storm. For by the end of the Thanksgiving weekend the 53-year-old Nobel laureate, who was born only a few yards off campus at New York Hospital and who earned his doctorate at Rockefeller in 1964, decided to give up on a job that a friend says was "his lifelong dream." His resignation was submitted on 2 December and accepted by the board of trustees the next day, ending the stormiest 2 years in Rockefeller's history.

It isn't easy to pick out a single factor or event that undid Baltimore. "Ill-starred" is the way Bruce S. McEwen, dean of graduate and postgraduate studies, describes Baltimore's tenure, despite his view that "David Baltimore was doing an excellent job as president." Many observers think that there was no single turning point, instead they see a process with some of the qualities of tragedy: a gradual deterioration of support over time because of a series of events, many avoidable, that led to an unavoidable resolution.

The Day Baltimore Won —and Lost

But underlying the entire tense history was a struggle between the board of trustees of Rockefeller and the university's elite senior faculty members, who form a kind of scientific oligarchy. Perhaps no single date exemplified that internecine conflict better than 17 October, a day of high drama that set in motion the final train of events leading to Baltimore's resignation. It was a day on which the beleaguered Rockefeller president won a great victory—and began to lose the war. In the morning, David Rockefeller, the university's powerful main benefactor, announced a $20-million gift to Rockefeller. The donation capped what university officials called the most successful fund-raising period in the institution's history. And it seemed to send an emphatic message to the outside world, for as he announced the gift, Rockefeller expressed "absolute confidence" in the university's president.

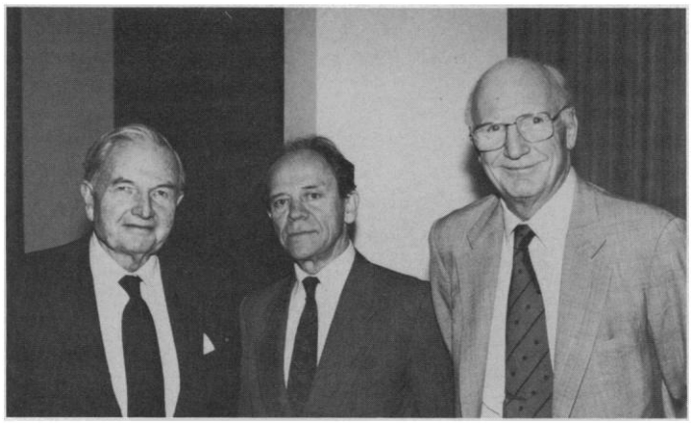
That afternoon, behind closed doors, Rockefeller and a group of his fellow board members endured another, and distinctly less pleasant, experience as a dozen Rockefeller professors delivered what one participant has called "a nearly unanimous vote of no confidence" in Baltimore. According to that same participant, who initially supported Baltimore but later joined those who opposed him, the 17 October meeting was "an extremely historical event in terms of its concreteness, its candor, and its concerns." Baltimore "had very little support....He had to be replaced." One trustee present at the meeting conceded the that board members were "stunned" by what they heard from the faculty.

Although it wasn't to boil over until October, the conflict between the board and some members of the university's faculty had been simmering since the very beginning of Baltimore's tenure. "For me, coming here is coming home," Baltimore had told the university community exactly 2 years earlier, on 17 October 1989, when he accepted the post. But it wasn't a happy home he was returning to. Many scientists within and outside the university agreed that the institution was in urgent need of reform. The university, it was said, had lost its sense of mission during the 10-year stewardship of Joshua Lederberg. There were deepening operating deficits, an aging senior faculty, and an absence of young blood: Not a single tenured professor had been hired from the outside since about 1983.

But at the time Baltimore was recruited, circumstances had combined to create a unique opportunity for institutional renewal. A new, 12-story lab building was due to be completed in 1992. Slots for 30 new full professors were projected over the next 15 years. And the board of trustees was committed to creating an alternative to Rockefeller's hierarchical, European-style academic structure, which had placed heavy emphasis on the power of senior lab chiefs and virtually excluded the possibility of junior lab chiefs obtaining tenure. Key members of the board thought Baltimore, who had started the Whitehead Institute for Biomedical Research in 1982 and built it into a powerhouse in molecular biology, was the ideal person to give the university new direction.

Even before he began to carry out his reforms, however, a significant number of the senior faculty, which numbers about 45, were convinced that David Baltimore was a less than ideal candidate—largely because of continuing controversy over Baltimore's handling of a flawed 1986 paper in *Cell*. According to faculty sources familiar with an informal poll conducted when his name first sur-

faced in September 1989, only a third of the senior faculty supported his candidacy. In fact, said Richard M. Furlaud, chairman of the board, the opposition was so strong that Baltimore "actually withdrew his candidacy because of it." But the board—and David Rockefeller—weren't giving up. Furlaud and Rockefeller flew to Cambridge to persuade him to change his mind. "Mr. Rockefeller said: 'Look, we still think you're the right person to do the job,'" recalls Furlaud. "And then he accepted [the role of candidate]."



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Power trio. *David Rockefeller, Torsten Wiesel, Richard Furlaud.*

The Baltimore Strategy

Baltimore replaced the retiring Lederberg on July 1, 1990. From the beginning, he dealt with the fiscal crisis (establishing a wage-and-salary freeze), emphasized molecular biology (especially in neurobiology), and moved aggressively to reward younger researchers at Rockefeller so that they would, in his words, develop "the kind of loyalty to the institution that can only develop in somebody whose career has been formed at the institution." To that end, he appointed or promoted about 45 junior faculty members, created an independent head of laboratory position for untenured faculty, and promoted seven junior researchers from within the university.

The reforms created what one young beneficiary, Elaine Tuomanen, named head of her own laboratory last February after 10 years at Rockefeller, termed "a general feeling of optimism, growth, and opportunity—that you can remain a part of what you build when you work here, and that's an important change in attitude." Vincent A. Fischetti, who became a tenured head of laboratory last year after 20 years on the junior faculty, told *Science*: "I think it's a real plus for trying to maintain really high-quality science at Rockefeller. In the past, it was very rare for a full professor to be promoted from within."

But not all junior faculty were so effusive about the reforms. Interviews by *Science* over the past month show a mixture of sentiment among the junior faculty, ranging from strong support to wary optimism to disenchantment over a two-tiered system in which a few junior faculty received internal promotions while most others faced prospects of advancement that were no better than they had been under the old regime.

Whatever the attitude of the junior faculty, it was clear that large elements of the senior faculty opposed Baltimore from the start. One of his detractors on the senior faculty told *Science* that Baltimore brought with him an attitude that was "not terribly sensitive to the university's past and its procedures." Others felt that he was so tainted by the fracas over the *Cell* paper (which ultimately engendered two university investigations, two NIH investigations, and Congressional hearings) that he would be unable to recruit top-drawer talent. Were the motives of the Rockefeller senior faculty pure? Baltimore's supporters have attempted to portray them as a group of aging researchers who exploited the controversy over the *Cell* paper to preserve their privileged position in Rockefeller's traditional structure.

But insiders point out that the senior faculty had already acknowledged the need for a reorganization of the university, particularly the move to give junior faculty more opportunity for promotion, more independence, and more voice in policy decisions. All were under way prior to Baltimore's arrival—and all substantive reforms won essentially unanimous approval in the Academic Senate. Said one senior faculty member: "To portray this faculty as a bunch of old dying swans who have lost touch with modern biology is complete and utter nonsense. During Lederberg's presidency, many people wanted to come here, but we never had the authority to hire them. Nobody has been hired for the last 10 years, and the board of trustees is to be blamed for that."

The festering institutional standoff between disaffected senior faculty and members of the board of trustees continued from the day of Baltimore's appointment until 21 March, when a newspaper story set the final crisis of his tenure in motion. That was the day *The New York Times* reported on a second NIH investigation, which charged that a crucial experiment for the *Cell* paper relied on questionable data and that when the paper came under challenge, co-author Thereza Imanishi-Kari attempted to cover up problems by fabricating data. The draft report, prepared by the NIH's Office of Scientific Integrity and leaked to the press, placed Baltimore's name—as well as the university's—on page one of the *Times*, and many of the faculty members' worst fears seemed to be coming true. Not that Baltimore was found guilty of any fraud; in fact, during the entire investigation it was never suggested that he had committed scientific misconduct. But the NIH investigators termed his unyielding defense of the discredited paper "difficult to comprehend."

That defense yielded for the first time when Baltimore joined four of the six *Cell* authors in immediately retracting the paper, but the damage was done: The revelations sparked an avalanche of negative publicity about Rockefeller and its president. A straw poll of the senior faculty in the spring, according to two faculty sources, indicated that only one-third expressed support for Baltimore, suggesting that he had not recruited any faculty members to his defense at a time when uneasiness among the opposed and undecided was growing.

That uneasiness deepened during the summer and fall after an exchange of *Nature* letters between Baltimore and Paul Doty, professor emeritus of biochemistry at Harvard. Doty attempted to make Baltimore's behavior in the *Cell* affair a kind of test case for the ethical standards of American science. He suggested that Baltimore's handling of the paper represented an "egregious departure from the usual standards of carrying out and reporting research." He criticized Baltimore for not analyzing the "quality and sufficiency" of data prior to publication; for failing to respond to criticism by rechecking contested data and reporting the possibility of error; for organizing an attack on critics when the paper came under scrutiny; and for failing, "in a timely manner," to test the reproducibility of a disputed experiment.

Doty also criticized Baltimore for suggesting that it was up to others in the scientific community to establish the paper's validity. Doty said this stance reflected "not only a fundamental retreat from responsibility but, if it became accepted practice, would erode the way science works." In summary, Doty asked "the wider community" to determine if Baltimore had compromised generally accepted scientific standards—an embarrassing referendum for a sitting president of one of the country's leading research institutions.

On 5 September Baltimore fired back an "open letter to Paul Doty" that faculty sources say played a large role in swinging wavering senior faculty members against him.

Even though he had retracted the paper, Baltimore wrote that there was "much published evidence" that supported its conclusions. The data in the retracted paper "have proved more durable than the data in most papers," he wrote. And even though the paper had been retracted, he defended its "rigor and criticality" and argued that it, along with the rest of his work, "stood up to the toughest test of all, the test of history." As before, Baltimore seemed to imply that it was up to the scientific community—not the paper's authors—to establish its veracity.

In his pre-Thanksgiving interview with *Science*, Baltimore argued that his position had been widely misinterpreted—that he understands the responsibility of authors to respond to challenged papers. Yet the exchange in *Nature* had a telling effect. A Rockefeller professor recently gave a glum summation of how Baltimore's reply influenced the faculty. "He even retracted his retraction....That's what made the faculty upset. They said, 'We can't support those arguments.' No one can defend this position. He was saying 'The paper still stands up as well as any other in the literature.' Do people believe that?"

Calm before the storm. *Rockefeller University's 15-acre East Side Manhattan campus.*

Faculty morale worsened when three senior researchers departed. In August, biochemist Anthony Cerami took 13 scientists and the rest of his group to the Picower Institute for Medical Research in Manhasset, Long Island. In October Nobel laureate Gerald M. Edelman and neuroscientist Bruce A. Cunningham (a colleague in Edelman's Neurosciences Institute) announced they would transfer to the Scripps Research Institute in La Jolla, California, in the summer of 1992.

It was at this point, according to a senior faculty member, that the trustees asked Torsten Wiesel, de facto head of the faculty, to survey sentiment once again among Rockefeller's 44 tenured professors. Wiesel conducted a secret straw poll in early October, according to several faculty sources, and communicated the results to the board in writing: About 70% no longer supported Baltimore's presidency. (Wiesel, who has been named acting president, declined to return repeated phone calls from *Science* to confirm these details.)

The October Revolt

When the board got the poll results, a faculty source told *Science*, "Wiesel was asked to put together a group that represented the views of the faculty, those in favor of Baltimore and those against him." The meeting, requested by the trustees, was scheduled for the afternoon of 17 October in the Cohn Library. What took place has been described to *Science* by four faculty participants, all of whom requested anonymity, and two trustees. Most participants agreed that, with the exception of one sharp exchange, the meeting was, as one put it, "very calm, no anger, a carefully reasoned presentation."

Representing the faculty were 11 tenured professors and two junior faculty members. They were to provide a spectrum of views to the thirteen board members in attendance, including David Rockefeller and the two trustees said to be Baltimore's strongest advocates, board chairman Furlaud and P. Roy Vagelos, president and CEO of the pharmaceutical company Merck & Co. Inc. Only three faculty members expressed support for Baltimore, and in each instance the support was expressed with what were described as "reservations."

"What's very clear," said one faculty participant, "is that people who were initially Baltimore's supporters spoke out against him at this meeting. As we've gotten to know the full extent of his mishandling of the paper, and the statements that he made, even people who supported him felt these were damaging signs. I think the board was shocked by the extent of the discontent." Indeed, some of Baltimore's critics on the panel were as surprised as the trustees at the near-unanimity of opinion. "He [Wiesel] attempted, in a very straightforward and evenhanded manner, to get people who were strongly opposed, people who were neutral, and people who were strongly favorable," said a second faculty participant. But, the same person said, "During the course of the meeting, it became clear that no one was favorable."

Stanford University biochemist Paul Berg, a university trustee and a strong Baltimore supporter, who attended part of the presentation, confirmed that faculty members at the meeting expressed three main concerns: "One, the continuing ball-in-play on the *Cell* paper, and all of the negative publicity and the uncertainty about when it would end. That came through clearly. The second was whether Baltimore was so severely wounded that he would be incapable of recruiting new faculty to Rockefeller. The third thing was whether all of the hubbub of the *Cell* controversy, and the public aspects of it, would also poison his ability to raise money."

Yet 5 weeks later, in his 25 November interview, Baltimore, though conceding that "there was significant discontent" expressed at the meeting, sought to downplay the meeting's significance. It was merely one of "an ongoing series" of sessions the board was having with the faculty, he told *Science*. In spite of the discontent, he said, the board had decided that "overall, the university is moving in the right direction." Furthermore, Baltimore questioned whether the faculty group Wiesel had assembled was truly representative of the Rockefeller faculty (as did some members of the board).

Rather than bowing to his faculty opponents, Baltimore launched his own counterattack, arguing to the board that he had strong support among Rockefeller's junior faculty. Board chairman Furlaud confirms that Baltimore "encouraged" untenured junior faculty to contact trustees and express their support for his presidency. Following the 17 October meeting, pro-Baltimore junior faculty members took their own polls and held meetings in hopes of mobilizing support for their leader. The effort culminated on 21 November, when three junior faculty representatives met with the board's executive committee. *Science* repeatedly attempted to speak with the three junior faculty members who met with the board as well as those involved in organizing meetings of support, and all either refused to discuss the matter or failed to return repeated telephone calls.

Baltimore's tactics succeeded briefly. Faculty members learned on 22 November that the board, in a decision that appeared to dismiss the discontent expressed at the 17 October meeting, would continue to support Baltimore. But the strategy had an unintended negative consequence: Many of the senior faculty were disturbed by Baltimore's strategy of playing junior faculty against senior faculty. "That was the final blow," said a well-placed senior faculty member. "It polarized the faculty. We were upset that such pressure had been put on untenured junior faculty."

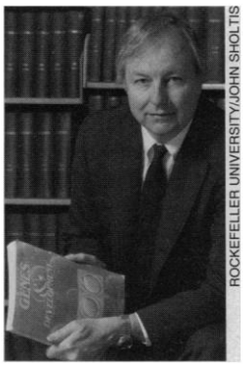
While the faculty was "fractionating," in the words of a senior faculty member, the board refused to budge. As late as 25 November, board chairman Furlaud reaffirmed to *Science* the trustees' unconditional sup-

port for Baltimore. The following day, in one-to-one meetings with about a dozen senior faculty members, Furlaud reportedly indicated that the board would not alter its support of Baltimore. According to one professor who met with Furlaud, the chairman said the board was "unanimously" behind Baltimore.

Endgame

It's not clear how much longer this standoff might have continued, but at one of the board-faculty meetings just before Thanksgiving came an event that may have tipped the scales: James E. Darnell Jr., vice president of academic affairs and a longtime member of the university faculty, told Furlaud he was thinking about resigning. "He said that Dr. Baltimore was losing some support among the faculty," Furlaud told *Science*, "and that's why he was thinking about resigning." Furlaud claims he did not know Darnell had in fact resigned until he saw Darnell's letter of resignation on the evening of 2 December; he said he believes Baltimore was unaware of Darnell's action when he himself decided to resign.

But Darnell's decision was common knowledge on the campus the day before Thanksgiving, and it clearly signaled the degree to which the controversy was splitting the campus. Darnell was someone special not only to the university but also to Baltimore. He had co-authored a molecular biology text with Baltimore and was known to be one of Baltimore's earliest and strongest advocates. Indeed, some Rockefeller insiders hypothesize that Darnell stepped down to put pressure on Baltimore and force him to resign before the university suffered further irreparable divisions over the issue. That theory could not be confirmed, since Darnell did not return repeated phone calls to discuss his resignation, which was accepted by the board of trustees along with Baltimore's on 3 December.



ROCKEFELLER UNIVERSITY/JOHN SHOLTIS

James Darnell

What lesson can be drawn from the story of David Baltimore's resignation? Asked what was the crucial element in the unfolding story, a former supporter on the Rockefeller faculty put it this way: "David refused to be contrite. He wouldn't admit that he made a mistake." A longtime friend and colleague of Baltimore's acknowledged the same flaw, but located the tragedy elsewhere. "I think it's tragic. I think it's a study in hypocrisy. We don't live in a Socratic society where people guilty of hubris get their eyes poked out. I don't understand what David did in his life that made everyone so mad at him." The former Baltimore supporter added: "It's so unnecessary. That's what so tragic. Of course, that's the essence of tragedy." ■ STEPHEN S. HALL

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SSC: The Japan That Can Say No

Tokyo—Talk of warmer U.S-Japanese relations may have been in the air last week, the 50th anniversary of Pearl Harbor, but U.S. Secretary of Energy Admiral James Watkins got a familiar Japanese cold shoulder. On a 4-day visit to Tokyo, Watkins was given little hope by government officials that Japan would provide more than small sums for the Superconducting Super Collider (SSC). Watkins was in Tokyo to pave the way for President George Bush's visit in early January for talks with the new Japanese prime minister, Kiichi Miyazawa. The SSC will be one of the items on the agenda.

According to official government sources, Watkins was told by Foreign Minister Michio Watanabe and Finance Minister Tsutomo Hata that Japan has no interest in becoming a major partner in the SCC project, although it may make "some contribution." In a separate meeting, Education Minister Kunio Hatoyama told Watkins that it would be impossible for the Ministry of Education, which runs the National Laboratory of High Energy Physics (KEK) and other large accelerator programs in Japan, to use its own funds for the SCC project.

U.S. officials have variously suggested that Japan should pay $1 billion to $2 billion of the estimated $8.5-billion cost of the SSC, or provide one of the large detectors. These requests come at a bad time for Japan. The government has already had to cut budgets to pay Japan's $13-billion contribution to the Gulf War, and several of Watkins' arguments for Japanese contributions—including the suggestion that Japan owes it to the world to spend more on basic research, and thus the SSC—are wearing thin in Tokyo.

According to Akihiro Fujita, director of policy planning for international programs at the Science and Technology Agency, there is growing resentment at the heavy pressure being put on the Japanese government. A speech by Watkins at the National Press Club in Tokyo did little to help matters. He claimed that the 350 Japanese researchers working at the U.S. National Institutes of Health are "doing medical research and receiving training at an annual cost to us of $8.5 million," with the clear implication that it was time for Japan to repay. That argument didn't go over too well: "The Japanese are employed at NIH as talented researchers actively sought out by the administration because of their high abilities and willingness to work very hard," says Hiroto Okayama, a molecular biologist at Osaka University and former NIH researcher.

Many Japanese scientists are opposed to the SSC because they feel sure it will draw funding away from their own projects. According to Toshimitsu Yamazaki, director of the Institute for Nuclear Studies, "In our political scheme, the Ministry of Finance keeps very definite control over the budget allocation to individual ministries.... Even if the prime minister should create a special budget [for the SSC], people are very much afraid that that would leave a negative influence on the budget of the Ministry of Education, the Science and Technology Agency, and others."

The way the United States approached Japan to help fund the SSC has also hit a nerve in Tokyo. According to a prominent member of the Science Council of Japan, the highest science policy body, when a delegation of U.S. high-energy physicists and U.S. Department of Energy (DOE) officials came to Japan 3 years ago, "They said that the SSC is their national project, and we accepted the idea." "Then," he says, "just 1 year later a DOE delegation came here to talk about international collaboration." Now Bush himself is coming to talk about collaboration. Given the response to Watkins' visit, however, Bush will have to come up with more eloquent—or more politically powerful—arguments to persuade Miyazawa that he should disregard the wishes of his own government ministers. ■ FREDERICK SHAW MYERS

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