

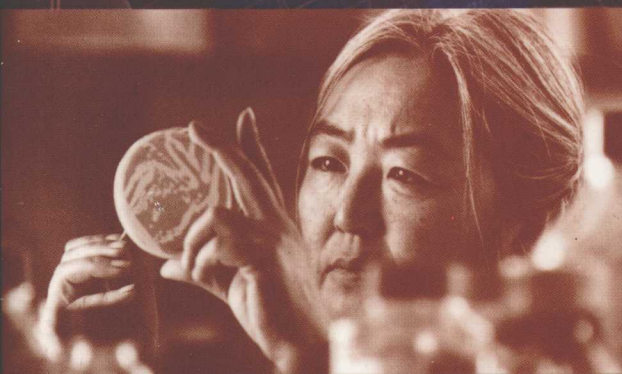
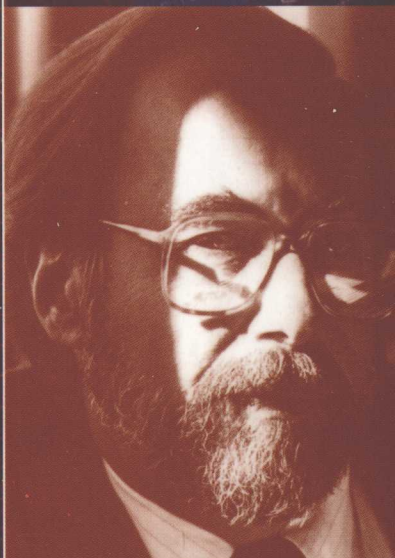
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baltimore case

daniel

j. kevles



A Trial of
Politics,
Science,
and
Character



THE BALTIMORE CASE

A L S O B Y D A N I E L J . K E V L E S

*The Physicists: The History of a Scientific
Community in Modern America*

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Uses of Human Heredity*

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the Human Genome Project (co-editor)*

THE
BALTIMORE
CASE



A Trial of Politics, Science, and Character



DANIEL J. KEVLES



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*In Memory of My Father, David Kevles,
and for
Michael and Joel,
the Next Generation*

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Preface

DAVID BALTIMORE won the Nobel Prize for physiology or medicine in 1975, when he was a thirty-seven-year-old professor of biology at the Massachusetts Institute of Technology (M.I.T.). Baltimore had been known among biologists as a wunderkind for some time. The work for which he shared his prize, a study of how a special class of viruses reproduce themselves (the AIDS virus was later shown to be one of them), ran contrary to most contemporary beliefs on the subject. After receiving the Nobel Prize, he continued doing research, but he also began to take a leading role in public debate about genetic engineering, the AIDS epidemic, and other issues over which science and public policy meet. He brought to whatever he did a degree of self-confidence that some of his colleagues called arrogance but that was integral to his achievements. In 1990, when he was fifty-two, he became president of Rockefeller University, one of the world's distinguished centers of teaching and research.

Eighteen months after he went to Rockefeller, David Baltimore fell from grace. He resigned, citing pressure from his colleagues and the personal toll of fighting a long battle over what was alleged to be a fraudulent research paper that he had collaborated on when he was at M.I.T. A front-page article in the *New York Times* noted that the "spectacle" of Balti-

more's downfall made it seem "larger than life, with an effect greater than any case of scientific fraud in memory."*

David Baltimore was never suspected of faking anything himself, but he had stubbornly defended the work of someone who was—a biomedical scientist at M.I.T. named Thereza Imanishi-Kari. She was one of six coauthors of the disputed paper, which reported on an experiment in immunology and was published in the journal *Cell* in 1986. Baltimore's support of her work was perceived to be unprofessional and unwise, if not irresponsible. He was the senior author of the paper, and because of the notoriety of his involvement, the affair became popularly known as "the Baltimore case." David Baltimore went back to M.I.T., resuming his professorship of biology. He continued to do brilliant work, but he was dishonored as a public figure.

From its inception, the Baltimore case piqued my interest as a student of the affairs of science in American society. At first, I had no intention of writing about it. I knew none of the principals until 1991, when I first met David Baltimore in another connection, and so far as I could tell from the press coverage, Imanishi-Kari seemed guilty and Baltimore foolhardy in defending her so vigorously. The Baltimore case seemed to touch deep-seated doubts about the scientific enterprise. Many people thought it high time that scientists answered to the public that in large part pays their bills, and I thought they had a point in demanding an enlargement of accountability.

However, others—a minority, to be sure—considered Baltimore and Imanishi-Kari victims, unfairly pursued by witch-hunting zealots ignorant of the way science works. The case dragged on for a decade, leaving wrecked careers in its wake, pitting congressmen against scientists, and producing both martyrs and tormentors. I had been wondering how and why scientific fraud and misconduct had emerged as an issue in the United States during the 1980s, when it was of little consequence in any other scientifically vital nation. The sustained ferocity of the case in and out of the media prompted me to suspect that an analysis of it might throw some light on science in late-twentieth-century American society and would be revealing in and of itself. I began looking into the Baltimore case, suspending judgment on questions of guilt or innocence as well as foolhardiness or courage until I had mastered the facts on my own.

There was plenty to look into. The case had been covered in numerous newspaper and magazine articles, probed in several congressional hearings,

*Philip J. Hilts, "Nobelism Caught Up in Fraud Case Resigns as Head of Rockefeller U.," *New York Times*, Dec. 3, 1991, p. 1

and exposed in the reports of more than one investigative agency of government. Most of the people involved in the case granted me interviews and some gave me access to their files of memoranda and correspondence. Contests over the charges against Imanishi-Kari generated extensive testimony and opened many previously confidential documents. Ultimately, the case proved to be a rich site for contemporary history, providing both abundant public and private documents and access to the recollections of living participants.

I am a historian by training and practice, and I have approached this vast body of material with a strong sense of the historian's respect for evidence, duty to weigh contradictory forms of it, and obligation to achieve a balanced understanding of the story. I have also felt it imperative to deal with the science to the extent necessary to appreciate what came to be contested. The case started as a small dispute in a laboratory over an experiment and then exploded into the larger sphere of politics and the media, but it remained fraught with technical issues throughout its life.

I have written the book to make its scientific content accessible to nonbiologists as well as to biologists, keeping discussions of the technical issues as concise as possible and relegating elaborative material to the notes. I have provided a brief account of the disputed experiment in the latter part of Chapter One. It was technically intricate, and lay readers should not be discouraged if they have trouble grasping all of it. I know biologists who find it difficult to comprehend. For assistance on the main scientific points, I have provided illustrations and a glossary of technical terms and concepts.

Following the case itself, the large majority of this book reaches far beyond technical matters. It is about individual character and behavior in science and the interactions of scientists with each other as human beings and professionals. It is about the relationship of science to the investigative powers of Congress and the executive branch; about the media's treatment of scientific ethics and practices; about the material dependency of science on the federal government; about tensions emergent in the late twentieth century between the biomedical sciences and American political culture.

But this book is also about the civil rights of scientists, particularly Thereza Imanishi-Kari. Once I started studying the record of the case, several points became quickly evident:

- Imanishi-Kari had not had a fair trial.
- She had been convicted in the court of public opinion and nowhere else.

- Those who condemned Baltimore for defending his collaborator overlooked or were indifferent to those crucial aspects of the case, among others.

Eventually, I became persuaded that Imanishi-Kari was innocent of the charges against her and said so, explaining why, in an article that appeared in *The New Yorker* magazine in May 1996. In subsequently writing this book, I found no reason to modify the fundamental judgments expressed there—except to have been reinforced in them by the outcome of the case. In June 1996, Thereza Imanishi-Kari was officially exonerated on all the counts that had been brought against her. David Baltimore began to re-enter public life, and in 1997 he was appointed president of the California Institute of Technology (where I have been a member of the faculty for more than thirty years). At its core, this book is the story of how a great injustice was perpetrated in the name of scientific integrity and the public trust and how it then came to be remedied, or remedied as much it could be after its weight had been endured for a decade.

Daniel J. Kevles
Pasadena, California
March 1998

Nobel laureate entangled in fraud case Resigns as head of Rockefeller U.

Dr. David Baltimore, who would receive the Nobel Prize for his work on the structure of the DNA molecule, has resigned as head of Rockefeller University.

By PHILIP J. HILTS

Dr. David Baltimore, who would receive the Nobel Prize for his work on the structure of the DNA molecule, has resigned as head of Rockefeller University.

President of Rockefeller U. Retracts Scientific Paper That NIH Office Says Contains Fabricated Data

By DAVID L. WHEELER

David Baltimore, president of Rockefeller University, last week retracted a scientific paper that has been the centerpiece of a three-year Congressional investigation into scientific fraud.

Mr. Baltimore, a Nobel Prize laureate, had long defended the paper.

Baltimore issued a written statement declaring that "the data were fabricated."

Statement declaring that "the data were fabricated" if it stands very serious he serolo-

The New York Times A Scientific Watergate?

Five years after disturbing questions were raised about a research paper written in part by the Nobel laureate David Baltimore, the celebrated case is finally moving toward a verdict. Federal investigators have concluded, in a draft report, that the paper contained fraudulent data and that it was written by a ghostwriter.

hands. A graduate student independently tried to get the results of the experiments.

Hero in Exposing Science Hoax Paid Dearly

By PHILIP J. HILTS
WASHINGTON, March 21 — When Dr. Harold O'Toole, a junior research fellow at Rockefeller University, was asked to review a paper by Dr. David Baltimore, a Nobel laureate, he found it contained a "disgraceful" amount of fraud. He lost his job and his reputation. He was paid dearly for his honesty.

The initial investigation was headed by "representative John Chagell, merged."

Did Imanishi-Kari Get a Fair "Trial"?

The National Institutes of Health's Office of Scientific Integrity (OSI) may be receiving the onslaught of bad publicity it has received in recent weeks. A group of 145 scientists, including some of the most prominent in the field, have signed a letter of support for Imanishi-Kari.

WHEN it was published in a journal called Cell in April 1986, "Altered expression of Endogenous Immunoglobulin genes in Transgenic Mice" by Dr. David Baltimore and his colleagues was the most widely cited paper in the field of immunology.

US finds fraud in research at MIT

Report also assails Nobel laureate

By Peter G. Connolly
GLOBE STAFF
Most scientists rallied around Dr. Baltimore when he was accused of fraud.

For challenging her boss's data, a scientist lost her job and home.

The first time Dr. O'Toole saw the paper, he was struck by the "disgraceful" amount of fraud. He lost his job and his reputation. He was paid dearly for his honesty.

Nobel Scientist Apologizes to Whistle-Blower Co-Author of Flawed Study Concedes His Oversight Was Inadequate

Associated Press
David Baltimore, a Nobel laureate who was co-author of a study that prompted a prolonged investigation of possible scientific misconduct, has apologized to the young scientist who prompted the investigation and admitted that he made mistakes in defending the flawed work of a co-author.

where O'Toole was her research associate. When O'Toole challenged the accuracy of data reported by her boss in the article in Cell, there were investigations first at MIT and later at Tufts University, where Imanishi-Kari now works. The university investigations uncovered only minor errors. O'Toole was fired.

Office of Scientific Integrity concluded that Imanishi-Kari "repeatedly presented false and misleading information" and made statement she knew to be false. Baltimore responded then that the findings raised "very serious questions." He withdrew the Cell paper. In his 14-page statement to NIH investigators, Baltimore acknowledged that "for too long" he had defended the now discredited paper.

Science as something already in existence, already completed, is the most objective, impersonal thing that we humans know. Science as something coming into being, as a goal, is just as subjectively, psychologically conditioned as are all other human endeavors.

—Albert Einstein
Address, 1932

And the significance of this great organization, gentlemen? It consists in this, that innocent persons are accused of guilt, and senseless proceedings are put in motion against them. . . .

—Franz Kafka,
The Trial

True gold fears no fire.

—Chinese Proverb

