

ferences in the ability of the HTLV-I and HTLV-II LTR sequences to direct CAT expression in a range of differentiated cell types. The number and type of cells infected by these different groups of HTLV may vary as a consequence of differences in LTR promoter strength, host cell range, or response to trans-acting transcriptional factors. The level of a viral protein effecting lymphocyte transformation may vary in a critical target cell as a result of differences in LTR function. Further work to identify the HTLV-associated trans-acting factor, as well as its target sequences in the viral and host cell genome, should provide insight into the mechanism of transformation by this family of retroviruses.

#### References and Notes

1. B. J. Poiesz *et al.*, *Proc. Natl. Acad. Sci. U.S.A.* **77**, 7415 (1980); V. S. Kalyanaraman, M. Sarngadharan, P. Bunn, J. Minna, R. C. Gallo, *Nature (London)* **294**, 271 (1981); M. Robert-Guroff, F. Ruscetti, L. Posner, B. Poiesz, R. C. Gallo, *J. Exp. Med.* **154**, 1957 (1981); M. Yoshida, I. Miyoshi, Y. Hinuma, *Proc. Natl. Acad. Sci. U.S.A.* **79**, 2031 (1982).
2. V. S. Kalyanaraman *et al.*, *Science* **218**, 571 (1982); I. S. Y. Chen, J. McLaughlin, J. C. Gasson, S. C. Clark, D. S. Golde, *Nature (London)* **305**, 502 (1983); E. P. Gelmann, G. Franchini, V. Manzari, F. Wong-Staal, R. C. Gallo, *Proc. Natl. Acad. Sci. U.S.A.* **81**, 993 (1984); G. M. Shaw *et al.*, *ibid.*, in press; K. Shimotohno, D. W. Golde, M. Miwa, T. Sugimura, I. S. Y. Chen, *ibid.* **81**, 1079 (1984); J. G. Sodroski *et al.*, *ibid.*, in press; M. Seiki, S. Hattori, M. Yoshida, *ibid.* **79**, 6899 (1982).
3. M. Popovic *et al.*, *Nature (London)* **300**, 63 (1982).
4. M. Popovic, M. G. Sarngadharan, E. Read, R. C. Gallo, *Science* **224**, 497 (1984); R. C. Gallo *et al.*, *ibid.*, p. 500; J. Schüpbach *et al.*, *ibid.*, p. 503; M. Sarngadharan, M. Popovic, L. Bruch, J. Schüpbach, R. C. Gallo, *ibid.*, p. 506.
5. P. A. Chatis, C. A. Holland, J. W. Hartley, W. P. Rowe, N. Hopkins, *Proc. Natl. Acad. Sci. U.S.A.* **80**, 4408 (1983); L. DesGroseillers, E. Rassart, P. Jolicoeur, *ibid.*, p. 4203; J. Lenz *et al.*, *Nature (London)* **308**, 467 (1984); D. Celander and W. A. Haseltine, in preparation; C. Rosen, M. Cloyd, J. Lenz, W. A. Haseltine, in preparation.
6. H. M. Temin, *Cell* **27**, 1 (1981); *ibid.* **28**, 3 (1982).
7. C. M. Gorman, L. F. Moffat, B. H. Howard, *Mol. Cell Biol.* **2**, 1044 (1982); C. M. Gorman, G. T. Merlino, M. C. Willingham, I. Pastan, B. Howard, *Proc. Natl. Acad. Sci. U.S.A.* **79**, 6777 (1982).
8. F. L. Graham and A. J. van der Eb, *J. Virol.* **52**, 456 (1973); C. Queen and D. Baltimore, *Cell* **33**, 729 (1983).
9. M. D. Walker, T. Edlund, A. M. Boulet, W. J. Rutter, *Nature (London)* **306**, 557 (1983).
10. G. J. Todaro and H. Green, *J. Cell Biol.* **17**, 299 (1963).
11. F. C. Jensen *et al.*, *Proc. Natl. Acad. Sci. U.S.A.* **53**, 53 (1964).
12. G. O. Gey, W. D. Coffman, M. T. Kubicek, *Cancer Res.* **12**, 264 (1952).
13. B. Royer-Pokora, W. D. Peterson, W. A. Haseltine, *Exp. Cell Res.* **151**, 408 (1984).
14. B. Howard, M. Estes, J. Pagano, *Biochim. Biophys. Acta* **228**, 105 (1971); A. Loyter, G. A. Scangos, F. H. Ruddle, *Proc. Natl. Acad. Sci. U.S.A.* **79**, 422 (1982).
15. P. J. Southern and P. Berg, *Mol. Appl. Genet.* **1**, 227 (1982).
16. R. C. Gallo *et al.*, *Proc. Natl. Acad. Sci. U.S.A.* **79**, 5680 (1982).
17. N. Yamamoto, T. Matsumoto, Y. Koyanagi, Y. Tanaka, Y. Hinuma, *Nature (London)* **299**, 367 (1982); S. Z. Salahuddin and R. C. Gallo, personal communication.
18. V. Manzari *et al.*, *Proc. Natl. Acad. Sci. U.S.A.* **80**, 11 (1983); M. Popovic *et al.*, in preparation.
19. I. Miyoshi *et al.*, *Nature (London)* **294**, 770 (1981).
20. S. Z. Salahuddin *et al.*, *Virology* **129**, 51 (1983); B. Hahn *et al.*, *Nature (London)* **303**, 253 (1983).
21. M. Popovic, G. Lange-Wantzin, P. S. Sarin, D. Mann, R. C. Gallo, *Proc. Natl. Acad. Sci. U.S.A.* **80**, 5402 (1983).
22. P. Clapham, K. Nagy, R. Cheingsong-Popov, M. Exley, R. W. Weiss, *Science* **222**, 1125 (1983).
23. J. G. Sodroski *et al.*, unpublished data.
24. I. S. Y. Chen, J. McLaughlin, D. W. Golde, *Nature (London)* **309**, 276 (1984).
25. P. S. Thomas, *Proc. Natl. Acad. Sci. U.S.A.* **77**, 5201 (1980).
26. C. A. Rosen, J. G. Sodroski, W. A. Haseltine, in preparation.
27. B. Hahn, V. Manzari, S. Colombini, G. Franchini, R. C. Gallo, F. Wong-Staal, *Nature (London)* **305**, 340 (1983).
28. R. C. Gallo and F. Wong-Staal, *Blood* **60**, 545 (1982).
29. N. Yamamoto, M. Okada, Y. Koyanagi, M. Kannagi, Y. Hinuma, *Science* **217**, 737 (1982).
30. M. Seiki, S. Hattori, Y. Hirayama, M. Yoshida, *Proc. Natl. Acad. Sci. U.S.A.* **80**, 3618 (1983).
31. J. Brady, J. B. Bolen, M. Radonovich, N. Salzman, G. Khoury, *ibid.* **81**, 2040 (1984).
32. N. Jones and T. Shenk, *ibid.* **76**, 3665 (1979); J. R. Nevins, *Cell* **26**, 213 (1981); A. Berk, F. Lee, T. Harrison, J. Williams, P. A. Sharp, *ibid.* **17**, 935 (1979); R. B. Gaynor, D. Hillman, A. Berk, *Proc. Natl. Acad. Sci. U.S.A.* **81**, 1193 (1984).
33. T. H. Lee and M. Essex, personal communication.
34. W. A. Haseltine *et al.*, *Science* **225**, 419 (1984).
35. V. Manzari *et al.*, *Proc. Natl. Acad. Sci. U.S.A.* **80**, 1574 (1983).
36. G. Franchini, F. Wong-Staal, R. C. Gallo, in preparation.
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#### ASSOCIATION AFFAIRS

## Gerard Piel: President-Elect of the AAAS

Dennis Flanagan

Gerard Piel, president-elect of the American Association for the Advancement of Science, has devoted his entire career to advancing public understanding of science, technology, and medicine. He has been president and publisher of *Scientific American* since 1947, a span of 37 years. Before that time he had been science editor of *Life* for 6 years.

Piel was born in 1915 at Woodmere, a suburb of New York City on Long Island, the fourth of six children of Loretto Scott Piel and William F. J. Piel. William Piel was president of Piel Brothers, a family-owned brewery. Gerard Piel was

educated at Phillips Academy in Andover, Massachusetts, and at Harvard College, from which he graduated magna cum laude in 1937.

Since Piel is the publisher of a magazine mostly devoted to the natural sciences, it is sometimes taken for granted that he was educated in those sciences. Such is not the case. At Andover he flunked physics, and at Harvard he kept a respectful distance between himself and such subjects. (One explanation of this apparent contradiction in the background of someone in Piel's occupation is that, if someone studies science and does well at it, the probability is high that

he will become a scientist. Therefore the main population from which someone in Piel's occupation can be recruited is one consisting of nonscientists.)

Piel's education did not, however, lack for influences that played a strong role in his career of advancing public understanding of science. At Harvard he first took up sociology, and under the Harvard tutorial system his first academic mentor was a graduate student named Robert K. Merton. (Merton, now professor of sociology at Columbia University, went on to found the sociology of science.) Later Piel concentrated in history, with an emphasis on political economy; his senior thesis dealt with the history of the French Socialist Party up to World War I. The interaction of economics and politics in social history struck a deep chord that has persisted throughout Piel's career. (At Harvard, Piel was also a leading member of the varsity wrestling team, which may signify a willingness to grapple with such problems.)

Piel left Harvard in the middle of the Great Depression, when by definition jobs were scarce. He found work in the

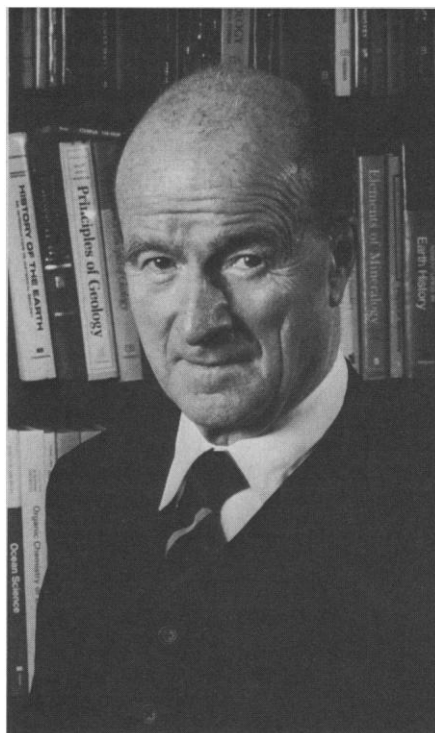
Dennis Flanagan is editor emeritus of *Scientific American*.

mail room of a small advertising agency named J. Sterling Getchell. There he met Mary Tapp Bird, his first wife and the mother of his sons Jonathan Bird Piel and Samuel Bird Piel. (Samuel Piel died in an automobile accident in 1964, as he was about to enter medical school.)

J. Sterling Getchell had the idea of a magazine named *Picture*, and he drafted his mail room clerk to help. At that time the new magazine *Life* was starting its meteoric rise, and when *Picture* began to ship water, Piel got a job at *Life* on the strength of being the first applicant with experience on a picture magazine. Like many other journalists, he has pleasant memories of his salad days. He began as assistant to a magnificently eccentric *Life* editor, Alexander King, whose office was typically inhabited by a visitor claiming to be the reincarnation of Christ or an agent representing the world's smallest midget. (King and Piel, having measured the midget, calculated that a full-size picture of him could be printed in *Life* if it were turned sideways and run across two pages. It was then presented as the first life-size picture of a man to be printed in a magazine.)

After this rough-and-tumble apprenticeship the young Piel (he was 24) was appointed science editor of *Life*. He immediately made a name for himself as a serious and imaginative writer. He covered, and covered well, the standard scientific advances of the day, but he also did a lot more. For example, he was much taken with a notion of R. Buckminster Fuller called the Dymaxion Globe, a map of the earth that could be printed on a flat sheet and then folded up into a 14-sided polyhedron. Piel succeeded in getting the globe, which made some serious points about map projections, printed in *Life*; at a modest estimate, 1 million Americans folded it up. A few of the globes can still be seen in odd corners around the country.

At *Life* Piel made a discovery that is still apparent in *Scientific American*. *Life* had pioneered in intensive photographic coverage of events, including scientific ones. In the case of the scientific stories getting the pictures called for the willing collaboration of the scientist. Accordingly the scientist usually collaborated on the text as well, particularly in checking the story before it went to press. At *Scientific American* the text is written by the scientist, but a similar collaboration obtains. *Scientific American* is among other things a picture magazine, devoting half of its space to illustrations. They are the result of a close interaction between the scientist author and the magazine's editors.



Gerard Piel

After 6 years of writing for *Life*, where Piel and I were colleagues, he left the magazine to become assistant to the industrialist Henry J. Kaiser. Piel had written an article about Kaiser for *Life* and was much taken by his bold outlook on industrial development and not least by the Kaiser prepaid group-practice medical plan. The Kaiser plan had been founded to provide medical care for workers and their families at Grand Coulee Dam and had proved itself in the delivery of medical care to 200,000 shipyard workers and their families during World War II.

Piel's interest in medicine and its economics has never diminished. *Scientific American* has published numerous articles on the delivery of health care over the past 37 years, including a single-topic issue entitled "Life and Death and Medicine." Piel currently serves as a trustee of the Henry J. Kaiser Family Foundation, whose philanthropy is largely dedicated to questions of access and equity in medical care. In 1967 he was appointed by Mayor John V. Lindsay of New York City to head a commission, which became known as the Piel Commission, to study the medical, economic, and social problems of the city-owned hospitals. The recommendations of the commission, which included members from all segments of urban society, were not adopted but have nonetheless shaped the city's approach to its hospitals ever since.

Piel had gone to work for Kaiser,

however, with an idea for a magazine of science in the back of his mind. After he had had a year of experience in business the idea began to look feasible. In 1946 he proposed to me that we start a new magazine of science. We were soon joined by Donald H. Miller, Jr., who from the beginning was concerned with the business aspects of the project. The main obstacle was that none of us had any money. (Although Piel was a member of a family that owned a brewery, the family was large and the brewery was small.) Piel set about raising capital for the magazine, while Miller and I helped him in developing plans. At this point we discovered that *Scientific American*, which had already been continuously published for 102 years, was going out of business. It seemed to us that it would be better to rejuvenate a distinguished old magazine than to start an entirely new one, and so we induced our investors to put up money for the purpose.

The first issue of the new *Scientific American* appeared in May 1948. It contained articles on subjects in the physical, biological, and social sciences and in technology and the history of science—the same "formula" it has had ever since. At the beginning there was doubt about the magazine's survival, not least because a large publishing company (McGraw-Hill, Inc.) had almost simultaneously launched a new magazine named *Science Illustrated*. After 2 years, however, the new *Scientific American* broke even economically, and it has continued to prosper.

Over the 37 years of the new *Scientific American*'s publication Piel's economic, social, and political concerns have had a strong influence on the content of the magazine. For example, from the beginning he has felt that, whatever other problems confront the human species, the paramount problem is the threat of nuclear war. Starting in the magazine's first year, it has published more than 100 articles on the subject.

This policy has not been without its risks. In 1950 the Atomic Energy Commission (AEC) prohibited the publication of an article on the hydrogen bomb written for the magazine by Hans A. Bethe of Cornell University. The article was already on press, and after intensive negotiation, the AEC agreed to allow its publication on the condition that certain passages be deleted. The AEC ordered the copies that had been printed up to that time burned. Piel persuaded the AEC to keep copies of the original article in its files and then, 12 years later, to declassify them. Now available for inspection, they show that neither

Bethe nor *Scientific American* had done anything to compromise national security.

The principal content of *Scientific American*, however, has been articles about progress in science. From the start Piel has had a special concern about the wellsprings of science in the university. In general his position has been that virtually all basic science is done in the universities, that basic science should be funded through the universities, and that the universities should have direct support from the federal government. In a recent talk before the Southwestern and Rocky Mountain Division of the AAAS he said: "There is no line in the federal budget for the support of science and for higher learning in America. What federal money comes to those central functions of our civilization comes as a slopover and byproduct of funds spent for other purposes."

Piel has accordingly devoted much of his time to university affairs. He was twice elected to the Harvard board of overseers and has been a trustee of Radcliffe College and New York University. He has also been a trustee of the Mayo Foundation. He is currently a trustee of the Phillips Academy, the American Museum of Natural History, the New York Botanical Garden, and the Foundation for Child Development.

Piel has been no less interested in the

contribution science and technology can make to human welfare, particularly in the poorer two-thirds of the world. *Scientific American* has published two single-topic issues on the relations between technology and economic development. Over the years Piel has given many addresses on this subject and on others bearing on the relations among science, technology, and society. Some of them are collected in two books: *Science in the Cause of Man* (Knopf, New York, 1961) and *The Acceleration of History* (Knopf, New York, 1972).

Piel has been much honored for his diverse efforts. In 1962 he received the Kalinga Prize, awarded by the United Nations Educational, Scientific and Cultural Organization for contributions to the popularization of science. He has also been given the George Polk Award, the Bradford Washburn Award, the Arches of Science Award, and the Rosenberger Medal of the University of Chicago. In 1980 the Magazine Publishers Association designated him Publisher of the Year.

In 1955 Piel married Eleanor Virden Jackson, a trial lawyer whose career has been largely dedicated to defending people who cannot pay for an effective defense or who are charged with transgressions that are politically unpopular. Eleanor Piel's absorption with defending the rights of the accused has amplified

Gerard Piel's well-developed sense of the transcendent importance of equity in the conduct of human affairs, and he takes much pride in her work. Their daughter, Eleanor Jackson Piel, Jr., is now in her second year at Harvard Medical School.

In 1978 *Scientific American* launched *Scientific American Medicine*, a renewable textbook of medicine edited by Edward Rubenstein of Stanford University School of Medicine and Daniel D. Federman of Harvard Medical School. The project was organized by Gerard Piel's son Jonathan, and it has prospered. This spring Jonathan Piel was appointed editor and publisher of *Scientific American*. Gerard Piel will continue as chairman of the board of Scientific American, Inc., which includes, in addition to *Scientific American* and *Scientific American Medicine*, the book publisher W. H. Freeman and Company and joint enterprises with the local publishers of editions of *Scientific American* translated into seven other languages: French, German, Italian, Spanish, Japanese, Chinese, and Russian. The Russian edition, launched in 1983 at a time when relations between the United States and the Soviet Union were notably cool, is an indication that the president-elect of the AAAS does not let orthodoxy stand in the way of pursuing the advancement of science and the solution of social problems.

## AAAS Council Meeting, 1984

Catherine Borrás

The AAAS Council held its 1984 meeting on 28 May in the Trianon Ballroom of the New York Hilton Hotel, New York City, with 57 of its 83 members in attendance. President Anna J. Harrison presided.

### Executive Officer's Report

William D. Carey called attention to his written report of 1983 activities and the operating budget for 1984 (*Science*, 3 February 1984). He said the Board of

Directors had just received the report of the Search Committee for a new Editor of *Science* and will reach a decision on a successor to Philip H. Abelson as quickly as possible. With deep regret, he informed the Council of the death of Robert V. Ormes, Associate Publisher of *Science*, after an illness of some months. Mr. Ormes was very nearly indispensable and his loss will be keenly felt.

Overall, the Association's affairs are in sound shape. Membership has dipped by a few thousand in the last couple of years of economic recession, but the dip

should be regarded as a short-term setback. *Science* and *Science 84* continue to perform well and are producing a favorable bottom line when viewed on a direct-cost basis. Dr. Abelson is tuning up the Reports section and taking initial steps toward electronic publishing.

For the first half of 1984, advertising income is decisively up for *Science* but trailing expectations for *Science 84*. Advertising agencies favor those consumer magazines which surveys indicate as having a higher "reader per copy" visibility. The 1984 budget is expected to be in balance, but with a somewhat different configuration of revenue and expense numbers than originally anticipated.

With regard to real estate, the AAAS has long been searching for an affordable new home into which it can fit all of its operations instead of being in four different places and in danger of adding a fifth. The solution now appears to be imminent, with negotiations for an extended

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