LETTERS
Hydrogen Bomb History: E. Teller; H. A. Bethe ........................................... 1270

EDITORIAL
Corporate Giving and the Public University: C. R. Wharton, Jr. .................. 1271

ARTICLES
A New Greenland Deep Ice Core: W. Dansgaard et al. .................................. 1273
The University, Industry, and Cooperative Research: A. B. Giamatti ............... 1278
German Energy Technology Prospects: M. Popp ........................................ 1280

NEWS AND COMMENT
New Broom Sweeps Clean at NSF ............................................................ 1286
German Firms Move into Biotechnology ..................................................... 1287
FTC Seeks a Little Less Honesty ............................................................... 1289
Briefing: NSA Knew of Flaw in "Knapsack" Code; Academy Group to Study U.S. Toxin Defenses; Brittle Reactors: NRC Has a Plan; Environmental Destruction Hurts India's Development ........................................... 1290

RESEARCH NEWS
A Baroque Turn for Intron Processing ....................................................... 1293
Fetal Hemoglobin Genes Turned On in Adults ........................................... 1295
Completing the Puzzle of Steroid Synthesis .............................................. 1297
Building Bigger Mice Through Gene Transfer ........................................... 1298

BOOK REVIEWS
Women Scientists in America, reviewed by J. W. Leavitt; Judgment under Uncertainty, D. M. Grether; Continental and Oceanic Rifts, L. Royden; The Behavior and Natural History of the Caribbean Reef Squid Sepioteuthis sepioides, R. E. Thresher; Books Received ................................... 1299
REPORTS


Pollen and Lignin Records of Late Quaternary Vegetation, Lake Washington:
E. B. Leopold et al. .................................................................................................................. 1305

Eruption of El Chichón Volcano, Chiapas, Mexico, 28 March to 7 April 1982:
J. M. Hoffer, F. Gomez P., P. Muela .................................................................................... 1307

Identification of a Protein That Purifies with the Scrapie Prion:
D. C. Bolton, M. P. McKinley, S. B. Prusiner ........................................................................ 1309

Virus-Induced Corticosterone in Hypophysectomized Mice: A Possible Lymphoid Adrenal Axis: E. M. Smith, W. J. Meyer, J. E. Blalock ...................................................... 1311

Diphenylhydantoin: An Alternative Ligand of a Glucocorticoid Receptor Affecting Prostaglandin Generation in A/J Mice: M. Katsumata et al. ................................................ 1313

Eukaryotic Transcriptional Regulation and Chromatin-Associated Protein Phosphorylation by Cyclic AMP: G. H. Murdoch, M. G. Rosenfeld, R. M. Evans .......................................................... 1315

Chromosomal Assignment of the Endogenous Proto-Oncone C-abl: S. P. Goff et al. .......... 1317

Mouse c-myc Oncogene Is Located on Chromosome 15 and Translocated to Chromosome 12 in Plasmacytomas: S. Crews et al. .............................................................................. 1319

Variable Ultrasound Echogenicity in Flowing Blood: B. Sigel et al. ................................. 1321

Yeast Mating Pheromone Activates Mammalian Gonadotrophs: Evolutionary Conservation of a Reproductive Hormone?: E. Loumaye, J. Thorner, K. J. Catt ............................................. 1323

Dual Task Interactions Due Exclusively to Limits in Processing Resources: J. D. Holtzman and M. S. Gazzaniga ................................................................. 1325

Human Fetal Movement: Spontaneous Oscillations Near One Cycle per Minute:
S. S. Robertson et al. .............................................................................................................. 1327

Reassortant Virus Derived from Avian and Human Influenza A Viruses Is Attenuated and Immunogenic in Monkeys: B. R. Murphy et al. .................................................. 1330

Benzodiazepine Receptor-Mediated Experimental “Anxiety” in Primates:
P. T. Ninan et al. ..................................................................................................................... 1332

Monoclonal Antibodies in the Lymphatics: Toward the Diagnosis and Therapy of Tumor Metastases: J. N. Weinstein et al. ................................................................. 1334

The Neuroanatomy of Amnesia: Amygdala-Hippocampus versus Temporal Stem:
S. Zola-Morgan, L. R. Squire, M. Mishkin ........................................................................... 1337

COVER

Rime ice accumulation on the western, windward side of a balsam fir on Mount Moosilauke, New Hampshire. Rime ice is a winter manifestation of cloud droplet deposition. Because the supercooled cloud droplets freeze upon impact and accumulate as rime ice, droplet deposition is more obvious in the winter than in the summer when the droplets coalesce and drip off the branches. See page 1303. [William A. Reiners, Dartmouth College, Hanover, New Hampshire 03755]
Corporate Giving and the Public University

Increasing numbers of public colleges have become involved in private fund-raising. In 1960–1961, U.S. corporations voluntarily contributed some 97 million to 905 colleges and universities. Of the total, about 23 percent went to public institutions. In 1980-1981, American firms were providing $778 million, of which more than $300 million went to public campuses.

In the past, the companies often had "private only" rules governing voluntary contributions to higher education. By 1981, however, a survey by the Council for Financial Aid to Education found no respondents that eschewed contributions to public colleges as a matter of policy. Occasionally, corporate policymakers still raise the issue of "double jeopardy"—the argument that voluntary giving to public colleges and universities is inappropriate because a portion of corporate state and federal tax payments already provides such support. True, but Hayden Smith, senior vice president of the council, estimates that only about 5 percent of corporate tax dollars go to public campuses. Equally to the point, however, is the fact that private institutions receive a similar hidden subsidy from the public in the form of tax exemptions.

Why is private support so crucial? One reason is that federal spending for higher education has been targeted by the present Administration for severe cutbacks, some of which are already being painfully felt by institutions and individual students alike. At first glance, public colleges and universities, with their lower tuitions and solid core of state appropriations, might appear better equipped than private institutions to weather the storm. Unfortunately, that "solid" core is being rapidly pared down by inflation and competing public priorities. A second reason is that because of comprehensive high-quality, low-cost programs, many public institutions continue to experience enrollment growth despite predictions to the contrary.

This does not mean that public campuses look to private donors for ongoing operational support. That is what tax dollars are for—a traditional public responsibility that state governments cannot shift elsewhere. What private gifts and grants can do is maintain the margin of excellence in public institutions by underwriting innovation, experimentation, and modernization. But from the corporate policy-maker's viewpoint, there are other justifications for voluntary contributions to public higher education. The record shows that public colleges and universities:

- Graduate the largest numbers of what will be our country's educated manpower. Public institutions conferred 65 percent of all degrees earned in 1979–1980 at the bachelor's, master's, and graduate levels.
- Produce the largest numbers of graduates within fields in high demand by private enterprise. They graduate nearly twice as many bachelor's degree holders in business and management, biological sciences, and physical sciences as do private colleges. In engineering and computer science, the margins are even more dramatic.
- Have created an extraordinary reservoir of leadership for American businesses. According to a survey by the National Association of State Universities and Land-Grant Colleges, over half the presidents and board chairpersons of the Fortune 500 industrial companies attended member schools.

Public higher education and private higher education are both important resources for the corporate community. Each needs and deserves voluntary corporate support. Investments in education—particularly in the efficient, responsive, and highly productive colleges and universities that make up higher education's public component—pay the highest dividends of all capital expenditures. As IBM president and chief executive officer John Opel has pointed out, "The return... is often difficult to quantify, but the bottom line is the same as that for any business venture. It contributes to our success."—Clifton R. Wharton, Jr., Chancellor, State University of New York, Albany 12246, and Chairman of the Board, Rockefeller Foundation, New York 10036

Abstracted from "Corporate Giving and the Public University", in The Corporate Director, July/August 1982, pp. 12–16.