

1479 This Week in *Science*

Editorial

1481 The Dirty Air Act

Letters

1485 Soviet Role in SAGE: G. T. GARVEY ■ Asbestos Policy: A. M. LANGER,
R. P. NOLAN, M. ROSS ■ Young Scientists and the Future: D. K. BODKIN;
N. SMALHEISER ■ The Cellular Basis of Memory: B. L. McNAUGHTON

News & Comment

1492 Mad Cow Disease: Uncertainty Rules
1494 Female Primatologists Confer—Without Men
1495 Will AIDS Conference Migrate?
1496 NIH Urged to Be a Smart Shopper
1497 Genome Center Grants Chosen
Jittery Hubble Awaits a Cure
1498 *Briefings*: Out of China . . . and Now Back In ■ Feds Hush Up a Bum Bomb
Detector ■ Retraining the Cranes ■ Chronic Leaks Plague Shuttle Science ■
Voice Lessons for Psychotics ■ Blocking the Backdaters ■ Human Deathtraps for
Mosquitoes ■ FDA Gets a New Boss

Research News

1500 Proton Microbeam Probes the Elements
1502 Signs of the Parkfield Quake?
1503 Cystic Fibrosis Corrected in Lab
Partner Found for the Myc Protein
1504 Millimeter Astronomers Push for New Telescope

Articles

1513 Drug Policy: Striking the Right Balance: A. GOLDSTEIN AND HAROLD KALANT
1522 Magnetic Confinement Fusion: H. P. FURTH
1527 New Methods of Drug Delivery: R. LANGER
1533 Molecular Targets for AIDS Therapy: H. MITSUYA, R. YARCHOAN, S. BRODER

Research Article

1544 Structural Characterization of a Partly Folded Apomyoglobin Intermediate:
F. M. HUGHSON, P. E. WRIGHT, R. L. BALDWIN

Reports

1549 Epitaxial and Smooth Films of *a*-Axis YBa₂Cu₃O₇: C. B. EOM, A. F. MARSHALL,
S. S. LADERMAN, R. D. JACOWITZ, T. H. GEBALLE

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COVER A partial cross section of a biocompatible polymer system that delivers medications, including proteins, in a controlled manner. This high-powered light micrograph was taken after the polymer matrix had been releasing protein for more than 5 months. See page 1527. [Photomicrography by Rajan Bawa]

- 1552 Direct Interaction of a Ligand for the *erbB2* Oncogene Product with the EGF Receptor and p185^{erbB2}: R. LUPU, R. COLOMER, G. ZUGMAIER, J. SARUP, M. SHEPARD, D. SLAMON, M. E. LIPPMAN
- 1555 Retroviral DNA Integration Directed by HIV Integration Protein in Vitro: F. D. BUSHMAN, T. FUJIWARA, R. CRAIGIE
- 1558 Inhibition of T Cell Receptor Expression and Function in Immature CD4⁺CD8⁺ Cells by CD4: T. NAKAYAMA, C. H. JUNE, T. I. MUNITZ, M. SHEARD, S. A. MCCARTHY, S. O. SHARROW, L. E. SAMELSON, A. SINGER
- 1561 "Pure" Human Hematopoietic Progenitors: Permissive Action of Basic Fibroblast Growth Factor: M. GABBIANELLI, M. SARGIACOMO, E. PELOSI, U. TESTA, G. ISACCHI, C. PESCHLE
- 1564 Protection from Chemotherapy-Induced Alopecia in a Rat Model: A. M. HUSSEIN, J. J. JIMENEZ, C. A. MCCALL, A. A. YUNIS
- 1567 Recovery of Mitogenic Activity of a Growth Factor Mutant with a Nuclear Translocation Sequence: T. IMAMURA, K. ENGLEKA, X. ZHAN, Y. TOKITA, R. FOROUGH, D. ROEDER, A. JACKSON, J. A. M. MAIER, T. HLA, T. MACIAG
- 1570 Extension of the Life-Span of Human Endothelial Cells by an Interleukin-1 α Antisense Oligomer: J. A. M. MAIER, P. VOULALAS, D. ROEDER, T. MACIAG
- 1574 Cell-Adhesive Motif in Region II of Malarial Circumsporozoite Protein: K. A. RICH, F. W. GEORGE IV, J. L. LAW, W. J. MARTIN
- 1577 Molecular Analysis of Acute Promyelocytic Leukemia Breakpoint Cluster Region on Chromosome 17: J. BORROW, A. D. GODDARD, D. SHEER, E. SOLOMON
- 1580 Flip and Flop: A Cell-Specific Functional Switch in Glutamate-Operated Channels of the CNS: B. SOMMER, K. KEINÄNEN, T. A. VERDOORN, W. WISDEN, N. BURNASHEV, A. HERB, M. KÖHLER, T. TAKAGI *et al.*
- 1585 Coding Channels in the Taste System of the Rat: T. R. SCOTT AND B. K. GIZA

Book Reviews

- 1588 Cloth and Human Experience, reviewed by C. HENDERSON ■ The Household Economy, S. GUGGENHEIM ■ The Moon Illusion, D. R. PROFFITT ■ Books Received

Products & Materials

- 1598 Benchtop Monitoring of DNA Labeling ■ Liquid Chromatographs ■ Portable GC-MS Instruments ■ Nylon Transfer Membranes ■ Micromanipulators ■ Safe Lab Waste Disposal ■ Fast Reusable Cartridges ■ Literature

*Author Index to volume 249 is found on pages I-X
Information for Contributors is found on pages XI-XII*

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The Dirty Air Act

While Washington concerns itself with drawing lines in the sands of Araby, and deciphering the opinions of an enigmatic nominee to the Supreme Court, an argument affecting millions of people, in fact, every new arrival on this globe, is raging. The battle, over the use of cloth or disposable diapers, has clearly resulted in washing a lot of dirty linen in public.

One enormous difficulty in this debate is the lack of a clear moral advantage identified with either side. That deficiency has forced an unpleasant need to examine the facts in the case, an activity for which Americans lack experience and find to be boring. Anyone regarding this problem as frivolous, however, should be apprised of the monumental fact that some 18 billion disposable diapers are discarded annually here, and they account for an estimated 2% of all municipal solid waste.

Although cloth diapers actually account for 1/100th the amount of solid waste of disposable paper diapers, they consume a great deal more detergents and hot water, which requires energy, thereby contributing to environmental stress. If a professional diaper service is involved, then there is gasoline consumed in delivery, to say nothing of exhausts contributing to the air pollution problem. In fact, use of a diaper service appears to consume three times as much fuel and cause nine times as much air pollution as use of disposable diapers. A scientist from the Natural Resources Defense Council has pointed out, in addition, that pesticides are used in cotton fields. To add further confusion, there is little doubt that disposable diapers, being quicker and more efficient, are an enormous help for parents who work. The ability to blame corporations is difficult in this case, because corporations make not only the disposable diapers but also the trucks that provide diaper service.

A related health problem also should be mentioned. To minimize environmental pollution and incidentally provide some respite to harried parents, there is a tendency to use double diapers to increase their absorption capacity and lengthen the time between required changes. Those who have experienced such techniques know that the conspiracy to make safety pins extremely dull and cloth extremely compacted after washing means that considerable force must be exerted to get the pin to pierce the diaper. Any conscientious parent will insert a finger between the baby's tender skin and the stubborn pin, with the obvious consequence that a large number of thumbs are impaled during the hazardous business of applying a cloth diaper. Most mothers and fathers bear their wounds heroically and with great modesty, never requesting medals of honor or other civic recognition for this unselfish act. This extraordinary danger of exposure to puncture wounds is ignored by most parents with the stoicism of a fighter ace going into battle. Clearly, there is an unquestionable loss of moral fiber by the descent to a paper diaper with a snap-on grip requiring little skill and no courage.

This problem involves the great complexity of water consumption, detergent pollution, habitat destruction, pesticide use, energy consumption, exhaust emission, and waste disposal. The battle is being fought out on the basis of facts, figures, and cost-benefit analysis without the usual charges and countercharges of villainy and conspiracy. It is intriguing to contemplate the unlikely possibility that other environmental dilemmas could be approached in the same manner. One might consider the cost of converting all glass bottles to one or two types of glass so that recyclability would become easy. Adding the cost of shopping bags to grocery purchases to increase the incentive of bringing your own reusable cloth bag could also be contemplated at this level of objectivity. Zoning to aid public transportation and limits on gas guzzlers could be similarly analyzed.

Of course, there is still the possibility that the diaper problem may be elevated to yet a higher level of indignation. There are some who would rather smell ozone than a dirty diaper. When this dilemma gets to Congress in the form of a Dirty Air Act it seems inevitable that diapers will precipitate a highly partisan debate. Yet at the moment the policy controversy seems unique as a model for avoiding lofty philosophical principles and concentrating on the bottom line.—DANIEL E. KOSHLAND, JR.