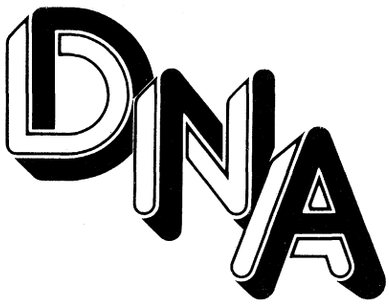
– 8 APRIL 1977 –

# Recombinant




**A group of reports dealing with current recombinant DNA research.**

The 8 April issue of *Science* will cover the multifaceted approach now being taken by scientists in their quest for answers and ultimately control of DNA.

Over 20 reports will cover current avenues of investigation, new experiments with eukaryotic and prokaryotic material, and indicate the extent of work being done in various laboratories in the United States and elsewhere. The conformity to NIH guidelines and the problems of containment or biohazard are illustrated by the work described.

This collection of reports should be instructive to those who want to understand the facts underlying current public policy discussion of recombinant DNA.

Additional copies of the special issue are available for $3.00 each. (Remittance must accompany all orders to the Association for less than $5.00.)

aaas

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**Washington, DC 20005**

## LETTERS

### Oil Spills: Effects of Petroleum on Marine Organisms

Philip H. Abelson's editorial (14 Jan., p. 137) concerning the *Argo Merchant* oil spill incident was prudent and timely. I have been involved for 3 years in work on the effects of petroleum on marine organisms. In my studies on mixed-function oxidase enzymes in relation to petroleum hydrocarbon detection and metabolism, representatives of several animal phyla have been exposed to petroleum in the laboratory. Research has included animal collections and observations near refinery outfalls, chronic sources of the hydrocarbons of low molecular weight that are believed to be the most toxic petroleum components. We have also exposed fish to petroleum for as long as 6 months and carried out some mutagen testing with fruit flies and the Ames bacterial strains. No laboratory results or observations of fauna near refinery outfalls have suggested that petroleum is a very harmful substance. A critical review of the literature also demonstrates that, in laboratory studies where toxic effects have been produced, experiments have generally been carried out with large doses of oil in stagnant water systems. A large spill in a confined area near shore will undoubtedly result in localized damage, but there was little reason last December for us to be awaiting daily a great ecological catastrophe on or near the George's Bank. Unfortunately, the flames of irrationality were kindled by a number of scientists. Now I am wondering how much garbage has been placed in my environmental conscience about pesticides and radionuclides—pollutants about which I have less familiarity.

JEREMIAH F. PAYNE
*Newfoundland Biological Station, Fisheries and Marine Service, St. John's, Newfoundland A1C 1A1, Canada*

### Natural Gas and *Science* Paper

I prefer the nonglossy look given by the paper and ink used for two-thirds of the 11 February issue of *Science*. It is easier to read without the high reflective surface of the glossy paper. Why not continue with this paper and ink process, particularly if it results in an energy savings?

BARBARA D. HAYS
*Department of Life Sciences, University of Pittsburgh, Pittsburgh, Pennsylvania 15260*

Your explanation of the use of uncoated paper when the drying oven of Byrd Press ran out of gas (News and Comment, 11 Feb., p. 557) neglected to answer one obvious question: Did production of *Science* by that means cost any less? If so, I suggest that you consider making the change permanent, in the interest of saving fuel as well as cost. I found the "duller finish" more comfortable on the eyes—because of the absence of glare—and it did not appear to me that any pictures on the uncoated paper were intolerably "less sharply defined."

WALDEN P. PRATT
*7048 Parfet Court, Arvada, Colorado 80004*

The change in paper finish in the issue of 11 February, brought about by the fuel shortage, has a very agreeable side-effect: I can now write notes in the margins of the articles with almost any writing instrument, something I could not do on the coated paper.

Furthermore, I find the uncoated paper tends to produce much less glare than the coated paper, making it easier to read both the articles and the aforementioned annotations.

Unless there are serious considerations that make it inadvisable, I would prefer that *Science* continue to use the uncoated paper, even after the gas supplies have been restored.

JAMES M. PRICE
*Department of Psychology, University of Oklahoma, Norman 73019*

We have received a large number of letters about our use of natural gas and paper. Because of the natural gas shortage, portions of recent issues of *Science* have been printed on uncoated paper with a dull finish, which required little heat to dry the ink. Previously *Science* had been printed entirely on coated glossy paper, for which natural gas was used to dry the ink. The switch conserved some natural gas, but it did not save energy or money.

For the issue of 11 February, the substitution of uncoated paper for glossy paper saved about $100 worth of gas but cost us an additional $5000 for paper and $600 for postage. The uncoated paper is heavier, and we thus consumed an extra 16 tons. Obviously, the extra weight required the cutting of more trees and the use of additional energy in processing the wood to make paper.

The halftones in that issue were better than anticipated because the paper was of a higher quality than we expected to find on short notice.—EDS.