from the market. Dermatologists argued vigorously to keep the drug on the market. The Health Research Group favors keeping the drug on the market, but wants more substantial controls on distribution.

At the end of the meeting, the advisory committee, whose members are predominantly dermatologists, voted against the idea of a ban and instead recommended tighter restrictions. It did not specify how the agency should accomplish this.

Several other countries, which approved Accutane for use after FDA, currently control Accutane's distribution more rigorously than the United States. In the United Kingdom, for example, only 200 dermatologists are certified to prescribe the drug, according to a letter by Adrian Ive, a British physician, to the FDA. Sweden has chosen not to sanction Accutane for general marketing and requires doctors to submit a special request to the government to prescribe it, according to FDA official Franz Rosa.

At the hearing, some participants suggested that FDA make the drug available only through Board-certified dermatologists or particular medical centers. But the agency has never before limited doctors' prescribing powers. At the hearing, FDA commissioner Frank Young questioned whether the agency actually has the legal authority to narrow the availability of the drug to certain doctors or centers.

For its part, Roche proposes to change the product label again to stipulate, for example, that the user "is reliable in understanding and carrying out instructions." The company also proposes to offer doctors standard informed consent forms for patients and pay costs for a patient to visit an obstetrician-gynecologist to rule out pregnancy and receive contraception counseling.

Public health officials are also concerned that other retinoids on the market are causing birth defects. Last year, Roche began selling Tegison, or etretinate, in the United States to treat severe psoriasis. Tegison, also a teratogen, has a half-life perhaps as long as a year. Accutane stays in the body for a week or less. Although there are no reports of birth defects in the United States, American public health officials are aware of seven cases overseas.

They also wonder whether megadoses of vitamin A are causing birth defects. Although there is no evidence to indicate that a problem exists, the relationship has not been well studied, Erickson says. Animal studies show that vitamin A is a teratogen.

Referring to Accutane, Erickson says that "we [in the medical community] were naive to think publicity and warnings would be enough. In retrospect, we should have made a fuss sooner." ■ **MARJORIE SUN**

Fresh Look at Acid Rain

On the same day that Canadian Prime Minister Brian Mulroney came to Washington to discuss trade issues and to press for acid rain controls, the newly appointed head of the U.S. acid rain research program was called before a congressional committee to answer the many criticisms of the program he inherited.

What began as a combative session ended amicably when the new executive director of the National Acid Precipitation Assessment Program (NAPAP), James R. Mahoney, agreed to "recall" the contentious executive summary of NAPAP's 1987 interim report.

There are "grounds for hope" said James Scheuer (D–NY), chairman of the subcommittee on natural resources, agriculture research, and the environment of the House Science, Space and Technology Committee, which held the hearings.

Mahoney, a Ph.D. meteorologist who for the past 5 years headed Bechtel's environmental group, took over as executive director of the interagency program in March, replacing J. Laurence Kulp, who resigned amid intense criticism last September. In a 1987 report the General Accounting Office (GAO) criticized Kulp for the program's extensive delays—the 1985 interim assessment was not released until mid-1987—for his micromanagement style, and for neglecting policy analysis, in particular, the congressionally mandated assessment of the economic impact of acid rain effects and controls.

Most of the criticism, however, has surrounded the 1987 interim assessment, the culmination of 5 years of research and $300 million (*Science*, 18 September, 1987, p. 1404). The problem was not the four-volume report but rather the 35-page executive summary, personally written by Kulp, which was widely criticized as a misleading attempt to downplay the severity of acid rain effects. Canada's environment minister Tom McMillan denounced the summary as "voodoo" science. Kulp resigned a week after the report was released.

At the hearing Mahoney was repeatedly pressed for his opinions on whether the executive summary is "fair and accurate." Mahoney conceded that the summary differs from the report in terms of "emphasis, definition, and issues covered" but added that the summary is not as far from the underlying science as some critics have portrayed it.

"Why not rewrite it?" asked Scheuer. After some haggling, Mahoney agreed to do just that; he promised to have an "updated" summary or document of some kind back before the committee by Labor Day.

"Dr. Mahoney's pledge to issue a new report is an implicit repudiation of the interim assessment," Scheuer told *Science*. "The new report will be a litmus test of whether Dr. Mahoney can restore the damaged credibility of the NAPAP program."

In terms of the final assessment, NAPAP's extensive research program will continue unchanged, said Mahoney, but plans for assessment have been revised dramatically to allow increased outside review. NAPAP will issue a "state of the science" report in summer 1989 and the final assessment, focusing on the severity and geographic scope of acid rain effects and on the usefulness of various control strategies, in fall 1990.

The report will not make policy recommendations—"that is for Congress and the executive branch," says Mahoney—but will evaluate the costs and benefits of a few plausible control scenarios. This marks a change for NAPAP, which under Kulp had pulled back from economic analysis. All methodologies will be rigorously documented and made available, Mahoney says, so that others in Congress and the executive branch can use them to evaluate additional control strategies. A detailed plan for the integrated assessment will be sent out for review within 3 or 4 months, Mahoney said, and will be released in final form in late 1988.

In another change from his predecessor, Mahoney is bringing in five new scientists specifically to direct the assessment effort, returning to an earlier model of NAPAP organization. Kulp had restructured NAPAP, abolishing the separate task group charged with managing the assessment and taking on the job himself. Moreover, Mahoney vowed to complete the assessment on time, which could be a first for NAPAP. ■ **LESLIE ROBERTS**