methodology was often flawed and that the experiment should be redone. In its review of more than 3000 pesticides, for example, the committee discovered deficiencies in half of the teratology studies and two-thirds of the genetic toxicity experiments. For cosmetic ingredients, it recommended that 75 percent of the tests for eye irritation and 40 percent of studies examining human sensitivity to the chemicals be performed again.

In general, the findings of the committee indicated that the amount of information available about chemicals correlated with the degree of federal regulation. Of all the categories, drugs have been most adequately tested while chemicals in commerce were studied the least. The committee stated that information about human exposure was scant, noting that "there are few legal reporting requirements for human exposure."

The study was conducted at the request of the National Toxicology Program which sought guidance about how to decide which chemicals of the 5 million in existence to test first and what tests should be conducted. Chairman of the committee was James L. Whittenberger, director of Southern Occupational Health Center at the University of California at Irvine.—**MARJORIE SUN**

## Dingell Warns Reagan on Cancer Appointments

Representative John D. Dingell (D–Mich.), chairman of the House subcommittee that oversees the National Institutes of Health, has written President Reagan a stern letter telling him he should improve the quality of his appointments to the National Cancer Advisory Board.

The board has 18 members, 12 of them physicians and scientists, who serve staggered 6-year terms. This year six members, all of them scientists, are retiring. There are no Ph.D.'s among the remaining members.

Dingell notes that Reagan's 1982 appointments—the four new scientist members are all practicing physicians—"did not adequately address" basic research. The result is that the board "is either underrepresented or has no representation at all in at least the following areas: virology, immunology, carcinogenesis, pediatric oncology, and medical oncology."

Dingell writes: "The unfortunate propensity of your Administration to undervalue substantive scientific expertise cannot be tolerated," and calls on Reagan to appoint people "whose research qualifications are impeccable."

Dingell's letter was inspired in part by a letter from five scientists, published in *Science* (20 January 1984), expressing concern about the board's scientific competence and noting that in 1982 none of the candidates proposed by NIH was appointed. NIH's 1984 list is now in the White House and selections should be announced in about a month.

—**CONSTANCE HOLDEN**

## Russian Influence in Science Diminishing

The impact of Soviet science on the rest of the world has declined "dramatically" since the height of détente, according to an analysis of citations from Russian scientific articles.

Andrew Sessler and Rita La Brie of Lawrence Berkeley Laboratory found that even in mathematics, where the Soviets' work is generally acknowledged to be world-class, Soviet contributions have been scanty as judged by citations from their journals.

The study used the *Science Citation Index* to get a list of 3942 journals, ranked according to the number of articles they contain, of which 63 were from the Soviet Union. Their leading series of publications, *Nauk Doklady* (journals put out by the Soviet Academy of Sciences), ranked third in total number of articles, but fell to 82 when ranked according to average number of citations per article, or "impact."

The total number of items published in the Soviet journals fell from 18,506 in 1975 to 15,014 in 1981. During the same period there was a worldwide increase by 67 percent to more than 700,000 items. Ranked by impact, the Soviet journals had fallen to 2442 in the total field of 3942.

The authors found it "surprising" that in half the 128 fields listed in *SCI* no Soviet journals are listed as major contributors. These include anatomy, alcoholism, education, embryology, energy, entomology, forestry, materials sciences, nutrition, mineralogy, plasma physics, psychology, radiology, statistics, and veterinary medicine. Publications in many fields, of course, are not available because they impinge on military matters—such as aerospace engineering and computers.

Even in areas where Soviet journals are plentiful, the impact rating stands far below that of the most-cited journal in the field. In chemistry, for example, the highest ranked journal, *Chemical Reviews*, has a rating of 10.581 compared with 1.124 for the top Soviet journal. In physics the comparable figures are 16 and 2. Mathematics fares better: 1.135 versus 0.304.

Some of the apparent low impact of Soviet science is owing to the fact that many of the most cited Soviet articles are published in Western journals. Francis Narin of Computer Horizons in New Jersey, who participated in a study of Soviet citations covering the mid-70's (published last year in *Social Studies of Science*), says there are really two sets of articles in any given field: those published in the West and cited by Western scientists, and those published in Soviet journals and cited by Soviets. "Even in areas of known excellence they are undercited" by the rest of the world, he says.

Soviet experts are inclined to believe that the main cause for the decline in citations has been the drying up of contacts with the West. Loren Graham of the Massachusetts Institute of Technology points out that the thousands of Russian and American scientists involved in exchanges have dwindled to a couple of hundred, and there has been a concomitant loss of interest in Russian science.

At the same time, there are suspicions that the quality of Soviet science has also suffered, in large part because of increased anti-Semitism and the emigration of Jews, particularly mathematicians. "There is not a good institute in Moscow that hasn't lost some of its staff to emigration," says Graham.

Graham quotes mathematician Lipmann Behrs to the effect that the Soviets seem bent on crippling a field—mathematics—in which they have long possessed an extraordinary depth of talent and tradition of excellence.—**CONSTANCE HOLDEN**