

# Scientist Thinks Some Chemicals More Harmful Than Radiation

Some chemicals may constitute an even more serious genetic risk than radiation. Prof. James F. Crow, Chairman of the Genetics Department at the University of Wisconsin, and Chairman of the Genetics Study Section of the National Institutes of Health, writing in the current issue of *Scientist and Citizen*, warns of this hazard to future generations.

The problem was discussed in a 1966 conference sponsored by the NIH Genetics Study Section, but the report of that conference has not yet been published. Now the full report of those deliberations is presented by Dr. Crow.

Thousands of chemical compounds are used in industry, agriculture and medicine, and reach people through food, drugs and air pollution. These

chemicals are screened for possible health effects but it has been learned that a chemical compound may have no observable harmful effect on a living organism (such as an experimental animal), yet may cause mutations in the animal's offspring, or later generations.

While it is possible that a chemical which causes mutations in bacteria or even mice, may be genetically harmless to people, nevertheless, says Dr. Crow, "...identity of the genetic material in all organisms implies that a chemical that is mutagenic to one species is likely to be in others and must be viewed with suspicion."

The report in *Scientist and Citizen* recommends that tests for genetic harm (mutagenicity) become a routine part of the screening of chemicals to which

people will be exposed, and that an up-to-date register of those chemicals found to be mutagenic be kept and the information made generally available.

Moreover, it is possible, according to this report, "even with the most rigorous screening procedures, that there will be widespread unwitting exposure of human populations to potent mutagens."

This would be very difficult to detect, because the consequence would be to increase the frequency of birth defects already present in the population.

At present, there is no feasible way of detecting promptly a small or moderate increase in the human mutation rate, but Dr. Crow suggests that it might be possible to detect an increase so great as to constitute a "genetic emergency," and recommends that this possibility should be carefully explored.

# The Sins of Mankind?

(Exclusive to the Tundra Times)

Recent discoveries of a vast reserve of oil in the Arctic has stirred world-wide attention in business. Alaska will contribute greatly to this need of oil resources. This of course means fuels for various needs in home and industrial uses.

This subject of oil and gas is related to vast consumption and combustion. Combustion then leads to the problem of smog (ice-fog in Alaska).

Unless research scientists find a way or means to alleviate this problem, it is here to stay. Very little is known yet on how to arrest air pollution. The most probable cause of pollution are the chemical additives used with oil and gas. (Which include all oil-based products such as paints, plastics, and coal.)

Although the amount of contamination in oil-derivate based products may show insignificant, further extensive research may show otherwise, based on the use of gas concentrates used in combustion engines. Contamination from one source, such as gas, may not be the greatest threat, but, rather a complex combustion of different sources.

This may be called the contamination carriers, such as air or water, which are used extensively either by force or natural means. If research scientists can create or harness a substance or material that can adhere to contaminants, it can pinpoint the exact cause and cure.

To further define various causes of contamination, here are several examples—paper matches—these use oil distillates, chemicals, and phosphorous. Gas lighters emit toxic fumes or vapors before or after ignition. As far as using cigarettes perhaps the paper or adhesive used to roll them may be a factor.

This again leads to the related subject—reaction. Reaction of foreign materials or substances that may change once it is received in the body. All these contaminants may be linked with illnesses which may result in death.

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## ISEGR Announces Major Study Of Alaska's Fisheries Resources

Plans for a major study of Alaska's fisheries resources were announced last week by Victor Fischer, director of the University of Alaska's Institute of Social, Economic and Government Research.

The \$127,000 year-long study is financed by a \$97,000 grant from the Economic Development Agency of the U.S. Department of Commerce. The additional \$30,000 consists of \$15,000 each from the State of Alaska and from the institute.

"The purpose of the study is to examine and analyze the potential contribution to Alaska's economic development of the fisheries resources in Alaskan waters and the adjacent high seas," Fischer explained.

Fischer stressed that the project will be carried out in collaboration with all concerned state and federal agencies working in conjunction with all segments of the fishing industry.

"The study has several primary objectives," Fischer said. "We first want to describe the fisheries resources in detail, including information on the geographical and seasonal abundance of 12 major species groups."

"Market potential for each group will then be assessed in terms of the domestic and international demand for each, with projections of any foreseeable demand. The prevailing technology of catching and processing will be described, together with the outstanding features of transportation and distribution."

Fischer said the next major step would be to describe and assess the present organization, physical plant, and equipment of the fishing and processing industries and marketing institutions in Alaska and elsewhere.

"We also hope to describe the social and economic characteristics and development problems of Alaska communities dependent on, or potentially benefiting from the development of, fisheries resources," Fischer said.

"We then hope to set forth alternative sets of goals for fisheries-related economic development in Alaska, to examine alternative development strategies for achieving these goals, and to develop appropriate conclusions and recommendations."

"A review committee to include broad government and industry participation is being set up," Fischer said. "The committee will include industry advisors recruited from all aspects of the industry and from the staffs of state and federal agencies concerned with fisheries and with economic development."

Several nationally known fisheries experts will participate in the project.

These include Clive Southey, a fisheries economist now at the University of British Columbia;

Hiroshi Kasahara of the United Nations Development Programme; Ralph W. Johnson, professor of law, James A. Crutchfield, professor of economics, Richard A. Cooley, associate professor of geography, all of the University of Washington; and Anthony D. Scott, professor of economics at the University of British Columbia.

Additional technical personnel will be selected in consultation with the U.S. Bureau of Commercial Fisheries and the Alaska Department of Fish and Game.

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