

## **John W. Gofman, 88, Scientist and Advocate for Nuclear Safety, Dies**

By JEREMY PEARCE

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Dr. John W. Gofman, a nuclear chemist and doctor who in the 1960s heightened public concerns about exposure to low-level radiation and became a leading voice against commercial nuclear power, died on Aug. 15 at his home in San Francisco. He was 88.

The cause was heart failure, his family said.

In 1964, while he was director of the biomedical research division at Lawrence Livermore National Laboratory in California, Dr. Gofman helped start a national inquiry into the safety of atomic power. At a symposium for nuclear scientists and engineers, he raised questions about a lack of data on low-level radiation and also proposed a wide-ranging study of exposure in medicine and the workplace, from fallout and other sources.

With a colleague at Livermore, Dr. Arthur R. Tamplin, Dr. Gofman then looked at health studies of the survivors of Hiroshima and Nagasaki, as well as other epidemiological studies, and conducted his own research on radiation's influences on human chromosomes. In 1969, the two scientists suggested that federal safety guidelines for low-level exposures be reduced by 90 percent.

The findings were contested by the Atomic Energy Commission, and the furor made Dr. Gofman a reluctant figurehead of the antinuclear movement. In 1970, he testified in favor of a legislative bill to ban commercial nuclear reactors in New York City and told the City Council that a reactor in urban environs would be "equal in the opposite direction to all the medical advances put together in the last 25 years."

Both he and Dr. Tamplin left Livermore in the 1970s, and Dr. Gofman went on to become an expert witness in radiation-exposure lawsuits and help found an advocacy group, the Committee for Nuclear Responsibility, based in San Francisco. In an unsuccessful project, he and others called for a five-year federal moratorium on new nuclear power stations, citing problems in the safe storage of radioactive waste. Yet, for all his efforts as a nuclear gadfly, he did not oppose the building of nuclear missiles.

"Because we live in a dangerous world," he said in 1993, "I think the only thing you have is the deterrence value" of such weaponry.

Dr. Gofman's appearance in the nuclear debate surprised some colleagues, since a thrust of his earlier research had been in cardiology. In the late 1940s and '50s, he and his collaborators investigated the body's lipoproteins, which contain both proteins and fats, and their circulation within the bloodstream. The researchers described low-density and high-density lipoproteins and their roles in metabolic disorders and coronary disease.

In his earliest work, while still a graduate student at the University of California, Berkeley, Dr. Gofman studied nuclear isotopes and helped to describe several discoveries, including protactinium-232, uranium-232, protactinium-233 and uranium-233. He also helped to work out the fissionability of uranium-233.

John William Gofman was born in Cleveland. He graduated from Oberlin College, and received a doctorate in nuclear and physical chemistry from Berkeley in 1943. Dr. Gofman went on to earn a medical degree from the University of California, San Francisco, in 1946.

He joined Berkeley in 1947 and retired as professor emeritus of molecular and cell biology in 1973.

With Egan O'Connor, he wrote a book, "X-Rays: Health Effects of Common Exams" (1986). He also wrote "Radiation-Induced Cancer from Low-Dose Exposure: An Independent Analysis" (1990).

Dr. Gofman's wife, Dr. Helen Fahl Gofman, a pediatrician, died in 2004.

He is survived by a son, Dr. John D. Gofman, an ophthalmologist, of Bellevue, Wash.