

# Science and Law

## Los Angeles Times

### 27 Chemicals Added to List of Toxics Under Prop. 65

BY PAUL JACOBS JUNE 19, 1987

Agreeing that testing of chemicals in experimental animals is a valid way of showing the risk of cancer or birth defects in humans, Gov. George Deukmejian. . .added 27 chemicals to the list of substances covered by Proposition 65. . .

### First Concrete Signs

The actions are the first concrete signs. . .to. . .end a debate Deukmejian started last February when he initially listed only chemicals proven to cause cancer in humans.

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Defendant [claimed] that Proposition 65 requires only known human carcinogens and reproductive toxins to be listed. The trial court. . . issued a preliminary injunction. . . to publish a list of substances that includes. . . the known human and animal carcinogens. . . We shall affirm.

\* \* \*

T]he suggestion that only known human carcinogens are subject to the Act ignores the plain language of [the statute].

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*Industry groups are fighting  
government regulation by  
fomenting scientific uncertainty*

## DOUBT Is Their Product

By David Michaels  
Photographs by Mindy Jones

Few scientific challenges are more complex than understanding the health risks of a chemical or drug. Investigators cannot feed toxic compounds to people to see what doses cause cancer. Instead laboratory researchers rely on animal tests, and epidemiologists examine the human exposures that have already happened in the field. Both types of studies have many uncertainties, and scientists must extrapolate from the evidence to make causal inferences and recommend protective measures. Because absolute certainty is rarely an option, regulatory programs would not be effective if such proof were required. Government officials have to use the best available evidence to set limits for harmful chemicals and determine the safety of pharmaceuticals.

Uncertainty is an inherent problem of science, but manufactured uncertainty is another matter entirely. Over the past three decades, industry groups have frequently become involved in the investigative process when their interests are threatened. If, for example, studies show that a company is exposing its workers to dangerous levels of a certain chemical, the business typically responds by hiring its own researchers to cast doubt on the studies. Or if a pharmaceutical firm faces questions about the safety of one of its drugs, its executives trumpet company-sponsored trials that show no significant health risks while ignoring or hiding other studies that are much less reassuring. The vilification of threatening research as "junk science" and the corresponding sanctification of industry-commissioned research as "sound science" has become nothing less than standard operating procedure in some parts of corporate America.

In 1969 an executive at Brown & Williamson, a cigarette maker now owned by R. J. Reynolds Tobacco Company, unwisely committed to paper the perfect slogan for his industry's disinformation campaign: "Doubt is our product since it is the best means of competing with the 'body of fact' that exists in the mind of the general public." In recent years, many other industries have eagerly adopted this strategy. Corporations have mounted campaigns to question studies documenting the adverse health effects of exposure to beryllium, lead, mercury,

vinyl chloride, chromium, benzene, benzidine, nickel, and a long list of other toxic chemicals and medications. What is more, Congress and the administration of President George W. Bush have encouraged such tactics by making it easier for private groups to challenge government-funded research. Although in some cases, companies may be raising legitimate arguments, the overall result is disturbing: many corporations have successfully avoided expense and inconvenience by blocking and stalling much needed protections for public health.

### The Taxicab Standard

A GOOD EXAMPLE of the current battles between industry and science is the controversy over beryllium. This lightweight metal is vital to the production of nuclear warheads because it increases the yield of the explosions; throughout the cold war, the U.S. nuclear weapons complex was the nation's largest consumer of the substance. Beryllium and its alloys are now used to make electronics equipment and even golf clubs. But the metal is also extremely toxic—breathing in tiny amounts can cause chronic beryllium disease (CBD), a debilitating ailment that scars the lungs. Victims have included not just the machinists who worked directly with the metal but others simply in the vicinity of the milling and grinding processes, often for very short periods. One accountant developed CBD after working for a few weeks each year in an office near where beryllium was being processed. CBD has also been diagnosed in people living near beryllium factories.

As assistant secretary of energy for environment, safety and health from 1998 to 2001, I was the chief safety officer for the nuclear weapons complex, responsible for protecting the health of workers at production and research facilities as well as for safeguarding the surrounding communities and environment. When President Bill Clinton appointed me, the Department of Energy's exposure standard for beryllium had not changed since 1949, some years after the substance's health dangers had become clear. In response to a crisis involving many sick workers and community residents, two scientists working with the Atomic Energy Commission estimated what

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How Industry's Assault on Science  
Threatens Your Health

David Michaels