## Journal of Pharmaceutical Sciences



FEBRUARY 1976

**VOLUME 65 NUMBER 2** 

MARY H. FERGUSON Editor

L. LUAN CORRIGAN Assistant Editor

SHELLY ELLIOTT

Production Editor

JANET D. SHOFF Copy Editor

EDWARD G. FELDMANN Contributing Editor

SAMUEL W. GOLDSTEIN Contributing Editor

LELAND J. ARNEY
Publications Director

## **EDITORIAL ADVISORY BOARD**

JOHN AUTIAN

HARRY B. KOSTENBAUDER

LYNN R. BRADY

CARL J. LINTNER, JR.

WILLIAM O. FOYE

DAVID E. MANN, JR.

WILLIAM J. JUSKO

GERALD J. PAPARIELLO

The Journal of Pharmaceutical Sciences is published monthly by the American Pharmaceutical Association at 2215 Constitution Ave., N.W., Washington, DC 20037. Second-class postage paid at Washington, D.C., and at additional mailing office.

All expressions of opinion and statements of supposed fact appearing in articles or editorials carried in this journal are published on the authority of the writer over whose name they appear and are not to be regarded as necessarily expressing the policies or views of the American Pharmaceutical Association.

Offices. Editorial, Advertising, and Subscription Offices: 2215 Constitution Ave., N.W., Washington, DC 20037. Printing Offices: 20th & Northampton Streets, Easton, PA 18042

Annual Subscriptions—United States and foreign, industrial and government institutions \$50, educational institutions \$50, individuals for personal use only \$30; single copies \$5. All foreign subscriptions add \$5 for postage. Subscription rates are subject to change without notice. Members of the American Pharmaceutical Association may elect to receive the Journal of Pharmaceutical Sciences as a part of their annual \$60 (foreign \$65) APhA membership dues.

Claims—Missing numbers will not be supplied if dues or subscriptions are in arrears for more than 60 days or if claims are received more than 60 days after the date of the issue, or if loss was due to failure to give notice of change of address. The Association cannot accept responsibility for foreign delivery when its records indicate shipment has been made.

Change of Address—Members and subscribers should notify at once both the Post Office and the American Pharmaceutical Association, 2215 Constitution Ave., N.W. Washington, DC 20037, of any change of address.

N.W., Washington, DC 20037, of any change of address.

© Copyright 1976, American Pharmaceutical Association, 2215 Constitution Ave., N.W., Washington, DC 20037; all rights reserved.

## THE LESSON FROM KEPONE

Let me begin by stating that I believe in pesticides. I believe they work; I believe their value outweighs their drawbacks; I believe they are needed if people are to live in reasonable comfort, enjoy health, and avoid a starvation diet. Indeed, I was one of those who felt that the action taken several years ago against DDT was too precipitous and too severe.

Moreover, as a weekend gardener of sorts, I have done my own full share of spraying, dusting, and otherwise bombarding the armies of insects that regularly invade the grounds surrounding my home from spring through fall each year. And for this purpose I maintain a veritable arsenal of bottles, bags, boxes, and tubes filled with a broad variety of chemicals that would have been the envy of the organic chemistry stockroom attendant back during my school days.

Having said all this, however, I am nonetheless appalled, dismayed, and, yes, even outraged over the so-called Kepone incident which first came to light several months ago in the town of Hopewell in southern Virginia. The manufacturing conditions under which this insecticide was produced were completely devoid of even the most elementary controls or care. Had the manufacturer set out purposely to poison his employees, destroy his town, and despoil the surrounding environment, a more effective job probably could not have been done.

Thriller fiction films depicting an enemy using biological warfare to sabotage a city's entire water supply pale by comparison with this real-life horror story. Air-borne contamination has spread to a radius of at least 60 miles; already, a major seafood-producing waterway system has been closed to fishing; and the extent of the damage is still in the early stages of assessment.

This did not come about through an accident or some natural disaster. Nor did it happen through simple carelessness such as that which would result from an undetected leak. It was due to gross, blatant disregard for the most obvious contamination. Kepone dust was so prevalent throughout the town and so thick in the plant that one observer is reported to have exclaimed that "if the plant had been producing water instead of Kepone, half the work force would have drowned in the mess of contamination!"

The plant producing the Kepone was reported to be a subsidiary operated by one of the giants in the American chemical industry. Consequently, the incident cannot be brushed off simply as the work of a single, greedy wayward, or even that of a small group of profit-hungry, irresponsible fly-by-nighters.

Simply stated, this firm failed to demonstrate the barest moral responsibility or the least concern for human welfare and quality of life. Such callous disregard will most surely be met by harsh restrictions and regulations. The full value that Kepone might have otherwise contributed to the general welfare, had it been employed judiciously and wisely, will probably be greatly diminished or even lost altogether as a result of current public indignation and forthcoming legislative reaction ensuing from this man-made disaster.

Sadly, as a result of this one company's deeds, the entire chemical industry will be tarred with the broad brush of distrust and a diminished public image. And who can blame the common citizen or the average legislator for reacting in this manner? There really is no basis for them to believe or expect that sister firms in the industry would not behave in the same manner if restrictions are not enacted to prevent such a reoccurrence.

Oftentimes, various observers have noted the close similarity between the chemical industry and the pharmaceutical industry. This similarity pervades many comparable features of the two industries, and one such aspect of commonality relates to public perception. Hence, the drug industry can learn a lesson—or actually a number of lessons—from the Kepone incident.

For our present purpose, it will be sufficient to focus attention on but one of the potential lessons derivable from this episode; namely, that the public image of the particular industry as a whole—or of a profession for that matter—will be no greater than the perceived performance of its weakest member. In turn, this standard of evaluation will also determine the breadth and depth of regulatory control that government will apply to monitor and control the operation of that industry or profession.

Hence, instead of creating doubts and suspicions regarding the quality of unnamed drug products and unnamed drug producers, the pharmaceutical industry would do a far greater service to everyone by quietly taking whatever constructive action is necessary to ensure that the level of performance of all manufacturers is sufficiently high so as to assure pharmacists, physicians, and patients that every drug product on the market will be safe, effective, and perform as expected.

—EGF