

EDITORIAL

## **Abuse\* of the Term "Amphetamines"**

There have been countless articles appearing in the scientific literature over the last few years capitalizing on the problems of drug abuse. During this period there has been an increasingly frequent apology for the drug-abuse victim through some rationalization of his role in social terms, while at the same time imbuing the abused drug with a defective personality. Thus, one finds attacks on "abuse drugs" as if they had, inculcate within their chemical makeup, virtue or vice. The vocabulary employed in reference to these drugs confirms this role, and an outrageous example is the wide usage of the term "amphetamines."

There is a unique chemical with the trivial name amphetamine which, in precise chemical terms, is phenylisopropylamine or 2-amino-1-phenylpropane. There can be no defense for the use of this name in the plural sense. It is true that there are a number of families of materials that bear some relationship to this paradigm, but each of these should be recognized and described in terms of their own collective properties; each of these separate groups should be identified with the scientific discipline which has defined it.

From the pharmacologic point of view, amphetamine is a sympathomimetic stimulant, and the use of the collective term "amphetamines" implicitly includes all drugs which find similar medical application. Yet, the Physicians' Desk Reference, under anorexics, has a subdivision entitled "amphetamines" listing such examples as "Desbutal" (a mixture of pentobarbital and methamphetamine) and "Ambar" (a mixture of phenobarbital and methamphetamine); neither of these contain amphetamine nor are they recommended as

---

\*Editorials are solicited regarding the abuse of the term "abuse"—  
The Editor.

stimulants. Those drugs which one finds promoted as stimulants or analeptics, such as methylphenidate, ephedrine, mazindol, caffeine, often bear at best only a passing resemblance to the amphetamine molecule. The medical journals abound with articles entitled "The Extensive Overprescription of Amphetamines—" or "Use of Amphetamines in the Treatment of —." Inspection of the text usually shows that the term is used to embrace a common pharmacologic property.

The forensic interpretation is quite different. Respect is paid to the chemical structure of amphetamine and this property, as well as the assignment of stimulant action and a specific inclusion in the drug schedules, is implicit in the term "amphetamines." Scientific reports with titles such as "Identification of Illegal Amphetamines—" may be expected to consider only those specific drugs that meet these three requirements, regardless of their clinical or abuse popularity. In the toxicologic literature, the term is almost always employed to include just two drugs, amphetamine and methamphetamine, as well as their separate optical isomers.

To a chemist, "amphetamines" implies a family of structures containing an aromatic ring, an attached three carbon chain, and a nitrogen atom located at the beta position. There is no consideration of biologic activity; there is only the expectation of a molecular skeleton that contains, somewhere, the requisite atoms. One can also encounter the term "amphetamines" with some descriptive adjective, further complicating the literature and misleading the scientific community. As an example, the phrase "hallucinogenic amphetamines" presumably describes drugs that are hallucinogenic and that contain the chemical nucleus of amphetamine. Yet the pharmacologic class "hallucinogen" is controversial and probably inexact, and it in noway includes the drug amphetamine. Not infrequently a pejorative connotation can occur to the reader, if his principle discipline is not that of the author.

In the long run, the appearance of this term can only reflect upon the carelessness of the writer. Excellent acceptable substitutes exist that can convey the intended meaning. One can compare compounds to amphetamine pharmacologically with the term "amphetamine-like action" or, if needed, with some qualifier such as stimulants, sympathomimetics, or anorexogenics. One can collectively refer to close chemical relatives of amphetamine as "phenylisopropylamines" or gather them under some umbrella as "amphetamine analogs." One can even explicitly name the compounds or drugs under discussion. But the continued use of the unsupportable term "amphetamines" cannot be justified.

Alexander T. Shulgin  
1483 Shulgin Road  
Lafayette, California

---