Mass Spectra of Dexamethasone and Betamethasone

The work of Attinà[1] in this issue of the Journal questions an earlier report[2] on the distinction between betamethasone and dexamethasone by mass spectrometry. The spectra referred to were obtained, using reference standard materials, on an instrument that was unsophisticated by modern standards. Indeed, the instrument belonged to a local university and was used in a service capacity by the university staff and students. At the time, our laboratories did not possess a mass spectrometer.

On learning of the work of Attinà[1], an attempt was made to repeat the spectra with modern equipment[3]. The spectra obtained were similar but not identical to those reported by Attinà[1].

We can only speculate as to why the spectra obtained in 1969 were so different from each other and from spectra obtained on more modern instruments. There may have been preliminary decomposition because of the minimal control over conditions existing within the instrument, or there may have been a "memory" effect owing to the service nature of the instrument. Nevertheless, based on the spectra received in 1969, the interpretation was reasonable and consistent with analogous work as cited.

We are grateful that this matter has been brought to our attention and thank those involved.

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[1] M. Attinà, *J. Pharm. Sci.*, **69**, 991 (1980).
[2] B. A. Lodge and P. Toft, *ibid.*, **59**, 1045 (1970).
[3] Finnigan 4000, Hewlett-Packard 5980 quadrupole.

Commentary on Science

I would like to call attention to some lucid, perspicacious, and appropriate comments on science and then suggest that we all apply the stated criteria to our efforts in the pharmaceutical sciences.

". . .there is a natural history of science— (i.e.) *science, in any given field, goes through a patterned course of growth and development. For example, it seems to me right and natural that in any new field of scientific endeavor the observations are gross, the hypotheses speculative and full of errors, the measurements crude. More important, I hold the opinion that this is just as truly science as the use of the most refined hypotheses and measurements in a more fully developed field of study. The crucial question in either case is not the degree of refinement but the direction of movement. If in either instance the movement is toward more exact measurement, toward more clear-cut and rigorous theory and hypothesis, toward findings which have greater validity and generality, then this is a healthy and growing science. If not, then it is a sterile pseudo science, no matter how exact its methods. Science is a* developing *mode of inquiry, or it is of no particular importance. . . A science (should endeavor) to wrest from the phenomena of experience the inherent order they contain."*[1]

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[1] C. Rogers, in "Psychology: A Study of a Science," vol. III, S. Koch, Ed., McGraw-Hill, New York, N.Y., 1959, p. 189.

Sulfonamide Microcapsules from Gelatin–Acacia Coacervates

The authors of a recent research paper[1] pertaining to sulfamethoxazole microcapsules prepared from gelatin–acacia coacervates cited no studies relating the coacervation pH, the type or concentration of the flocculating (dehydrating) agent, or the exposure duration and concentration of formaldehyde to the properties of powdered products recovered therefrom. The effects of some of these factors as well as the extraction of sulfamerazine from intact microglobules retrieved from gelatin–acacia coacervates were, however, reported previously[2]. It should be apparent from a perusal of these papers[1,2] that there is considerable similarity between the methods used to produce and recover the sulfonamide microcapsules. Therefore, some substantive conclusions from the earlier study[2] would appear to be germane to the results and discussion of the more recent one[1].

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[1] H. Takenaka, Y. Kawashima, and S. Y. Lin, *J. Pharm. Sci.*, **69**, 513 (1980).
[2] D. W. Newton, J. N. McMullen, and C. H. Becker, *ibid.*, **66**, 1327 (1977).