would seem to be the means of achieving this approximation.

To test this hypothesis partially, two new magnetic baskets were built. The first conformed to the original specifications (1) but was made of 16-mesh instead of the original 8-mesh stainless steel wire. The second basket was constructed with 8-mesh wire and had larger dimensions: an inner diameter of 12 mm. and a length of 38 mm. instead of the 11 × 25-mm. dimensions of the original basket.

A tablet and capsule were selected to be tested. Pentobarbital tablets were prepared in our laboratories, which allowed control of the ingredient and manufacturing variables. Commercially prepared sodium butabarbital capsules were selected since a previous publication (1) showed that capsules manufactured in an automated manner show less variance than hand-packed capsules.

The pentobarbital tablets were tested in the three different size baskets and showed no clogging of the pores in any case. At least five tablets of the same formulation and hardness were run in each basket. The T_{50} percent values increased in the expected order as the dimensional and pore size of the baskets decreased. The T_{50} values of 10, 14, and 21 min. were found for the bigger basket, regular basket, and smaller pore basket, respectively. In varying the revolutions per minute of the stirring propeller from 60 through 150 for the pentobarbital tablets in the regular basket, a distinct difference can be seen. The T_{50} at 150 and 120 r.p.m. is very close at an average of 2.5 and 3.25 min. Decreasing the revolutions per minute to 90 and to 60 shows a significant reduction and difference, with the T_{50} equal to 7.5 and 14 min., respectively.

A comparison of the dissolution of the sodium butabarbital capsules in the three baskets shows little difference between the bigger and regular baskets, with the T_{50} equal to 26 and 29 min., respectively. The smaller pore basket did show an increase in the T_{50} to 38 min. The difference in the T_{50} in the regular basket as a function of revolutions per minute was small at 150 and 120, producing average times of 15 and 16 min., respectively. Decreases in propeller speed to 90 and 60 r.p.m. showed T_{50}'s of 21 and 30 min., respectively.

In conclusion, the adjustment of basket pore size and propeller revolutions per minute can produce significantly different dissolution profiles, which should be considered when comparing *in vitro* dissolution results from the magnetic basket in quality control or as a means of correlating *in vitro–in vivo* data.

(1) R. E. Shepherd, J. C. Price, and L. A. Luzzi, *J. Pharm. Sci.*, **61**, 1152(1972).

(2) T. E. Needham, R. E. Shepherd, and L. A. Luzzi, *ibid.*, **62**, 470(1973).

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BOOKS

REVIEWS

The Prostaglandins, Volume I. Edited by Peter W. Ramwell. Plenum, New York, NY 10011, 1973. 526 pp. 17 × 25.5 cm. Price $22.50.

Respected scientists have collaborated in this treatise to report on the present status of prostaglandin data and hypotheses in chemistry, physiology, and pharmacology. The chemistry of prostaglandins is presented in a functional manner. The chemical, metabolic, physiological, and pharmacological implications of altering bonds, specific groups, and steroidal configurations on this complex molecule are discussed. Methods of *in vitro* and *in vivo* synthesis of the primary prostaglandins and analogs from various chemicals are described.

Prostaglandins synthetase, its assay, and the hypotheses regarding physiological production of various prostaglandins *in vivo* are discussed. Working hypotheses are presented and defended by data for the physiological role of various prostaglandins in peripheral, central, and autonomic neurotransmission; renal, respiratory, GI, ocular, cardiovascular, lipid, and endocrine homeostasis; and male and female reproductive function. Data and hypotheses for possible roles of various prostaglandins in pathological states such as hypertension, asthma, inflammation, anaphylaxis, glaucoma, ocular trauma, and endocrine disorders are presented.

The possibilities of treating neurological, respiratory, GI, cardiovascular, renal, and lipid diseases with exogenous prostaglandins are explored. Results of using PGE_2 and $PGF_{3\alpha}$ for induction of term labor by the intravenous route and for induction of artificial abortions by the intravenous, subcutaneous, vaginal, extraovular, and intraamniotic routes are presented to demonstrate the practicability of prostaglandins for terminating pregnancy at all stages of gestation. In this rapidly developing field of research and development involving the chemist, physiologist, pharmacologist, and clinician, this volume is valuable to scientists in all of these disciplines in summarizing what often appear to be conflicting data and applying them to hypotheses.

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