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BRITISH PHARMACEUTICAL TECHNOLOGY CONFERENCE
9 - 11 April 1980
London

"Pharmaceutical manufacturers should be allowed to demonstrate bioequivalence in man, if their products fail to comply with arbitary in-vitro tests", said Professor J.G. Wagner (Upjohn Center for Clinical Pharmacology, U.S.A.) at the opening address of the British Pharmaceutical Technology Conference, held at the London Tara Hotel from the 9th to 11th April. Professor Wagner was reviewing some of the more interesting aspects of 22 bioavailability studies which he has been involved in over the last 17 years.

The British Pharmaceutical Technology Conference, sponsored by the Solid Dosage Research Unit, 49 Menlove Avenue, Liverpool L18 2EH, U.K., attracted delegates from seventeen countries. Twenty seven original research papers were presented from seven different countries acknowledging the international reputation that the Conference now enjoys. The Conference has developed to become an international forum for the discussion of research in pharmaceutical technology. Many of the papers presented are to be reproduced in Drug Development & Industrial Pharmacy.

Following Professor Wagner's bioavailability theme, Dr. J. L. Kanig (Edward Mendell Co. Inc., U.S.A.) emphasised the importance of bioavailability testing in his plenary lecture entitled the "Status of Dissolution Rate Measurement and the Relationship to Bioavailability". Dr Kanig voiced the opinion that the new U.K./U.S.A. catalogue of pharmaceutical excipients which is about to be published, may well be used by the regulatory authorities as an official "Codex" and this, thought Dr. Kanig may well be a

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source of ammunition in the bureocrats armary. Dr R. Gröning (Johann Wolfgang Goethe University, Frankfurt, W. Germany) described a novel flow through dissolution rate apparatus which gave good correlations between in-vitro and in-vivo results for five commercially available tablets and capsules of nitrofurantoin. The apparatus consisted of two interconnecting flow through cells; one cell acting as the "gastric" part and the other cell as the "intestinal" part of the model. Dr C. D. Hertzfeldt (Johann Wolfgang Goethe University, Frankfurt, W. Germany) showed that the development and programming of flow-through type dissolution models could be optimised by simulation using an anologue computer. "The preparation & Properties of Tablets containing Solid Dispersions of Indomethacin & Polyethylene Glycol 6000" was the title of a paper presented by Dr.J.L. Ford (School of Pharmacy, Liverpool Polytechnic,U.K.). Dr. Ford showed that tablets of indomethacin could be produced with dissolution rates 200 times greater than conventional tablets of indomethacin without polyethylene glycol. This novel method of utilising solid dispersions to improve dissolution rate provoked much discussion and interest from many delegates.

Tablet disintegration featured prominently at the Conference. Workers at the University of Pavia, Italy under the direction of Professor A. La Manna, had collaborated with Professor A.M. Guyot-Hermann at the University of Lille, France and Dr. J. Ringard of Bottu Laboratories, France to evaluate the disintegrating force of various tablet disintegrants. Their results showed that it was possible to critically evaluate compact disintegration by determining the maximum force developed in a special piece of apparatus. In another study Professor A Stamm and Dr D Gissinger had evaluated tablet disintegrant wettability, water uptake and swelling in an attempt to quantatatively assess tablet disintegrants. Much discussion took place about the applicability and the results of measuring tablet disintegration. Dr M. J. Groves (Travenol Laboratories Inc., U.S.A.) presented a first class review of the various methods available for measuring the particle size of sub-micron particles. Mr. P.J. Davies (School of Pharmacy, Brighton

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Polytechnic, U.K.) went on to discuss specific methods for particle sizing of inhalation aerosols.

Both speakers thought that the development of lazer methods could revolutionise particle size measurement.

The second day of the Conference was dominated by presentations concerned with pharmaceutical processing. Dr. H. Seager (Beecham Pharmaceuticals, U.K.) armed with 60 colourful slides explained how his company attempted to understand the compaction mechanisms involved when tablets were prepared by different granulation techniques. Mr. J.I. Wells (Beecham Pharmaceuticals, U.K.) evaluated the claims that a better direct compression vehicle could be produced using a combination of dicalcium phosphate and microcrystalline cellulose and also showed that granule properties could be modified by changing the granulation solvent. A new direct granulation method has been developed by workers at Liverpool Polytechnic, U.K. Dr. M.H. Rubinstein explained the advantages of this new method and how it could be applied to the preparation of paracetamol tablets. In a final paper, Dr. N.A. Orr (School of Pharmacy, Sunderland Polytechnic, U.K.) applied the classical mixing theory to determine the distribution of hydrocortisone in ointments on the skin. In most commercial ointments large lumps of hydrocortisone could be observed and in discussion this worried many of the delegates present. A highlight of the second day was the Conference dinner served in elegant surroundings on small tables bedecked with flowers.

Dr. R. Gurny (School of Pharmacy, University of Geneva, Switzerland) described a novel prolonged acting drug delivery system for the treatment of glaucoma, which attracted much discussion and comment. Dr. P. York (Industrial Pharmacy Unit, Bradford University, U.K.) in an elegant presentation showed that drug release from gelatin capsules can significantly be affected by the amount of moisture present. The findings were discussed in terms of the nature of the surfaces of the powder particles and factors such as powder bed permeability and water penetration rates. Miss P. Musikabhumma (School of

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Pharmacy, Liverpool Polytechnic, U.K.) showed that the moisture level of microcrystalline cellulose was critical and that compression properties of this material could be dramatically influenced by the degree of drying. In the final paper of the Conference, Dr.F. Carli (Farmitalia CarloErba, Italy) in perfect english delightfully explained how compaction pressure influences the capillary characteristics of compacts and how capillary penetration measurements can give useful information on the behaviour of pharmaceutical powders under compression.

Judging by the comments made by participants the Conference was very well received and everyone seemed anxious to register for the next Conference in two years time. The intention of the Conference was to review contemporary scientific developments in pharmaceutical technology in an informal convivial atmosphere. Certainly the Conference achieved these aims and very much more.

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