Bioavailability of Drugs

Editors:
B.B. Brodie
Consultant, National Heart and Lung Institute, National Institutes of Health, Bethesda, Md.
W.M. Heller
Executive Director, United States Pharmacopeial Convention, Inc., Rockville, Md.

87 figures and 18 tables
S. Karger · Basel · München · Paris · London · New York · Sydney · 1972
Published simultaneously as ‘Bioavailability of Drugs’

S. Karger · Basel · München · Paris · London · New York · Sydney Arnold-Böcklin-Strasse 25, CH-4011 Basel (Switzerland)

All rights, including that of translation into other languages, reserved. Photomechanic reproduction (photocopy, microcopy) of this volume or parts thereof without special permission of the publishers is prohibited.

© Copyright 1972 by S. Karger AG, Verlag für Medizin und Naturwissenschaften, Basel
Printed in Switzerland by Thun Offsetdruck, Birsfelden

Contents
Conference Data 7
Preface 8
Welcome Addresses 9
Introduction 15
Lawrason, F.D. (Dallas, Tex.): The Rationale for the Conference 17
Jollow, D.J. and Brodie, B.B. (Bethesda, Md.): Mechanisms of Drug Absorption and of Drug Solution 21
Levy, G. (Buffalo, N.Y.): Bioavailability, Clinical Effectiveness, and the Public Interest 33
Bearman, J.E. and Loewenson, Ruth B. (Minneapolis, Minn.): Design of in vivo Studies of Bioavailability – Biometrical Considerations 44
Ban, W.H. (Buffalo, N.Y.): The Use of Physical and Animal Models to Assess Bioavailability 55
Riegelman, S. (San Francisco, Calif.): Physiological and Pharmacokinetic Complexities in Bioavailability Testing 118
Fales, H.M. (Bethesda, Md.): Newer Physicochemical Methods Useful in Bioavailability
Panel Discussion on Case Histories in Bioavailability of Drugs

Doluisio, J.T. (Lexington, Ky.): Introductory Remarks of the Moderator 153
Leeson, L.J. (Summit, N.J.): Phenylbutazone 154
Glazko, A.J. (Ann Arbor, Mich.): Diphenylhydantoin 163
Conklin, J.D. (Norwich, N.Y.): Biopharmaceutics of Nitrofurantoin 178
O’Reilly, R.A. (San Jose, Calif.): Sodium Warfarin 181
Cook, D. (Ottawa, Ont.): Canadian Experience 190

Panel Discussion on the Significance of Bioavailability


Contents

Macek, T.J. (Rockville, Md.): The Official Compendia 204
Simmons, H.E. (Rockville, Md.): Food and Drug Administration 206
Walton, Charles A. (Lexington, Ky.): The Profession of Pharmacy 208
Azarnoff, D.L. (Kansas City, Kans.): The Profession of Medicine 211

Discussion

Gilman, A. (Bronx, N.Y.): Closing Remarks 215