

*Symposium on Mechanisms of
Gastrointestinal Absorption*

Foreword

IN order for any orally administered chemotherapeutic agent or nutrient to have any direct systemic effect, it must be absorbed from the gastrointestinal tract. Recent advances in this branch of biochemical science include methods of measuring absorption and the determination of the metabolic fate of test compounds and their rates of excretion. It can be stated categorically that these contributions have come primarily from studies on lipids, iron, calcium and vitamin B₁₂, where isotopic compounds are available. From these investigations, much has been learned about various means for the quantitative measurement of absorption and the determination of the factors which control it. Some of these factors are vitamin deficiency (vitamin B₆ deficiency reduces the absorption of vitamin B₁₂ and amino acids); the endocrine status (hypophysectomy impairs absorption of iron and vitamin B₁₂); environmental conditions such as deviations of temperature or pressure from normal (they alter the absorption of vitamins B₁₂ and iron); and the presence or absence of adjuvants, such as intrinsic factor for the absorption of vitamin B₁₂, and apoferritin for the absorption of iron.

Furthermore, the sites of absorption have been studied carefully. Such studies utilize electronic devices and surgical technics which permit the evaluation of absorption not only in intact animals but also in segments of the gastrointestinal tract.

The purpose of this symposium is to bring together investigators of different disciplines with a common interest in the problem of absorption. By so doing, different technics for measuring absorption and various concepts about the mechanism can be exchanged. Some of the papers presented during this symposium are published in this volume. Others are only mentioned because of previous publication in other journals. For the sake of completeness, readers may wish to refer to them. They are "Equipment and Methodology for Relating Gastrointestinal Absorption to Site of Drug Release," by S. Eriksen, J. V. Swintosky, E. J. Serfass, T. H. Lin, J. Abrams and F. M. Sturtevant (*J. Pharm. Sc.*, 50: 151, 1961); and "Intestinal Transport of Phosphate Action of Vitamin D, Calcium and Potassium," by H. E. Harrison and Helen C. Harrison (*Am. J. Physiol.*, 201: 6, 1961).

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