

PREFACE

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The present volume of BioThermoKinetics develops for the first time the explicit link between thermodynamics, metabolic control, bioenergetics and clinical applications. The fields of theoretical bioenergetics and the day-to-day problems faced in medical diagnosis and therapy appear to be far apart. Yet the proposed links which may sometimes have seemed rather artificial in the past, increasingly evolved towards tractable research concepts and begin to make their mark in the clinical environment. It is only by direct contact and collaboration between theoretical and clinical scientists, that a mutual understanding can be improved, common interests identified and problems of general importance solved.

The complexity of living systems - functional or diseased - is a plain fact for medicine; for modern science it remains a challenge. This naturally calls for an interdisciplinary evaluation of hypotheses, data, models and perspectives. One of the expectations of the clinician is that bioenergetics will provide improved methods and concepts for independent assessment of the physiological and pathological state of cells and tissues, as a quantitative aid in diagnosis, optimization of therapy and drug development. *What is Controlling Life?* is not a humble question. Neither is the task of clinical and interdisciplinary bioenergetics.