

# **THE SIMPLER NATURAL BASES**

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The simpler natural bases by George Barger

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**GEORGE BARGER**

**THE SIMPLER  
NATURAL BASES**



# MONOGRAPHS ON BIOCHEMISTRY

EDITED BY

R. H. A. PLIMMER, D.Sc.

AND

F. G. HOPKINS, M.A., M.B., D.Sc., F.R.S.

## GENERAL PREFACE.

THE subject of Physiological Chemistry, or Biochemistry, is enlarging its borders to such an extent at the present time, that no single text-book upon the subject, without being cumbrous, can adequately deal with it as a whole, so as to give both a general and a detailed account of its present position. It is, moreover, difficult, in the case of the larger text-books, to keep abreast of so rapidly growing a science by means of new editions, and such volumes are therefore issued when much of their contents has become obsolete.

For this reason, an attempt is being made to place this branch of science in a more accessible position by issuing a series of monographs upon the various chapters of the subject, each independent of and yet dependent upon the others, so that from time to time, as new material and the demand therefor necessitate, a new edition of each monograph can be issued without re-issuing the whole series. In this way, both the expenses of publication and the expense to the purchaser will be diminished, and by a moderate outlay it will be possible to obtain a full account of any particular subject as nearly current as possible.

The editors of these monographs have kept two objects in view: firstly, that each author should be himself working at the subject with which he deals; and, secondly, that a *Bibliography*, as complete as possible, should be included, in order to avoid cross references, which are apt to be wrongly cited, and in order that each monograph may yield full and independent information of the work which has been done upon the subject.

It has been decided as a general scheme that the volumes first issued shall deal with the pure chemistry of physiological products and with certain general aspects of the subject. Subsequent monographs will be devoted to such questions as the chemistry of special tissues and particular aspects of metabolism. So the series, if continued, will proceed from physiological chemistry to what may be now more properly termed chemical physiology. This will depend upon the success which the first series achieves, and upon the divisions of the subject which may be of interest at the time.

R. H. A. P.

F. G. H.

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THE  
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1914

TO  
H. H. D.



## PREFACE.

IN the following pages I have endeavoured to give an account of those basic substances of animals and plants which are of general biological interest, either because of their wide distribution, or on account of their close relationship to the proteins and phosphatides. In contradistinction to the typical vegetable alkaloids, these bases have a simple chemical constitution.

By a more or less arbitrary delimitation of the subject matter, involving for instance the total exclusion of purine bases, I have aimed at giving, in the space at my disposal, a somewhat detailed account of the chemistry of the bases dealt with, and of their derivatives. Some, like the amines and adrenaline, are remarkable on account of their physiological action, and in each case, therefore, a brief description of this action has been added. In this way I have endeavoured to make the monograph also of interest to those who are concerned with the biological rather than with the chemical aspect of the subject.

A brief chapter on the practical methods used in the isolation of the simple bases has been added, and special attention has been given to the bibliography which extends to the autumn of 1913.

It is a pleasant duty to express my great indebtedness to Dr. H. H. Dale, without whose advice and criticism much of the pharmacological sections would have remained unwritten.

G. B.

ENGLEFIELD GREEN,  
SURREY,  
*November, 1913.*

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