

# **MANUAL FOR THE PHYSIOLOGICAL LABORATORY**

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Manual for the Physiological Laboratory by Vincent Harris & D'Arcy Power

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BY

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### PREFACE TO THE FIRST EDITION.

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It has been customary for several years to issue to the class of Practical Physiology in St. Bartholomew's Hospital papers containing a short account of the histology and chemistry of the various organs, together with the methods employed in the preparation of the tissues for the microscope. The gradual increase in the number of these papers has induced the authors to collect and publish them, as they have found that in a large class it is almost impossible to teach practical histology without some definite text-book as a basis.

The excellent manuals of Foster and Langley, Schäfer, and Rutherford, possess the objection that they are somewhat too elaborate for the ordinary student, whilst they do not contain any epitome of histology—an omission which, in the opinion of the authors, greatly detracts from their utility.

This work may therefore prove in some respects more useful to the classes of practical physiology now established in the various medical schools, than those which have just been mentioned.

At some future time the authors hope to publish an account of the chief physiological instruments based on the same plan, with the methods for employing them.

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The authors beg to return thanks to Mr. Marrant Baker for many valuable suggestions; to Dr. Klein, F.R.S., for revising part of the histology; to Dr. Russell, F.R.S., for permission to publish the chemical memoranda, compiled under his direction; and to Mr. J. W. Groves, of King's College.

*March, 1880.*

## PREFACE TO THE SECOND EDITION.

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THE rapid sale of the first edition of this book, and the kind reception which has been accorded to it by many of the teachers of Physiology, both in the United Kingdom and in America, have encouraged the authors to bring forward a new edition.

Material alterations and additions have been made, and although the general arrangement has been maintained, it will be found that the sections on the methods of preparing tissues for examination have been almost entirely rewritten and corrected to date. In every case an endeavour has been made to describe those methods which are most practically useful, whilst many others have been purposely omitted as unnecessarily complicated. Various additions to the Histology, and the removal of some clerical errors, have rendered the second portion of the book more complete.

The section on Physiological Chemistry has been simplified by the introduction of more ample directions for the guidance of the student.

The third part comprises an account of some of the more simple physiological instruments, and of the chief experiments designed to demonstrate the properties of muscle and nerve. A considerable portion of this account has been used for some time in manuscript form in the authors' class, and has been found of service.

With an idea of impressing upon the student of medicine, for whom this book is more especially intended, the absolute necessity of acquiring a knowledge of healthy organs before proceeding to the examination of those which are diseased, a brief account of the ophthalmoscope, laryngoscope, and stethoscope has been appended.

In conclusion, the authors beg to offer their warmest thanks to Dr. Klein, F.R.S., and to Mr. F. J. M. Page, B.Sc., for much assistance in the sections upon Histology and Practical Physiology respectively. They have aided them materially, not only in suggestions and methods, but also in actual revision. The authors have also to thank Mr. Henry Power, Dr. Pye Smith, Dr. Lauder Brunton, F.R.S., Mr. McCarthy, Prof. Charles, Mr. Butlin, Dr. Sawtell, Dr. Ormerod and Dr. Murrell, as well as those gentlemen who are mentioned in the preface to the previous edition, for suggestions and help.

By the courtesy of several firms, many figures have been inserted, in addition to those which have been specially drawn by Mr. T. Godart.

*May, 1882.*