LECTURES
ON
THE ACTION OF MEDICINES
BEING THE COURSE OF LECTURES
ON
PHARMACOLOGY AND THERAPEUTICS
DELIVERED AT ST. BARTHOLOMEW'S HOSPITAL DURING THE SUMMER SESSION OF 1896.

BY

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L. B.
SIR TREVOR LAWRENCE, BART.,

TREASURER OF ST. BARTHOLOMEW'S HOSPITAL,

IN RECOGNITION OF HIS LOVE OF SCIENCE, ADMINISTRATIVE ABILITY, AND GENEROUS LIBERALITY.

AS WELL AS

IN GRATITUDE ACKNOWLEDGMENT OF MUCH PERSONAL KINDNESS,

THESE LECTURES ARE DEDICATED

BY HIS ATTACHED FRIEND

THE AUTHOR.
TO THE READER.

I may, perhaps, be pardoned for saying a word or two of introduction to the following Lectures in regard both to their matter, and to their manner. They are intended to give a general sketch of the mode in which drugs act upon the body, and they are arranged very much in accordance with the schedule for the examination in Pharmacology which was instituted by the Royal Colleges of Physicians and Surgeons, but which was abolished before any examination had actually been held. In the discussion which arose in regard to this examination previous to its abolition, much dislike of the schedule was expressed, although it had been introduced for the purpose of limiting the work that the student had to do, instead of increasing it. The schedule is here reproduced, and it will be seen that it may be very fairly used as a table of contents to the present book.

In regard to the manner of these Lectures, I may say that I am fully aware of the objections which may be brought against it. I acknowledge at once that the Lectures are imperfect. They are redundant in some parts, and scanty in others; they are not well adapted for the purpose of cramming, and any man who tries to pass an examination upon them alone will not be at all likely to get the maximum number of marks. But I do not think that lectures are intended for the purpose of cramming. Their use is not to supply the student with all the information he needs, but to awaken his attention, to excite his interest, to impress upon him certain points which will form a nucleus for his knowledge, and around which he may afterwards group more information. The first courses of lectures that I gave, in 1870 and 1871, were the fullest, the most complete, and, from the examination point of view, the most satisfactory. They were carefully written down and read aloud to the students, but, as I soon found out, students do not like read
lectures. Moreover, the amount of information I gave to them in the hour was far more than they could comfortably take up, and it seemed to me that even the best of them, in trying to grasp too much, got hold of too little, and the lazier ones did not even make an attempt. I then began to reconsider the matter, and thought of Solon's answer in regard to the laws which he had given to the Athenians. "Are those the best laws you can frame?" said his questioner. "No," said Solon, "but they are the best laws that the Athenians can keep." It appeared to me that Solon's advice had been taken also by a London preacher, who went to a friend of mine learned in history. "I am going to preach a sermon upon war," he said; "I want you to give me some facts." My friend rattled off half a dozen pieces of information. "Stop," said the preacher; "that is as much as my congregation will hold." In my lectures I have tried to follow this preacher's example, and not to stuff into each lecture as much information as could be given in the hour, but as much as I thought my audience would take up. Whether I have been right or wrong in so doing I must leave to the readers of these Lectures to judge.

It is with much pleasure that I acknowledge my obligation to Mr. M. Donaldson for the accuracy with which he took down the lectures in shorthand as they were delivered, and to Dr. Tunnicliffe for his kind assistance in revising them.

T. LAUDER BRUNTON.

SCHEDULE OF PHARMACOLOGY.

The Action of Medicinal Agents on the Body in Health and Disease.

The range of the Examination will extend to the following Medicinal Agents:—

The Application of Heat and Cold by both dry and moist methods.
Bleeding, Leeching, and Cupping.
Counter-irritation.
The Pharmacopoeial Drugs and preparations defined in the Schedule of Pharmacy.

The scope of the Examination, as regards the above Agents, will be held to include any of the following Actions:

Caustic action; the production of eschars, blisters, and pustules; the formation of protective coatings.

Actions on the peristaltic movements of the alimentary canal and on the secretions of the glands connected with it; on the processes of digestion; on the appetite. The production and arrest of nausea and vomiting.

Actions on the composition of the blood; on its corpuscles and leucocytes; on cell movements; on nutrition and metabolism.

Actions on the muscular walls of the heart and its intrinsic ganglia; on its accelerator and inhibitory apparatus; on the muscular coats of arteries and arterioles; on the blood pressure and blood flow. Rubefacient and irritant action; astringent action; arrest of hæmorrhage.

Actions on the processes of inflammation, acute and chronic.

Actions on absorption; on the absorption of serous and inflammatory effusions.

Actions on the secretory apparatus of the kidneys and the composition of the urine.

Actions on the cutaneous and mammary glands.

Actions on the movements of respiration and the secretion of the respiratory tract.

Actions on the higher cerebral functions. The production and prevention of sleep.

Actions on the sensory functions of the nervous system. The production of anaesthesia, local and general. The relief of pain. Actions on the special senses.

Actions on the reflex and motor functions of the nervous system and on muscular tissue. The production and arrest of spasm, convulsions, and cough.

Actions on the intrinsic muscles of the eye.

Actions on the gravid uterus; on the catamenial flow.

Actions on the temperature of the body; on pyrexia and hyperpyrexia.

Actions on specific materies morbi; on microbes and ferments; on the processes of putrefaction and infection.

Antidotal action with regard to other drugs.

It will also include—

The channels of absorption and elimination of drugs.
The principles of dosage: Idiosyncrasy, Accumulation, Toleration, Habit.
The usual toxic effects of—

Phosphorus.
Drugs containing *Arsenic, Mercury, and Lead.
Iodides, Bromides, and Salicylates.
Chloroform and Chloral Hydrate.
Morphine, Atropine, Strychnine, and Quinine.
Acetanilide and Phenazone.
Digitalis, Ergot, Camphor, Oil of Turpentine, and Cantharides.