

Although it may be considered by some a modern drug, yet the clinical use of the plant from which it is isolated dates back some 5000 years; and thirty-five years elapsed between its isolation and the discovery of its real value.

Ma Huang has been used in China by native physicians for thousands of years, and similar species of *Ephedra* have been employed as medicines in many other parts of the world since remote antiquity. It was not until 1885, however, that Yamanashi obtained an impure crystalline substance from the plant. Two years later, Nagai and Hori isolated the alkaloid in pure form. Miura found that the alkaloid was toxic in large doses, but advocated its use as a mydriatic. Its clinical value was not appreciated until 1917, when Amatsu and Kubota reinvestigated its properties; but their work passed unnoticed by the western world until 1923, when Chen and Schmidt began their researches.

The alkaloid ephedrine finds its chief use as a substitute for adrenalin, to which it is related in chemical structure; it is not so potent a substance, but it has the great advantage that it can be given by mouth. The authors describe in detail the actions of the drug on animals and its uses in the treatment of a variety of diseases in man. They also include a section on synthetic ephedrine and other related compounds.

The monograph gives a good though brief account of the work which has been carried out on the alkaloid during the past six years. Its perusal raises the question whether other valuable drugs may not be awaiting extraction from the herbs used by native physicians of the East.

The Metabolism of Tumours: Investigations from the Kaiser Wilhelm Institute for Biology, Berlin-Dahlem. Edited by Otto Warburg. Translated from the German edition, with accounts of Additional Recent Researches, by Dr. Frank Dickens. Pp. xxix + 327 + 5 plates. (London: Constable and Co., Ltd., 1930.) 40s. net.

THE work of Otto Warburg on the metabolism of tumours is so well known that it needs no introduction; but for investigators working on the metabolism of isolated tissues, frequent reference to his methods and results is a necessity, so that the publication of an English translation will be widely welcomed.

Apart from a short introduction on the technical details of methods, the book consists of reprints of papers published since 1908 by Warburg and his co-workers. The earlier papers deal with the oxidation process in sea urchin eggs and red blood cells; from 1923 onwards the researches deal chiefly with tumour tissues. The metabolism of a tumour cell is characterised by the production of lactic acid in the presence of oxygen or aerobic glycolysis; normal tissues produce the acid in the absence of oxygen, but in its presence it is further oxidised; in other words, normal tissues obtain their energy by

respiration, tumour tissues by the conversion of carbohydrate to lactic acid. The distinction between the two types, however, is not absolute: thus, tumours respire as well as showing aerobic glycolysis, whilst normal tissues can be made to develop the abnormal form of metabolism by interfering with their respiration. If a normal growing cell glycolyses aerobically, it usually dies; if it lives, a tumour results: hence, interference with the respiration in growing cells is the cause to tumours.

The English edition has been brought up to date by the inclusion of a few recent papers which were not in the German edition; it should prove of interest to a wide circle of readers.

Psychology.

Alcohol and Behaviour. By Prof. Sydney Smith. (The Henderson Trust Lectures, No. 10, delivered at the University of Edinburgh, 28th November 1930.) Pp. 37. (London and Edinburgh: Oliver and Boyd, 1930.) 6d.

It is very refreshing to read a lecture on alcohol without finding any bias or the influence of vested interest as is so often the case in articles of this kind. Prof. Smith, in "Alcohol and Behaviour", the Henderson Trust Lecture for 1930, has presented as impartial a study of the subject as we could wish for. There are some most interesting, and at the same time most surprising, statements. We would scarcely expect to find that there is no relation between alcohol and the murder rate, that, despite the fact that drunkenness has diminished to such an extent, yet there is an increase in offences of a sexual nature up to twice the 1909 level, and that offences against property have considerably increased in the same period. It is also surprising to read that the expectation of life in those more than thirty years of age is not in any degree impaired by the moderate consumption of alcohol. The author concludes by reminding us that as a nation we are becoming year by year more sober, but at the same time more dishonest and less moral.

Crime as Destiny: a Study of Criminal Twins. By Prof. Dr. Johannes Lange. Translated by Charlotte Haldane. Pp. 199. (London: George Allen and Unwin, Ltd., 1931.) 6s. net.

PROF. LANGE attempts to show that in monozygotic twins there is a very strong tendency for one child to be a criminal if the other one is. We are not inclined to agree necessarily as to the "dreadful influence" of alcohol in creating criminals, nor do we agree that criminal tendencies are so largely the result of hereditary factors. The influence of bad environment and evil influence in childhood is of so much more importance. Much more can be done with problems of the young delinquent by means of child guidance than by any questions of sterilisation or the prevention of cross-breeding of inferior or criminal types.