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Medical Research in Great Britain.¹

PRIOR to 1913, relatively little had been done to foster or subsidise medical research in the United Kingdom. It is true that in almost all the universities there were one or two exhibitions or scholarships, but on such a small pecuniary scale that they could only be regarded as temporary stepping-stones for a select few who had, or imagined they had, a *flair* for original investigation. For scholarships of greater value the pioneer was the Grocers' Company, which by its benefactions enabled many men to adopt research careers in which they afterwards attained great distinction. In the present century, three great benefactions, by private individuals, have been given to Great Britain. Lord Iveagh gave 250,000*l.* to be associated with the Lister Institute; Mr. Carnegie gave several millions to further university education in Scotland, and Sir Otto Beit gave more than a quarter of a million pounds to found a series of fellowships in medical research.

While the Governments of other countries supported research financially, that of Great Britain was excessively penurious, and it was not until 1913, when the demands for an increase of medical knowledge had become clamant, that in connexion with the National Insurance Act the Medical Research Committee came into being, under the chairmanship of the late Lord Moulton. Two bodies were founded, one properly called the Medical Research Committee consisting of ten members, of whom seven were professed scientific men; the other—the Advisory Council—consisting of forty-two representatives of the various universities and learned medical bodies of Great Britain. It was intended to act in a consultative capacity, but in practice rarely or never did so. The duties of the Medical Research Committee were to frame schemes of research and to see that they were carried out, and the Committee was entitled to disburse a matter of 50,000*l.* annually, which sum was calculated at the rate of one penny in respect of each insured person in Great Britain. The Committee met under the chairmanship of Lord Moulton, and very early a secretary was appointed in the person of Dr. (now Sir) Walter Fletcher, who had been previously known as a physiologist but especially as senior tutor of Trinity College, Cambridge, and as a man of affairs. The subsequent history and results of the Medical Research Committee must always be associated with him as the driving force behind the Committee.

From an early date Lord Moulton advocated that the income of the Committee should be spent in two

¹ Committee of the Privy Council for Medical Research. Report of the Medical Research Council for the Year 1922-1923. Pp. 143. (London: H.M. Stationery Office, 1923.) 3s. 6*d.* net.

ways, one in a central research institute in London to which the highest ability for research should be attracted in four departments, namely, applied physiology, bacteriology, pharmacology, and statistics. The other part of the scheme provided for the payment, part or whole, of a number of workers in other institutes in London or in the provinces. With these ends in view, a number of research schemes were prepared dealing with subjects of public health interest which in the opinion of the Committee demanded rapid solution. These schemes were being converted into action when the great War broke out in 1914. The Medical Research Committee at once placed the whole of its resources at the service of the Army, and throughout the War devoted itself whole-heartedly for the good of the country. It started great schemes of research on various war problems and pressed into its service almost every available worker who could usefully be employed at home or abroad. It enabled many men to work undisturbed by annoying military regulations, and it is not too much to say that, mainly through the efforts of the Medical Research Committee, we emerged at the end of the War with a reputation for research in medical war problems as high as that of any other country. The nation owes, indeed, a great if inadequately recognised debt to the labours of the civilian workers under the Medical Research Committee.

With the end of the War, a return was made to a pre-War state. The central research institute, which had been purchased at Hampstead, was prepared for the reception of the different research departments. By this time the Committee had acquired an increased reputation and a vastly increased power of controlling medical research by virtue of its increased income. It passed away from its previous close association with the public health government departments, and rightly or wrongly established itself under the ægis of the Privy Council. It was renamed the Medical Research Council. Lord Moulton had been succeeded by the Hon. Waldorf Astor, and he in turn by Viscount Goschen. In 1919-20 a grant-in-aid of 125,000*l.* was voted by Parliament for the expenditure of the Council, and in 1920-21 this amounted to 130,000*l.* The Council also took under its wing the Industrial Fatigue Research Board with its income, and also the grants made to the Board of Control of England and Wales and the General Control Board of Scotland. Other financial arrangements have been made by the Council, so that within ten years it may be said that the Medical Research Council has become the leading power in medical research in the British Isles in much the same sense as the Rockefeller Institute dominates the United States.

While it is a truism that medical research requires

money, it is equally true that money cannot buy the highest types of medical research. Research and original investigation of the highest kind are the work of the individual, and first-class researchers occur sporadically but a few times in a generation. The other workers are for the great part mediocre, and much that is called research consists in a confirmation of work done as well or even better by predecessors. An attempt is frequently made to overcome the absence of prime workers by harnessing ordinary workers in teams, although this is very rarely a complete success, for it is found by experience that some of a team do not know how to work and some will not. With its Teutonic outlook, Rockefellerisation may work in the United States, but it is antagonistic to British instinct with its peculiar individualism. The real scientific researcher is rarely a self-seeker. History shows, in fact, that he is a peculiarly unworldly type and cannot be successfully "run" by a millionaire. Naturally the generous millionaire or the parsimonious government like to see a return for their money, and this very tendency it is which leads to a depreciation of the quality of the work which cannot be compensated by excessive quantity. We have carefully studied the recent report for the year 1922-23 of the Medical Research Council, which, although it contains a record of progress, contains no record of a first-class medical discovery. The principal medical discovery of the year—insulin—was made in Toronto, and relatively little has been added to the knowledge given us by the Canadian workers. In general, progress is being made which is set out in great detail in the report, but it may justly be said that in some places the report is verbose and almost meretricious and a good deal of it is neither inspiring nor inspired.

Agricultural Research at Rothamsted.

- (1) *Manuring of Grass Land for Hay*. By Dr. Winifred E. Brenchley. (Rothamsted Monographs on Agricultural Science.) Pp. viii + 146. (London: Longmans, Green and Co., Ltd., 1924.) 12*s.* 6*d.* net.
- (2) *The Micro-Organisms of the Soil*. By Sir E. John Russell and Members of the Biological Staff of the Rothamsted Experimental Station. (Rothamsted Monographs on Agricultural Science.) Pp. vii + 188. (London: Longmans, Green and Co., Ltd., 1923.) 7*s.* 6*d.* net.
- (3) *Farm Soil and its Improvement*. By Sir John Russell. Pp. 126 + 37 plates. (London: Ernest Benn, Ltd., 1923.) 7*s.* 6*d.* net.

ONE of the most gratifying features of the scientific development in England during the present century has been the revivification of the Rothamsted