

alarmed: in the past few days—see page 8—the United States President has found it necessary to veto the Health, Education and Welfare Bill to which the cancer programme is attached.) What Lord Zuckerman says is that no purpose would be served by a sudden increase in funds for cancer research in Britain, because these could not be used effectively. He does, however, argue for “a steady and substantial increase over the years”, believing that the Coordinating Committee for Cancer Research has now efficiently embarked on the definition of goals in cancer research and that, in any case, it will in due course be necessary to provide a British counterpoise to the attraction for young researchers which the American programme will no doubt acquire in due course.

Unhappily there is at least the possibility that on this occasion Lord Zuckerman has been over-sanguine. Nobody will—or at least should—quarrel with his opinion that the sheer scale of the programme on which the Americans have embarked may—when the problem of “curing cancer” turns out to be less tractable than the publicists suppose—create yet another round of disillusionment. It is also self-evident that no purpose will be served by pouring British money into enterprises for the screening of chemotherapeutic drugs, a job well done by American institutions, public and private alike. It is also reasonable to argue, as Lord Zuckerman does, that there is scope for more epidemiology, for more public education, for improvements of the hospital services on the therapeutic side (and for operational research to decide how best to deliver cancer treatment to those in need of it) as well as for the sympathetic evaluation of the methods by which terminal illness is at present dealt with in British hospitals. All this is good, but Lord Zuckerman seems entirely to have overlooked one of the most serious anomalies in the present pattern of cancer research in Britain—of the £10 million a year at present spent on basic research in cancer, no less than 60 per cent is at present raised by means of voluntary societies, principally the Imperial Cancer Research Fund and the Cancer Research Campaign. One practical consequence is that the pattern of the research at present undertaken is more arbitrary than if it had been entirely supported by public funds (and it will be some time before the coordinating committee is able to exert an entirely rational influence). Another is that the system as a whole has to carry more structural inefficiency than is desirable. And there is always the danger that contributions to the voluntary societies which at present spend the lion's share on cancer research will fluctuate not merely with the prosperity of the country as a whole but with the changing public view of the hopefulness of these activities.

Lord Zuckerman could have said more. To the extent that one of the continuing conundrums in cancer research is the recognition that the first need is a better understanding of the processes by means of which normal cells beget other normal cells, quite fundamental cell biology can also properly be regarded as cancer research. By this test, of course, the public contribution to cancer research through agencies such as the Medical Research Council is much larger than appears at first sight. But does it not follow that somebody should ask whether enough is being done in molecular biology and cellular immunology to satisfy the needs that may be felt ten years from now? And is it too soon for potential customers to begin to formulate the questions which in due course they will have

to ask of contractors in the field, university departments, the units of the Medical Research Council and the like? That is one question that Lord Zuckerman has overlooked. Another is the method by means of which a country such as Britain should seek to keep in touch with what is happening elsewhere. Lord Zuckerman's outwardly impressive list of institutions in the United States and elsewhere with which British laboratories at present collaborate is more than a little misleading, for many of the institutional links which he describes depend on the chance acquaintance of individual researchers. Might it not have been sensible to advocate that if the United States Congress is determined to spend \$1,000 million on cancer research in the next few years, the British government should spend a tiny fraction of that sum on a programme of collaboration to enable a handful of people from Britain to work each year in American laboratories, and to support the kinds of exchanges between working scientists which are, in the last resort, the most efficient means of information retrieval? But collaboration with mainland Europe on this and other enterprises is also necessary.

100 Years Ago



RESEARCHES IN GREENLAND*

In Umenak Fiord I ascended a mountain of about 7,000 ft. with five Greenlanders, and took my theodolite to the top. As you know the weight of the instrument, you will be partly able to appreciate this performance. The ascent, first over swamp, then over basalt *débris* which reposed insecurely upon solid basalt, and finally, at the top, up columnar basalt, was a sweet thing of its kind. The picture of your humble servant being lowered by a rope, dangling like a bundle from a crane, will, perhaps, to some people, be more interesting than the results obtained by the theodolite. These, however, were not unimportant. My peak, an isolated one, commanded a view of almost the whole of the Umenak district (which contains the highest mountains of Greenland proper), and a magnificent view of the “inland-ice.” I found the general elevation of the mountains exceeded by about 2,000 ft. the height previously assigned to them. Of the altitude of the “inland ice” I shall write on a subsequent occasion.

A large part of my time in the Waigat was occupied by the measurement of a base line. This was the most important piece of work that I undertook, and it was successfully executed. I find the Waigat to have in some places scarcely half the width which our maps give it. I find its mountains to be about double the altitude that they have been supposed to be; and Hare Island I find to be twice the length represented upon the Admiralty Chart; Hare Island has some points of particular interest. I got from it a rather large collection of fossil plants, and went to its top (1,800 ft.). From the summit, at midnight, I distinctly recognised the mountain called Sanderson's Hope, near Upernavik, which was distant from me 140 miles!

EDWARD WHYMPER

Written on board the brig Hvalfisken as it proceeded out of the harbour of Godhavn, Sept. 10, 1872.

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