

the extrinsic, origin of cancer. According to this theory, each cell in the human body is regarded as equivalent to an entire individual amongst the protozoa or other unicellular organisms, and the cancer parasite is taken to be in effect simply the cancer cell, which by a process of atavism has reverted more or less to the condition of the original protozoa, and has become in its relation to the normal cells in the body the equivalent of an intruding protozoan parasite. This cancer cell, to which he gives the name of *unicellula canceri*, is considered to be a completely independent organism, which has not entered the body from without, but has been generated within it, and which, instead of acting in harmony with the normal cells, acts in opposition to them, and thus produces anarchy and destruction.

Two objections have been made to this view, namely, that in the first place the cancer cell, so far as we know, undergoes no process analgous to that of fertilization, and that, in the second place, it is apparently incapable of growth apart from the organism in which it has primarily developed.

As regards the second of these objections, Dr. Peyton Rous, of the Rockefeller Institute, New York,<sup>33</sup> has produced malignant sarcoma in fowls by the subcutaneous injection of the filtrate of a similar growth obtained from a bird of the same species. Professor Alexis Carrel and Dr. Burrows, also of the Rockefeller Institute, report a still more conclusive experiment, in so far as the human subject is concerned, in that they have made a successful culture from a sarcoma removed by operation from a female patient, although in this instance growth was less luxuriant than that of the fowl sarcoma.

In this connection it may be mentioned that Dr. Simon Flexner<sup>34</sup> draws attention to the fact that it has recently been discovered that a number of diseases occurring in man and the higher animals are due to microscopic parasites, epidemic poliomyelitis being an instance of this.

Sir Jonathan Hutchinson<sup>35</sup> states that his experience indicates that the administration of arsenic, even if only for a short period, may result in predisposition to cancer, more especially epithelioma, and he thinks that it is probably also responsible for some cases of endothelioma and sarcoma. He suggests that the drug may act as a depressant to growth, and thus allow of the appearance, after a short interval, of degenerate forms of growth nearly allied to those of vegetation.

From time to time a large number of remedies have been suggested for the treatment of cancer, and some of them have been used with a certain amount of success. Several writers report cases