nexion, comparisons have frequently been made between the rates of breakdown in autoclaved and untreated soils. Several authors indicate the need for caution when interpreting data so obtained, for whereas re-inoculation of sterilized soil sometimes restores the rate to that in untreated soil, this is not always the case and, for several groups of compounds, there is some possibility that autoclaving may significantly alter the rate at which decomposition occurs by non-biological mechanisms.

This volume should prove valuable not only to those directly concerned with environmental contamination, but also to many biochemists, microbiologists and soil scientists. It is, in general, well written and the subject matter clearly presented. Few typographical errors were noticed, but the price seems somewhat high for a book containing less than 400 pages. K. A. HASSALL

Correspondence

Immunity against Cancer

SIR,—In your issue of September 6 you published an interesting and beautifully carried out piece of work by Watkins and Chen, headed "Immunization of Mice against Ehrlich Ascites Tumour using a Hamster/Ehrlich Ascites Tumour Hybrid Cell Line" (**223**, 1018; 1969). The technique used was elegant in the extreme, but the conclusion, that mice can be immunized against an old homograft like the Ehrlich tumour, was reached by other workers many years ago. Half a century of painstaking research (Hauschka, T. S., *Cancer Research*, **12**, 615; 1952) has shown that immunity to homografts cannot be equated with immunity to cancer. It is therefore most unfortunate that the perfectly correct title of Dr Watkins's paper was transmuted to "Immunization against cancer" on the front cover of *Nature*.

In the seventeen years since Hauschka's review, chemically induced and virus induced tumours have been shown to be antigenic in inbred mice, but this more recent work in no way invalidates the earlier conclusions about the use of homografts in cancer research.

While it is true that, if human tumours contain tumour specific antigens, Watkins and Chen's technique could be used, it is difficult to see what advantage their complex approach would have over the use of heavily irradiated cells, which have been used in experimental systems since 1910 and which were tried on patients a decade later.

Yours faithfully,
OLIVER SCOTT

British Empire Cancer
Campaign for Research,
Research Unit in Radiobiology,
Mount Vernon Hospital,
Northwood, Middlesex.

SIR,—I do not wish to comment on the first two paragraphs of Dr Scott's letter which, as the grounds of a private quarrel between him and yourself, are none of my business. However, I should like to reply to his last paragraph.

1. Our approach is not complex. It is both technically and conceptually very simple.
2. The logic behind the use of heavily irradiated cells in the immunotherapy of tumours is not very sound. There is little evidence of an immunological response to human malignant tumours (but see, for example, Lewis *et al.*, ref. 1), so that it is not surprising that the injection of heavily irradiated cells from a tumour does not lead to an effective immune response.
3. The advantages, if any, of using hybrid cells in therapy would derive from the following argument. If a human tumour has "weak" transplantation antigens, it may be possible to provoke an immune response to them by introducing into cultured tumour cells, by hybridization, new and highly foreign antigenic determinants, in the hope that the immune response to the new determinants may extend to the weak tumour antigens. The results of our experiments with Ehrlich ascites tumour cells, which have been known for some time to contain weak transplantation antigens, provide some experimental justification for the idea.

As Dr Scott points out, immunotherapy with heavily irradiated tumour cells has been tried since 1920. The chief argument against this form of therapy is that it does not work; the only argument in favour of trying immunotherapy with hybrid cells is that it *may* work. On the other hand, of course, it may not. If it was reasonable to try heavily irradiated cells clinically, it must be equally reasonable to try hybrid cells—unless Dr Scott has some better suggestions to offer—as a possible adjunct to radiotherapy, chemotherapy and surgery.

Yours faithfully,
J. F. WATKINS

Sir William Dunn School of Pathology,
Oxford.

[1] Lewis, M. G., Ikonokisov, R. L., Nairn, R. C., Phillips, T. M., Fairley, G. H., Bodonham, D. C., and Alexander, P., *Brit. Med. J.*, **3**, 547 (1969).

University News

Dr J. A. Owen, Alfred Hospital, Melbourne, has been appointed to the chair of chemical pathology at **St George's Hospital Medical School,** University of London.

Dr H. M. Power, University College, Dublin, has been appointed first professor of control engineering in the department of electrical engineering, **University of Salford.**

Announcements

The **Ramsay Memorial Fellowships** trustees have made the following awards of new fellowships in chemistry for the year 1969–70: a general (British) fellowship to **Dr D. B. Sheen** (University of Leeds); a Glasgow fellowship to **Dr E. W. Colvin** (University of Glasgow); a Canadian fellowship to **Dr M. F. Tchir** (the Royal Institution); a Japanese fellowship to **Dr M. Koiwa** (University of Oxford); a Spanish fellowship to **Dr F. Hernandez Cano** (University of Manchester Institute of Science and Technology); and a United States fellowship to **Dr P. R. Certain** (University of Manchester).

Dr J. S. Kirkaldy, professor of metallurgy and materials science at McMaster University, Canada, is to be presented with the **1969 Henry Marion Howe Award** of the American Society of Metals, for his paper published in *ASM Transactions*.

Mr D. A. Oliver, CBE, director of research at the BSA Group Research Centre, Birmingham, has been selected to receive honorary membership in the **American Society of Metals.**

Dr G. Curzon, Institute of Neurology, London, has been awarded a prize by the **Anna-Monika-Stiftung** of West Germany in recognition of his work on the relationship between brain serotonin and adrenocortical secretion and its possible significance in depressive illness.

ERRATUM. In the article "Cytosine Derived Heteroadduct Formation in Ultraviolet-irradiated DNA" by Varghese and Patrick (*Nature*, **223**, 299; 1969), the second sentence of the acknowledgments should have read: "This work was supported by two US Public Health Service grants from the National Institutes of General Medical Sciences, and a grant from the Bureau of Radiological Health".