

$\text{OOC}-\text{C}_6\text{H}_4-\text{NO}_2$ , is an unusual compound, the iodine acting chemically as a positive ion. Hydrolysis or reduction produces elementary iodine.

It is probable that in the agar cup-plate tests against *T. gypseum* and *M. audouinii* at least part of the activity of the compound is due to the liberation of iodine, as there is evidence that the latter is produced during the period of contact with the fungi. On the other hand, in the experiments with dried spores the role of free iodine is questionable.

The impregnated papers are in contact with the compound for very short periods of time, after which the excess drug is washed off. However, the usual

difficulties in procedures of this sort are encountered. It is impossible to remove all of the active compound by washing, and there is always a possibility that traces of the drug remaining may exert some activity during the washing process. The filter papers, when tested after washing, give evidence of traces of positive iodine. The washing process itself produces no free iodine, since tests for this element in the wash solutions are negative.

#### References

1. EMMONS, C. W. Private communication.
2. KLEINBERG, J., NOVAK, M., and GERBER, V. *Proc. Soc. exp. Biol. Med.*, 1945, **58**, 238.

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## Letters to the Editor

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### Surface Measurements of Radioactive Phosphorus in Breast Tumors as a Possible Diagnostic Method

It has been shown repeatedly by assaying tissues that most experimental tumors take up relatively greater amounts of radiophosphorus ( $\text{P}^{32}$ ) than normal tissues. In 1942 Marinelli and associate showed that after tracer doses of  $\text{P}^{32}$  to three human cases the beta ray activity as measured on the surface was greater over cutaneous lesions than over normal skin.

It occurred to me that the energy of the beta rays from radioactive phosphorus was sufficiently great that, if tumors in the subcutaneous tissues took up more  $\text{P}^{32}$  than the surrounding tissues, it should be possible to detect a difference by measurements on the skin surface. Therefore, in June 1945 preliminary investigations were started in the Division of Radiology, in cooperation with the Division of Surgery of the University of California Medical School, to study the differential uptake by breast tumors of tracer doses of  $\text{P}^{32}$ . The radioactivity on the surface of the skin over various types of breast tumors, over axillary nodes, and over supraclavicular nodes was measured with a Geiger-Müller counter a day or two before surgical removal. These measurements revealed that over tumors which were proven later to be malignant the activity was 25 per cent or more above that of comparative normal areas. Skin measurements over breast tumors which were later proven to be benign consistently showed less than 25 per cent difference between involved and uninvolved tissue. In March 1946 systematic studies were undertaken by comparing the activity measured on the skin surface over palpable breast tumors, adjacent areas of the same breast, comparative areas of the other breast, and the lymphatic drainage areas. In all but one of 25 patients the diagnosis based on preoperative surface measurements was confirmed by microscopical examination of the tissues after surgery.

These findings are so suggestive that this brief report

is submitted with the hope that other investigators will try the method. A more detailed but still preliminary report on this subject will appear in the November 1946 issue of *Radiology*.

BERTRAM V. A. LOW-BEER

Department of Radiology, University of California  
Hospital, San Francisco

### On Eugen Fischer

The note about Eugen Fischer, professor of physical anthropology, University of Berlin, and director of the Kaiser Wilhelm-Institut für Physische Anthropologie (*Science*, 1946, **104**, 161) brings to mind that he was one of the leading Nazi anthropologists who are morally responsible for the persecution and extinction of the peoples and races the Nazis considered "inferior." He was the first Nazi rector of the University of Berlin and took over this post when decent scholars withdrew or refused to do business with the Nazis. His address delivered at the inauguration ceremonies (29 July 1933) was entitled: "The Conception of the 'Völkisch' (Nazi) State in the View of Biology." This address foreshadowed the official execution of the principles of "racial hygiene" as taught by the Nazis.

If anyone, he is the man who should be put on the list of war criminals.

FRANZ WEIDENREICH

American Museum of Natural History

### Effect of 2,4-Dichlorophenoxyacetic Acid on the Development of Anjou Pear Scald

The inhibiting action of growth-regulating chemicals on the development of apple scald has been reported by Schomer and Marth (*Bot. Gaz.*, 1945, **107**, 284-290). Treatment of apples at time of cold storage with  $\alpha$ -naphthaleneacetic acid,  $\beta$ -indolebutyric acid, and a mixture of these two compounds with  $\alpha$ -naphthalene acet-