CORRESPONDENCE

This department is for the publication of informal communications that are of interest because they are informative and stimulating, and for the discussion of controversial matters. The mandate of this JOURNAL *is to disseminate information relating to leprosy in particular and also other mycobacterial diseases. Dissident comment or interpretation on published research is of course valid, but personality attacks on individuals would seem unnecessary. Political comments, valid or not, also are unwelcome. They might result in interference with the distribution of the* JOURNAL *and thus interfere with its prime purpose.*

Antileprosy and Biological Antioxidant Activity of Serotonin

TO THE EDITOR:

P. Jayaraman and collaborators ([4]) have described the antileprosy activity of a derivative of serotonin, desoxyfructoserotonin. In this work it is demonstrated that desoxyfructoserotonin competes with DOPA for uptake through the same system, and it causes an inhibition of the incorporation of ^{3}H-DOPA by *Mycobacterium leprae*. Since a continuous supply of very small amounts of DOPA may be essential for the survival and proliferation of *M. leprae*, blocking the enzyme-controlled utilization of DOPA by *M. leprae* may be interpreted as being an antileprosy activity. At present, desoxyfructoserotonin is being used by mouth in leprosy patients in some pilot experiments in Africa and Asia under the direction of L. Mester (personal communication, 1981).

Regarding serotonin, Bernheim and collaborators ([3]) have demonstrated the powerful antioxidant activity of this biological amine. These authors studied lipid peroxide formation in rat brain homogenates and found that serotonin had an antioxidant activity more intense than those of bufotenin, tryptamine, and epinephrine. Also, peroxide formation in 3.0 mg of pure methyl linolenate incubated with cytochrome c was completely inhibited by 10 μg/ml or serotonin. Probably, this antioxidant activity can explain the radiation-protection activity of serotonin when it is injected immediately before exposure.

It seems that we are dealing once again with a compound that has antileprosy as well as biological antioxidant activity. The hypothesis was advanced by Bergel ([1,2]) that the antileprosy activity of dapsone, thiocarbanilides (Ciba 1906), thiosemicarbazones (TBl), and other compounds could be related to a biological antioxidant activity.

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