# Mycobacterium Leprae Captured?

In July-September, 1975 issue of the International Journal of Leprosy, Skinsnes and associates claim to have successfully cultured *Mycobacterium leprae*. This claim, subject to confirmation, could revolutionize the entire picture of research and hopefully, control of leprosy. Preceding the 'successful' culture of the organism, a number of studies had been carried out to show that hyaluronic acid was probably an important nutrient for *M. leprae*[1,2,3]. Accumulation of hyaluronic acid was histochemically demonstrated in lepromas and ascribed to β-glucuronidase deficiency of lepra cells. In contrast, the epithelioid cells and Langhan's giant cells of the tuberculoid lesions were seen to have the necessary enzymatic process for degrading hyaluronic acid. To substantiate the argument further, hyaluronic acid-fed mice showed enhanced growth of *M. leprae* in their abdominal wall. Saccharic acid a known inhibitor of β-glucuronidase was reported to have caused, in the mice, regression of advanced or inhibition of early *M. leprae* infections.

Ascorbic acid (the inevitable vitamin C !) yet another inhibitor of β-glucuronidase caused regression of lepromatous lesions and associated changes in the morphology of the bacilli in 4 patients.

The evidence, direct and circumstantial, was overwhelming to warrant the use of hyaluronic acid in the medium for culture of *M. leprae*. The leprosy workers and patients would literally pray that the organism grown is genuinely *M. leprae* – the cause of so much misery the world over. Ironically *M. leprae* that has consistently defied attempts at culture was the first organism ever to have been associated with a human disease!

Numerous attempts made in the past to culture *M. leprae* have met with failures. Probably the organism closest to *M. leprae* was the I.C.R.C. bacillus of Khanolkar and associates which had an intracellular growth in the fetal spinal ganglion cells[4]. It is a pity that confirmed identification of this bacillus has not been attempted.

And doubts have already been expressed about the identity of the mycobacterium cultured by Skinsnes and associates. Pattyn (personal communication, 1976) and Kato (personal communication, 1976) working independently identified the organism as *M. scrofulceum* and concluded that the organism isolated by Skinsnes is entirely different from the aetiologic agent of leprosy.

Further work would seem essential before any definite opinion can be expressed, but if hyaluronic acid should prove to be such an important nutrient for *M. leprae*, important avenues have already opened up for fruitful search in this direction.

REFERENCES

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## TRUE or FALSE ?

The susceptibility and resistance to the staphylococcal exfoliatin (S.E.) which is responsible for the 'scalded skin syndrome' is determined by inherent genetic attributes of the epidermis.

(Answer page No. 243)