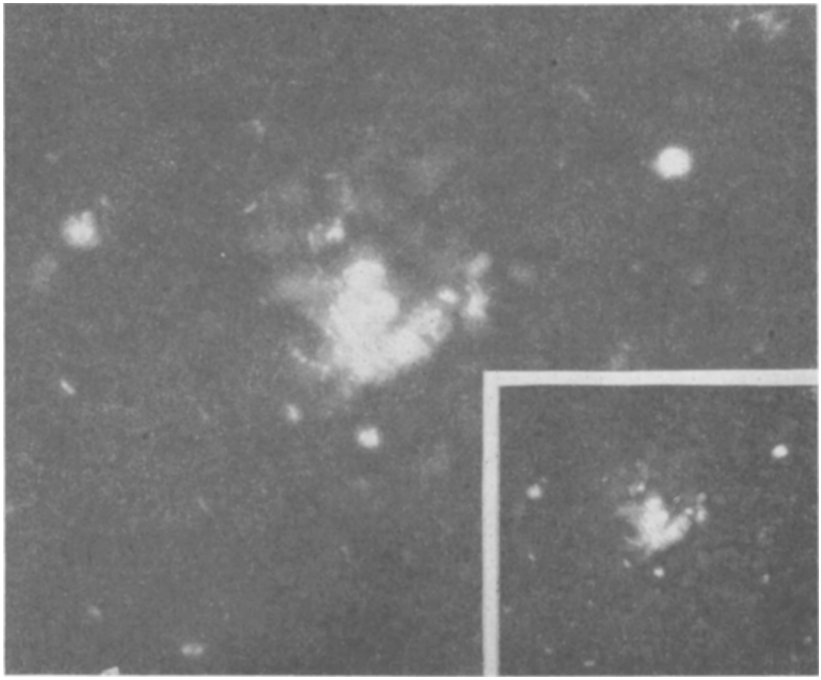
13707

Demonstration of Globi and Leprosy Bacilli by Fluorescence Microscopy.*

HOWARD J. HENDERSON, E. H. SPAULDING AND E. S. GAULT.
(Introduced by E. R. Long.)

From the Henry Phipps Institute, University of Pennsylvania, and the Department of Bacteriology and Immunology, Temple University School of Medicine, Philadelphia.

Hagemann[1] reported the superiority of a fluorescence method using berberine sulfate stain for demonstrating leprosy bacilli in nasal mucus and thick blood smears. The same year he[2] proposed an auramin-fluorescence technic for the routine identification of acid-



A B

FIG. 1.
A. Globi in impression smear from spleen. Approx. 1000 ×.
B. Same field at approx. 400 ×.

* Aided by a grant from the Leonard Wood Memorial for the Eradication of Leprosy (American Leprosy Foundation).

1 Hagemann, P. K. H., *Deutsche med. Wchnschr.*, 1937, **63**, 514.

fast bacteria, especially tubercle bacilli. The suitability of this method for cultures of *Myco. leprae* has been confirmed by Küster[3] and for leproma smears by Kline and Leach.[4]

Recently one of us (H.J.H.) has investigated the separation and concentration of acid-fast organisms from the tissues of leprosy patients. To cryochemed spleen† distilled water was added and direct impression smears were made from a piece of the tissue. One set of smears was stained with auramin O and examined according to the fluorescence procedure described by Richards and Miller.[5]

A representative field is shown in the accompanying photomicrographs. The faint material in the background is non-acid-fast splenic cellular substance. The acid-fast bacilli have a characteristic granular appearance.

Although no accurate comparison was made with Ziehl-Neelsen stained smears, the fluorescence technic was clearly superior for demonstrating globi and leprosy bacilli. It is of interest to note that Richards, Kline and Leach[6] believed more tubercle bacilli could be demonstrated in the same microscopic fields by fluorescence than by the conventional method.

13708 P

A Method for Separating Intact Leprosy Bacilli from Leprous Tissue.*

HOWARD J. HENDERSON. (Introduced by E. R. Long.)

From the Henry Phipps Institute, University of Pennsylvania.

In a recent investigation the author[1] attempted to obtain from spleens of lepers an antigen or product analogous to tuberculin which might be used in the diagnosis of leprosy. The product, obtained

2 Hagemann, P. K. H., *München. med. Wchnschr.*, 1938, **85**, 1066.

3 Küster, H., *Deutsche med. Wchnschr.*, 1939, **65**, 92.

4 Kline, E. K., and Leach, R. E., *Proc. Conf. State and Prov. Lab. Directors*, 1940.

† Obtained through the courtesy of Dr. John Hanks, Culion, P.I.

5 Richards, O. W., and Miller, D. K., *Am. J. Clin. Path.*, 1941, **11**, 1.

6 Richards, O. W., Kline, E. K., and Leach, R. E., *Am. Rev. Tuberc.*, 1941, **44**, 255.

* Aided by a grant from the Leonard Wood Memorial for the Eradication of Leprosy (American Leprosy Foundation).

1 Henderson, H. J., *Internat. J. Lep.*, 1940, **8**, 271.