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Aluminum Company of America

ALUMINUM RESEARCH LABORATORIES

POST OFFICE BOX 772

FRANCIS C. FRARY
DIRECTOR

New Kensington, Pa.

Sept. 25, 1941

Dr. Leroy U. Gardner
Saranac Laboratory
Saranac Lake, N.Y.

Dear Dr. Gardner:

Referring to our correspondence about the possibility that alumina dust or lime dust would aggravate a tuberculous condition, I thought you would be interested in the following portion of a report from our East St. Louis plant covering their experience in this connection:

"As I said in my letter to Dr. Walker, our statistics were not conclusive, but we felt that we had a lower ratio of respiratory diseases in those departments where Bauxite or Alumina dust was prevalent than in other departments such as the Machine Shop or Electric Shop. Specifically, we had one case of an employee who worked in the Bauxite Department for about fifteen years. He was off for six weeks with pneumonia, and on returning to work was x-rayed, as is our custom. This x-ray disclosed what was diagnosed as old arrested tuberculosis. We immediately put him in the Plant Protection Department where his work was very light and conditions as nearly ideal as we could make them. After just two years in the Plant Protection Department, the tuberculosis became active and the man finally succumbed to the disease. Here was a case of a man working in the Bauxite dust for fifteen years, with an old, arrested tubercular condition and two years after he was taken out of the dust, the disease flared up."

In your letter of September 3rd, you mention "...our experience with hydroxide of aluminum on non-virulent tuberculous infection and of the stimulating effect which we had observed in guinea pigs". Have you published these results and, if so, could

you give me either a reference to the publication or send me a reprint? Am I correct in my interpretation that when you speak of the "stimulating effect" you are referring to an effect similar to that of silica, where the presence of the dust stimulates the non-virulent bacteria so that they become virulent and produce an infection?

I think you are quite right in the letter which I received today, in your statement that the aluminon (aurine-tricarboxyl acid) method is very tricky, and certainly there does seem to be some serious difficulty in getting a dye which is suitable. The method is, of course, purely empirical, but when you have the right dye it seems to work very well indeed. I hope you will be able to get a suitable dye from Fales.

Sincerely yours,

FCF:ML


Director

Aluminum Research Laboratories
ALUMINUM COMPANY OF AMERICA