PLAINTIFF'S EXHIBIT AB-69
PENGAD-Bayonne,N.J.

THE SARANAC LABORATORY
FOR THE STUDY OF TUBERCULOSIS
OF THE EDWARD L. TRUDEAU FOUNDATION
SARANAC LAKE, N.Y.

March 28, 1945

Dr. L. E. Hamlin
Medical Department
American Brake Shoe Company
2501 Blue Island Avenue
Chicago 8, Illinois

RE: Experiments on Burner Dusts

Dear Ham:

Pursuant to our conversation in Chicago on March 21 on the subject of the causes of the rapidly appearing nodular shadows in the films of your foundry employees I would suggest the following program of animal experimentation. This is essential to reconcile an X-ray appearance simulating silicosis with a dust which apparently contains too little silica to produce this disease in short periods of time.

1. Preliminary injection tests on 6 rabbits and 12 guinea pigs would be made to determine the potentialities of ~~burner~~ Grinder dust to irritate living tissue and provoke reaction.

2. Expose a group of 200 guinea pigs, 50 white rats and 12 rabbits to high atmospheric concentrations of dust collected from your plant.

Exposures to be continued 8 hours daily, 6 days a week over a period of 2 or possibly 3 years. According to our routine procedure the animals would remain in the dusting room during the night and would then continue to breathe appreciable amounts of dust.

3. At suitable intervals during the course of the exposure, the lungs of selected members of each species under test would be X-rayed to determine whether nodular shadows developed.

4. Sacrifice of animals at successive intervals during the course of the exposure would permit comparison between anatomic changes in the lungs and the X-ray shadows and would establish the amounts of silica, iron and manganese in the tissues.

5. One-quarter of the originally exposed guinea pigs, 40 in number, would be infected with attenuated tubercle bacilli the day before they were placed in the dusting room. The evolution of the infection in them would determine whether this dust acted like pure quartz to activate the tuberculosis and produce tuberculO-silicosis. A like number of infection controls, not exposed to dust would be kept in normal atmosphere to be sacrificed at intervals with members of the dusted group.

6. Another group of 50 guinea pigs would be similarly infected with attenuated tubercle bacilli and at successive intervals thereafter while their tubercles were healing, subgroups would be placed in the dusting room to discover whether the burner dust like pure quartz would cause reactivation and spread of the infection. The same infection controls used for group 5 would serve with group 6.

In order to carry out these tests it will be necessary to procure several hundred pounds of dust so that a sample of uniform composition may be available for the entire exposure period. The exact quantity necessary can only be estimated after we have experimented and determined the behavior of this material in atmospheric suspension, its settling rate and other characteristics.

The total duration of the inhalation experiments would likewise depend upon the rate of development of disease. It seems highly probable that at the end of one year there should be some indication of the nature of the results but perhaps this will require two years. A third year may be necessary to develop changes in the lungs which are dense enough to cast shadows on an X-ray film.

The Saranac Laboratory will undertake this program of research for the sum of $6,000 annually for the first two years and for $4,500 for a third year if such proves essential.

Preliminary injection tests could be started in June and by September we should have raised a sufficient number of animals, free from taint of extraneous infection to begin the inhalation program. No time would be saved by purchasing animals from outside sources as these invariably harbor latent infections of the lungs which reactivate on exposure to dust. In the interim the physical characteristics of the burner dust in atmospheric suspension can be established and the preliminary injection tests will have developed to guide the later parts of the program.

It was indeed a pleasure to have seen you in Chicago and I only regret that my time was so occupied that I could not review with you the films of your employed group.

Sincerely,

Roy

Leroy U. Gardner, M. D.
Director

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