THE SARANAC LABORATORY
For the Study of Tuberculosis, Occupational Disease, and Industrial Hygiene
Founded by EDWARD LIVINGSTON TRUDEAU in 1885
7 CHURCH ST., SARANAC LAKE, NEW YORK

P.O. Box 561
Reference

February 6, 1956

Telephone: Laboratory 5[illegible]
Director 580

Mr. W.D. Burch
Director of Personnel and Industrial Relations
Owens-Corning Fiberglas Corporation
P.O. Box 901
Toledo, Ohio

Dear Mr. Burch:

On the occasion of their recent visit here to inspect our progress with the study on the pathogenicity of fiberglas, Dr. Bishop and Mr. Black mentioned to me that this research project falls under your general supervision.

To facilitate your task of explaining to lay personnel, who might be interested in the results of our experiments, just what a product like fiberglas may be capable of doing to man, herewith a few preliminary comments. Please do not hesitate to call for further elucidation as need arises. I will do my best to inform you fully about what we already know and will not hesitate to tell you directly where the limits of our own and also other researches' limitations lie. You may have difficulty with published statements too. Please feel free to consult me at any time about such matters if you believe I can be of help to you.

Firstly, the following is the status of our current experimentation on fiberglas:

	Product Studied	Method	Type and Number of Animals Used		Stage Reached	
1	Fiberglas with Calcium Sulphate filler	Intratracheal	Guinea pigs	10	Completed at 12 months	Chemical and Histological Studies in Progress
2	" " " " "	"	Rats	10	" " " "	" " " "
3	" " " " "	"	Rabbits	5	" " " "	" " " "
4	Fiberglas with Calcium Carbonate filler	"	Guinea pigs	10	" " " "	" " " "
5	" " " " "	"	Rats	11	" " " "	" " " "
6	" " " " "	"	Rabbits	7	" " " "	" " " "

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	Product Studied	Method	Type and Number of Animals Used		Stage Reached	
7	Resin only	Intratracheal	Guinea pigs	9	Completed at 12 months	Chemical and Histological Studies in Progress
8	" "	"	Rats	11	" " " "	" " " " " "
9	" "	"	Rabbits	5	" " " "	" " " " " "
10	" "	Intravenous	Rabbits	5	" " " "	" " " " " "
11	Glass fibers only	Intratracheal	Guinea pigs	10	" " " "	" " " " " "
12	" " "	"	Rats	10	" " " "	" " " " " "
13	" " "	"	Rabbits	5	" " " "	" " " " " "
14	" " "	Subcutaneous	Rats	5	" " " "	" " " " " "
15	Fiberglas with Calcium Sulphate filler	Inhalation	Guinea pigs	60	Modified and Terminated at 15 months	" " " " " "
16	" " " " " "	"	Rats	16	Terminated and Modified at 15 months	" " " " " "
17	" " " " " "	"	Rabbits	9	Terminated at 9 months	" " " " " "
18	Fiberglas with Calcium Sulphate + Beryllium Phosphor	"	Rats	10	In progress	" " " " " "
19	Fiberglas with Calcium Sulphate + R1 Tuberculosis	"	Guinea pigs	26	Terminated at 9 months	" " " " " "
20	Reactivation of Tuberculosis by Fiberglas	"	Guinea pigs	27	" " " "	" " " " " "
21	Control Tuberculosis only		" "	13	" " " "	" " " " " "
22	Fiberglas with Calcium Carbonate filler	Inhalation	" "	60	In progress 15 months 28 animals autopsied	" " " " " "

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	Product Studied	Method	Type and Number of Animals Used		Stage Reached	
23	Fiberglas with Calcium Carbonate Filler	Innalation	Rats	24	In progress 15 months 16 animals autopsied	Chemical and histological Studies in Progress
24	" " " " " "	"	Rabbits	9	In progress 15 months 7 animals autopsied	" " " "
25	Fiberglas (excessive concentrations)	"	Guinea pigs	7	In progress 15 months	" " " "
26	Fiberglas with Calcium Carbonate Filler + Beryllium Phosphor	"	Rats	6	In progress 15 months	" " " "
27	Fiberglas + R_1 Tubercle	"	Guinea pigs	24	17 autopsied	" " " "
28	Reactivation of Tuberculosis by Fiberglas	"	" "	26	18 "	" " " "
29	R_1 Tubercle Control	"	" "	34	16 "	" " " "
30	Flakeglas	Ocular Instillation	Rabbits	2	Completed	
31	"	Cutaneous contact infriction	Rabbits	2	"	
32	"	Intratracheal	Guinea pigs	10	In progress	
33	"	"	Rabbits	5	" "	
34	"	"	Rats	8	" "	
35	"	Intravenous	Rabbits	5	" "	

I believe the foregoing list will show you what a comprehensive range of tests we are making to ascertain in what way and to what degree fiberglas or any of its components is harmful, if indeed it causes any damage to animal tissues. Even so, we believe several additional studies would be required. As there has been appreciable discrepancy between the results obtained on guinea pigs, rats and rabbits it is most essential that we study the effects of the product on monkeys as well so that we may know whether the human species will react adversely or favorably to inhalation of the dust.

February 5, 1958

Mr. N.D. Burch
Owens-Corning Fiberglas Corporation

It is imperative also that we determine how rapidly and completely fiberglas dust is eliminated from animal tissues and whether, if it is expelled after dust exposure has stopped, this is accompanied by reversal of those tissue reactions we have already observed. No doubt you will readily perceive the medico-legal importance of such information. We should also prolong the exposures for at least another year. In the case of our earlier glass wool, asbestos and talc studies we showed that unfavorable results sometimes ensued during the third year of exposure while they remained in abeyance previously.

A fourth avenue yet to be explored more satisfactorily would be a study on the capacity of the fiberglas to induce lung cancer. There is so much propaganda over the issue of lung cancer today that one cannot omit this study, either to clear the product of all potential blame or to discover in time whether it holds such a danger. I suppose you already know that asbestos is fairly well incriminated as a carcinogen and the asbestos causes lung damage by virtue of the length of its fibers, a property it shares with the fiberglas. Various polyester resins have already been incriminated as carcinogens so that one must remain cautious about the fiberglas resin until it has been cleared.

Finally, in view of the evidence we already have that the fiberglas dust facilitates the development of tuberculosis, this study should be expanded to include the third superimposition phase of the tubercle study, i.e., to determine whether prior exposure to the dust will stimulate tuberculosis. Reference to the foregoing tabulation reveals that we have already instituted the investigation on the simultaneous phase and the reactivation phase. Such a large proportion of our rabbits died in the dust room that we believe the studies on them should be repeated. Deaths may have been due to an intercurrent epizootic and not due to the fiberglas dust. If a new set of animals could be studied, the suspicion that the dust may have caused the deaths of the rabbits would either be verified or rebutted. None of the guinea pigs died spontaneously and we are inclined to believe the rabbits died of causes other than the dust, but unless we can repeat this phase of the study, the record will remain unfavorable.

I look forward to meeting you at some time in the not too distant future and hope the foregoing information will be of some value to you meanwhile.

Yours sincerely,

W.W.H. Schepers, M.D., D.Sc.
Director

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