



Basic Research

- ① Interface between mineral matter & the living world.
- ② Determine dose relationships.
- ③ Alter response by changing the fibre to eliminate the biological re-action.

Dr. Sugauchi - oncogeny

Nicholson - Bio-Physicist

Mackler -

Comar - Cell Culture Studies

Burkley - Elec. Microscopie

Hienman - Occup Health

Smith - Pathologist

Benecho - Hemocytic tests

Schmitzer - Micro Biologist

Boden - Histology - Biologist

Theodorovich -

Richner - Public Health

Kay - Toxicologist

Langner - Mineralogy

Schiff
Staff

Asbestos & Ascidolite have a different cellular effect than chrysotile. It is difficult to recognize asbestos from ascidolite in the tissue (cell). The "acantho las body" formation is similar asbestos to chrysotile.

Dr. Lillhoff's summary of Dr. Sgarbi's presentation
Release of the fibres in the cells continues to
advance the theory. These biological
effects reported are based on very fine
fibres (fibrils) Try to not the fact that
the effect is mechanical, it is not. Phagosome
(the eat-cell) the asbestos fibre is inside a phagosome.
Silica is also found in a phagosome. The objective
is to look for something that will coat the
phagosome which will eliminate the fibres from
escaping and killing the cell. Some chrysotile
fibres can be digested. Perhaps a low dose plus
the natural process of digestion is the answer.
If one cell dies and the fibre escapes, the
fibre can transfer to another cell which will
also be affected. This repetitive process of
affected cells is known w/silica, it is
now known to occur w/asbestos in the
opinion of Lillhoff. An extremely heavy
exposure of workers for me I know who
30 years ago has now developed with
no histological evidence of asbestos w/
fibrinosis - (in response to my question as to
the comparison of advancement of asbestos
to silicosis. As the cell dies, this is the
condition & occurs as fibrinosis.

100 people exposed in 1941 - 5 for 1 week +
95 for 5 years - all 100 will have asbestos.
Concentration levels such that in some
exposures the sun could not be seen in the
window.

Dr. Smith - Harmless - Mesothelioma

30H fibres

Less than 5H

7 out of 50

0 out of 50

8 out of 50

1 out of 50

10 out of 50

0 out of 50

Dr. Smith feels we cannot ignore the fibre
size & shape effect. Schmitt suggested
Smith might not have seen the smaller
fibres in the 30H size.

Dr. Schmitz - Hemolytic ^{effect} modification
of asbestos fibres.

Chrysotile is the most effective asbestos agent
in lung & human cells.

Amosite has the same hemolytic activity
Crocidolite is somewhat more active than
Amosite but not as active as Chrysotile.

- Very poor oral penetration - speech difficulty

Question whether all animals exposed to high temperature cause a different effect on health due to change in fibers subjected to long periods of heat.

~~That the effect~~ Aspect ratios of chrysotile is opposite that of Crocidolite. Aspect ratio is 19:1 x dia.

Danger - Air jet milling of chrysotile fibers does have an effect of change in the surface of the fibers or fibrils.

Staff question - Can you define the source of the contamination by fiber size at sampling site w/ consideration of fallout of large fibers. Therefore possible that asymptomatic exposure could be long fibers & general public - proximity of location - small fibers. 28 cases of general public asbestos fibers (found by electron microscopy) in their lungs. Cases against both male & female - 3 of the 28 had potential occupational related exposure - 25 no history of exposure.

Two hundred more cases to a few million in lungs exposure. Staff - no indications that these findings have any relationship to disease - Believe case related and case will be found to be much higher than that to which about exposure were

spread.

Chrysotile fibers are different in chemical analysis by electron probe studies in the lung than asbestos. Chrysotile are in contact w/ lung & the other.

Bill Smith -

Summary of animal studies at Fairleigh Dickinson w/ asbestos & D.E. Virus effect related? to tumor. Less more tumors w/ crocidolite than w/ chrysotile asbestos tumors produced in both. Reduction of fibers to which animals spread related to development of tumors. Thomas found of crocidolite is different to feel than that of chrysotile. Cytoplast when given to animals did retard tumor growth.

Treatment	28 days	46 days	93 days	100 days
None	5/7	0/7	0	0
CYTOXAN	6/6	6/6	6/6	2/6

Human meso treated w/ RNA & claimed to get good results w/ 8 patients - Italy. Leichoff thinks he could prolong life w/ treatment. RNA extracted from pig liver.

HAVE YOU OR ARE YOU CONSIDERING
UNDERTAKING THE TREATMENT OF MESO.
W/ RNA OR CYTOSIN

current
case
admission

2 cases
didn't work well
at dosage so far
used.

Roger Gyor
Pres - NA asbestos

We may learn further -