

JULY 8, 1969

NEWS RELEASE



THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL SCHOOL AT DALLAS

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DALLAS -- Fears of a few scientists and a piece of chilling science-fiction notwithstanding, the danger of any biologic contamination of earth by germs brought back from the moon is extremely slight, a noted Dallas microbiologist believes.

And rigid protective measures being taken in the Apollo 11 lunar exploration effort are adequate to safeguard both the astronauts and the earth's environment against any possible pollution by moon-born microbes, says Dr. S. Edward Sulkin of The University of Texas Southwestern Medical School.

Dr. Sulkin is professor and chairman of microbiology at Southwestern.

"Some scientists," Dr. Sulkin noted in an interview, "have questioned the reliability of the procedures which are to be used to limit the contamination of the earth with potential disease-producing microbes which conceivably could be found on the moon.

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first add sulkin

"It has even been suggested that forms of microbial life on the moon might contaminate the earth with catastrophic results. This is extremely unlikely--the hair-raising current Book-of-the-Month Club bestseller 'The Andromeda Strain' notwithstanding."

In "The Andromeda Strain", a novel by Harvard medical student Michael Crichton, the earth is devastated by a new strain of germs from outer space against which man has no defense. The book has fueled debate over the adequacy of quarantining procedures planned for the Apollo landing.

One prominent scientist who has questioned decontamination measures is Dr. Martin Alexander of Cornell University. Dr. Alexander has called National Aeronautics and Space Administration quarantine plans "inadequate" in view of the potentially disastrous consequences, and has urged a delay in the moon landing until samples of lunar material can be obtained by an unmanned collecting device.

Dr. Sulkin agrees that the possibility of biologic back-contamination of the earth exists, but he says it is remote.

And while emphasizing he is not "picking an argument" with fellow scientists, he said he does not agree that the risk is such that the moon mission should be delayed.

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"The return of men and samples from the surface of a foreign celestial body does entail some risk," he commented. "This is fully recognized by the scientists involved, and every known precaution has been taken for containment of any disease-producing organisms."

A factor weighing heavily against any microbial threat to man from the moon is the inhospitable lunar surface itself. It is highly unlikely, Dr. Sulkin feels, that a microbe could survive in this airless, waterless, radiation-laden environment.

"The unprotected surface of the moon, where the astronauts will touch down, is constantly bombarded by solar winds, x-rays and ultraviolet light," he observed.

"Because of radiation and temperature ranging from 250 degrees above to 250 degrees below zero, chemicals essential for life as we know it on earth would not remain intact very long.

"There is always the possibility," he said, "that strange forms of life not known to earthmen exist on or within the moon which do not require the same chemical constituents as required of lower and higher forms of life on earth. But it is hardly likely that such forms could survive on earth."

Constant bombardment by meteorites tends to confirm that the earth is as hostile to any "foreign" organisms as the moon's rarified, extreme climate is to unprotected man.

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"Over the years," Dr. Sulkin noted, "millions of tons of unsterilized lunar material have reached the earth as a result of meteors--without releasing bizarre forms of life."

Protective precautions include a three-week quarantine for the astronauts and a 60-day quarantine for moon rocks and dust before the material is released for scientific analysis. Suits containing 28 layers of material, bulky boots and strong plastic helmets will protect the astronauts from radiation and temperature extremes, Dr. Sulkin said.

"A unique receiving laboratory has been developed for handling the lunar samples and quarantining to limit back-contamination," the Dallas scientist said.

Upon splashdown, astronauts will replace spacesuits worn on the moon with special isolation garments before entering the receiving laboratory, which will be flown intact to NASA's Houston headquarters. The men will breathe through biological filters and their sealed boxes of moon material will be washed with germicidal solution.

"The return to earth of samples of lunar rock and dust collected by specially designed procedures will present an unparalleled opportunity to examine extraterrestrial materials under rigidly controlled conditions," Dr. Sulkin said.

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"To be assured that the biologic aspects of the mission are valid and successful, it is essential that the lunar samples be received free of contamination of terrestrial organisms. Biologic barriers have been designed to limit such contamination.

"A two-way system has been devised that will protect laboratory scientists and technicians on the outside from contact with possible lunar biologic material, and also will protect the samples inside from terrestrial biocontamination," he said.

July 8, 1969

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