

BROOKHAVEN NATIONAL LABORATORY
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REFER:

DEPARTMENT OF
BIOLOGY

March 6, 1969

Dr. Joshua Lederberg
Genetics Department
Stanford University Medical School
300 Pasteur Drive
Palo Alto, California 94305

Dear Dr. Lederberg:

I am replying to your telephone call of February 28 regarding work on the radiosensitivity of microorganisms isolated from highly radioactive environments near large gamma sources or around nuclear reactors.

While several people have studied samples from our outdoor gamma sources here, very little of this has so far been published but whatever information is available I am sending under separate cover.

I know that work has been published from at least two other outdoor installations but cannot readily put my hands on the exact references. I would, therefore, suggest that you write directly to the following institutions where I know such work has been done.

Dr. J. Sandfaer
Division of Agricultural Research
Danish Atomic Energy Research Establishment
Risø, Raskilde
Denmark

Dr. K. Yamakawa
Institute of Radiation Breeding
Ohmiya, Ibaraki
Japan

Several other large outdoor gamma sources exist and I do not know specifically that work has been carried on but in case you wish to contact them, the following are appropriate names and addresses.

Dr. D. DeZeeuw
Institute for Atomic Sciences in Agriculture
Wageningen
Netherlands

A. H. SPARRROW

Dr. H. Gaul
Max-Planck Institute für Züchtungsforschung
5 Köln-Vogelsang
Germany

Dr. C. Gomez-Campo
Instituto Nacional de Investigaciones Agronomicas
Avda. Puerto de Hierro
Madrid, Spain

Dr. A. R. Gopal-Ayengar, Director
Biology Group
Bhabha Atomic Research Centre
Modular Laboratories
Trombay, Bombay-74
India

Prof. Åke Gustafsson
Institute of Genetics
Lund University
Lund, Sweden

Dr. H. B. Newcombe
Atomic Energy of Canada Limited
Biology and Health Physics Division
Chalk River
Ontario, Canada

Dr. Howard T. Odum
Department of Zoology
University of N. Carolina at Chapel Hill
Chapel Hill, N. Carolina 27514

Dr. Thomas D. Rudolph
Lakes States Forest Experiment Station
Institute of Forest Genetics
Star Route No. 2
Rhinelander, Wisconsin 54501

Dr. R. S. Russell
Agricultural Research Council
Radiobiological Laboratories
Letcombe Regis, Wantage,
Berks, England

Dr. G. T. Scarascia-Mugonozza
Laboratorio per le Applicazioni
in Agric., Centro Studi Nucleari
Casaccia, C.P.L., S. Maria di Galeri
Rome, Italy

Dr. M. S. Swaminathan
Botany Department
Indian Agricultural Research Institute
Delhi, India

Dr. A. T. Wallace
Plant Science Section, Bldg. OH
University of Florida
Agricultural Experiment Stations
Gainesville, Florida 32603

Director, Irradiated Food Products Division
U. S. Army Natick Laboratories
Natick, Massachusetts 01760

In addition to these names, there are, of course, a large number of nuclear reactors many of which may have high radiation intensities in water shielding. As I explained on the telephone, I recently had an inquiry from the IAEA concerning this matter and I would suggest that a single letter to Dr. R. N. Mukherjee, Unit of Radiation Biology, Division of Life Sciences, IAEA, Vienna 1, Kaerntnerring, Austria would be appropriate since he is trying to coordinate and collect information concerning highly resistant organisms in liquids used for shielding nuclear reactors.

There are also a fair number of laboratories in this country and elsewhere involved in food irradiation projects but I regret that I do not have a list of these. The Director of the Army Natick Research Laboratories might be able to supply you with the names and addresses of appropriate people in other institutions.

I am enclosing, under separate cover, some of my own reprints relating to chromosome size and radiosensitivity. In addition one of these has a little data on radiosensitivity of blue-green algae in soil. There are two or three papers currently in press in Radiation Botany on the radiosensitivity of blue-green algae. These could only be sent out with the specific approval of the authors. If you would like to see these, please make a specific request and I shall write to the authors asking their permission.

Dr. Joshua Lederberg

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I shall be glad to cooperate with your student studying this topic and help supply samples or make laboratory space available if he wishes to conduct preliminary screenings here.

Yours very sincerely,



Arnold H. Sparrow,
Senior Radiobiologist

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