

NEWS & VIEWS

NEW METHOD STIMULATES RESISTANCE TO VIRUSES

CHICAGO, ILLINOIS, June—A radically new technique for protecting living animals against viruses was described recently at a meeting of the Federation of American Societies for Experimental Biology. The method, which stimulates a body substance called interferon, protected test mice against a dose of influenza virus which was quickly fatal to unprotected animals.

The new approach was described by virologists of the Pfizer company. The team, consisting of Drs. Kouichi Takano, Joel Waaren, Keith Jensen and Alan L. Neal, are all on the staff of Pfizer's Biological Research Centre at Terre Haute, Indiana.

The investigation may open the way for entirely new approaches to the prevention of disease, which until now has relied primarily upon the use of vaccines made from viruses or bacteria.

Interferon is a protein substance apparently made by living cells in response to virus invasion. It is not the same as an antibody, which also develops as a result of infection, although not as rapidly. Interferon, if present in sufficient quantity, may give immediate protection against virus attack.

The line of research followed by Pfizer scientists was based on the fact that the infectious part of a virus is its nucleic-acid, either deoxyribonucleic acid (DNA) or ribonucleic acid (RNA)—which composes its reproductive mechanism. They then exposed living cells to nucleic acids from a non-infectious source—in this case yeast—in the hope that the cells would be stimulated to produce interferon as they would by viral nucleic acids.

Contact of the nucleic acid with lung tissue appears to be essential, as injecting the nucleic acids had no effect. Approximately 20 to 24 hours were required for the appearance of protective effects. The protection lasts for a week or longer, diminishing gradually.

Administration of live viruses will also stimulate interferon production but a surprising result of this investigation was the finding that nucleic acid produced more potent lung interferons than live viruses, probably because of the cell destruction caused by the virus.

The Pfizer scientists point out that it cannot yet be established that the interferon or interferon-like substances resulting from exposure to nucleic acids are solely responsible for the increased resistance to infection. Nucleic acids are rapidly taken up by cells and there may be some kind of competition between them and the viral nucleic acids which tends to reduce the concentration of viruses found in the lungs. It is also suggested that another mechanism may be involved, that cell permeability may be affected by exposure to nucleic acids.

The Pfizer scientists conclude, "Although it is tempting to speculate about possible prophylactic application of nucleic acids administered in the respiratory tract of man or animals, this is premature." Much further study and additional information must be obtained as to the pharmacology of nucleic acid and their long-term effects.

AMERICAN COLLEGE OF POSTGRADUATE STUDIES

The American College of Postgraduate Studies, chartered March 30, 1961, has officially opened its roster to applicants for Founder Fellowship. The college is the first University without walls dedicated to postgraduate medical education.

Its objectives include :

1. To unite in one postgraduate teaching association those who are engaged in the practice of medicine and surgery.
2. To advance the practice and study of all branches of medicine and surgery.
3. To stimulate and encourage research and postgraduate studies in all branches of medicine and surgery.
4. To promote the practical application of all recent advances in medicine and surgery, and to help correlate clinical and experimental studies.

5. To provide regular postgraduate teaching seminars.
6. To edit and publish a Journal and textbooks prepared by members of the College and others, for the advancement of postgraduate teaching in medicine and surgery.

The Founding Governors of the College will be elected from among the Founder Fellows. Those physicians who are interested in affiliating with the College, or obtaining further information, may communicate with the Executive Officer, Alfred J. Cantor, M. D., 147-41 Sanford Avenue, Flushing, Long Island, New York or Donald C. Collins, M. D., Treasurer, 7046 Hollywood Boulevard, Hollywood, California.

NEW PREPARATION

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