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# Rheumatism Germ Found, Say Rockefeller Doctors

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## May Solve Problem of One of Most Serious Diseases of Mankind

Two doctors of the Hospital of the Rockefeller Institute for Medical Research today announced the discovery of a germ which may solve the problem of rheumatic fever and rheumatic heart disease.

One of the most serious diseases of mankind because it is so often followed by progressive heart impairment, particularly in children, rheumatic fever has baffled medical scientists seeking both its true cause and an effective cure.

Dr. Homer F. Swift, considered the world's leading research scientist on rheumatic fever, and Dr. Thomas McPherson Brown, announce their discovery in the current issue of Science.

### Arthritis Germ Discovered, Too

There is a possibility that the rheumatic fever germ they have found is the same one announced two weeks ago by Dr. A. B. Sabin, also of the Rockefeller Institute, as a probable cause of arthritis.

The two diseases, rheumatic fever and arthritis, together constitute one of the major causes of chronic illness and disability.

For years medical scientists have pursued the belief that the two diseases have been caused by some type or types of the common streptococcus, the most frequent cause of infections.

Serums, vaccines and antitoxins have been produced with only slight success to fight both diseases.

The new germ or germs, both called "pleuropneumonia-like microorganisms" by the three doctors, may be the missing element in the cause of rheumatic fever and arthritis, with the streptococcus also playing a causative role.

The germ isolated by Drs. Swift and Brown was found after using highly ingenious techniques to cultivate a bacteriological response from secretions developed by a child with rheumatic fever.

The germ cultivation was done by implantation of the secretion in one of the special membranes of chicken eggs. It was only after taking the fluid from one planting and placing it into a new one for five successive times that a recognizable response was observed. This compares with ordinary bacteriological germ cultivation in which suspected material is planted in a medium and germ growth begins immediately.

Drs. Swift and Brown were able to produce a lung inflammation in mice with their germ, a response which Dr. Sabin was unable to do with his almost identical arthritis germ.

The two doctors believe that the difference may be only one of selectivity of site by a different type of the same germ. Dr. Sabin's germ produced lesions in the joints of rabbits but not pneumonia.

All three doctors are now concentrating on better methods to cultivate the germ and to further establish its connection with human arthritis and rheumatic fever.

Once this is done, research will be started to find ways to fight the germ, just as ways have been found to fight other diseases once the true cause was established.

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## Rheumatic Fever Cause Clues Are Found By Science

### Vicious Disease Of School Age Children In Northeast Frequently Kills

NEW YORK, March 23.—(AP)—Clues to the unknown cause of rheumatic fever, a disease that attacks 1 of every 100 Americans, were announced today in science.

Rheumatic fever is a particularly vicious disease of school age children in the northeastern United States. It frequently results in damaged hearts, and often in death a few years after the rheumatic attack.

An unidentified streptococcus has been suspected. But at the Rockefeller Institute a new microorganism, said to resemble the pneumonic germ, has been found in rheumatic fever sufferers.

The evidence on this new cause of disease is unusual, all being "backhanded." Two Rockefeller scientists, Homer F. Swift and Thomas McPherson Brown, announce that this new organism causes pneumonia in mice and even other ills in animals deliberately infected with it.

Two weeks ago A. B. Sabin of the institute reported discovery that this same new organism caused chronic arthritis in mice.

In all cases the new germ, or virus, was obtained from human beings with rheumatic fever. This cumulative evidence puts the new germ on the spot as the possible cause of the rheumatism.

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