this disease, however, the patient often does not know he has it. In fact, he may not even feel sick. So he fails to get treatment for himself at an early stage when it can be most helpful, and fails to stop the spread of his germs to other persons.

In this early stage, long before the patient is coughing or spitting blood or having night sweats or feeling tired, X-ray pictures can detect the disease. Consequently, tuberculosis authorities urge more widespread use of X-rays to find the patients who need treatment and to check the spread of tuberculosis.

The National Tuberculosis Association is conducting its annual Early Diagnosis Campaign, to remind people generally of the importance of finding the unsuspected tuberculosis patients in every community and every home.

One place to start looking for unsuspected tuberculosis, the association believes, is in the army of defense industry workers.

Science News Letter, April 5, 1941

MEDICINE

Sulfa Drugs Able to Cure by Chemical Warfare in Germ

Believed Antagonistic To Chemical Playing Role In Bacterial Enzyme System Essential To Germ's Life

SULFANILAMIDE and the other sulfa drugs cure by waging and winning chemical warfare within the bodies of invading disease germs. This explanation of how the sulfa drugs probably work was suggested in a Sigma Xi lecture at Mississippi State College by Dr. Perrin Long, professor of preventive medicine, Johns Hopkins Medical School.

Dr. Long is an authority on the sulfa drugs, being one of the first American physicians to use them and the man chiefly responsible for introducing Prontosil, granddaddy of the sulfa drugs, to this country.

"Two main theories as to the mode of action of sulfanilamide have been evolved," Dr. Long said.

He favors what he calls the "inhibitor theory," according to which chemical warfare is waged in the invading disease germ's body.

The warfare is between the sulfa drug and one or both of two other chemicals, para amino benzoic acid and methionine. The first of these has been found in yeast and is very likely present in all living things, including bacteria. Scientists have recently found that it has to a high degree the power of inhibiting or stopping sulfanilamide's action against disease germs. It does this both in the test tube and in the infected animal.

Methionine is one of the essential amino acids from which proteins are built. It is found in normal blood and probably is also present in body tissues. Like para amino benzoic acid, methionine can stop the bacteriostatic activity of sulfanilamide.

One or both of these chemicals may play a role in some enzyme system by which bacteria digest and get nourishment from their food. Sulfanilamide, according to Dr. Long's theory, must compete with one or both of these other chemicals for a place in the bacterial enzyme system. If it wins the chemical war and gets to the enzyme system first, the germs cannot flourish and the patient can overcome them and get well.

Science News Letter, April 5, 1941

PSYCHOLOGY

Psychologists Honored For Research on Vision

ONE of the highest honors in the field of psychology, the Howard Crosby Warren Medal, was awarded by the Society of Experimental Psychologists to Prof. Clarence H. Graham, of Brown University.

The award was made for Prof. Graham's notable researches in the field of vision. He has been particularly interested in exactly what happens to the eyes and to the nerves involved in vision when light strikes the eye or when the intensity of light suddenly changes — as when you step from bright sunshine into a darkened theater.

Prof. Graham was recently appointed

HONORED

Dr. Clarence H. Graham, of Brown University, shown here at work in his laboratory, was awarded the Howard Crosby Warren Medal for his distinguished research in the psychology of vision.