

## Ultra-Minute Germs Studied

A brief glimpse into a new world, more minute than that revealed by the most powerful microscopes, was given scientists at the Philadelphia meeting of the National Academy of Sciences. Dr. Simon Flexner, director of the Rockefeller Institute for Medical Research of New York, described researches that are in progress upon one of the world's mystery diseases, encephalitis lethargica, popularly known as sleeping sickness.

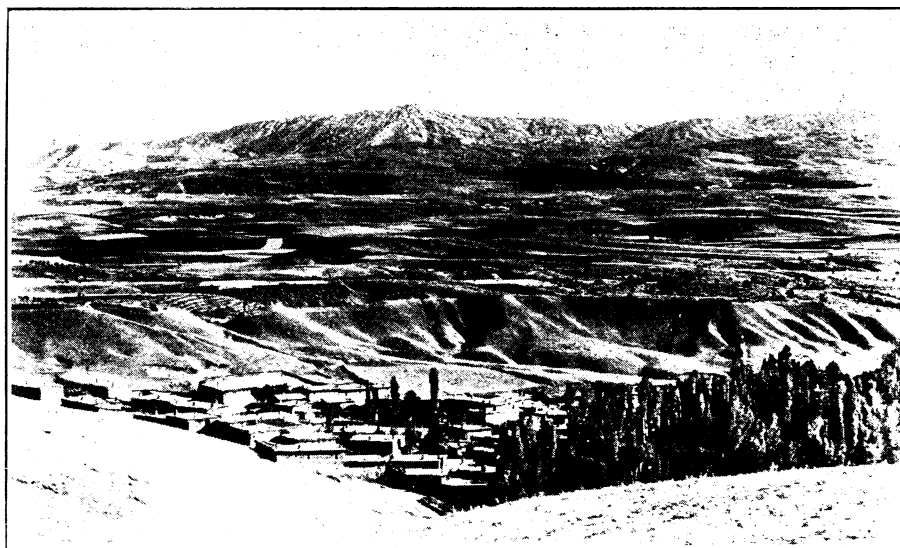
There is a realm of invisible organisms living within the animal body. Against these deadly submicroscopic germs, called "viruses," the medical world has no safeguard, Dr. Flexner explained. The bacteriologist can not grow them, his eyes can not see them, he can distinguish them only by their effects. Many of the most troublesome diseases, such as encephalitis and the hoof and mouth disease of cattle are caused by these viruses.

In studying encephalitis, which suddenly appeared in the world in 1916 in Europe and which since 1919 has been epidemic in this country, medical researchers believed that they had found evidence that the virus of this deadly disease was the same as that obtained from ordinary cold sores such as have afflicted the lips of the human race since a remote past. The contents of these cold sores when injected into rabbits produced a diseased condition quite similar to that of human encephalitis. But further research, particularly that of the Rockefeller Institute, failed to substantiate the identity of the two viruses and Dr. Flexner told the academy that the cause of encephalitis is still an unsolved problem. Two years ago Japan suffered from a severe epidemic of a new disease similar in character to the encephalitis of this country and Japanese investigators may throw some light on the problem. Seven out of ten people afflicted in Japan died and the disease has a high fatality rate in this country as well.

The eye of the camera, which can see with light too short to be caught by the human eye, will be used in investigating the invisible viruses, Dr. Flexner explained. By taking photographs through the ultra-microscope which utilizes ultra-violet rays, and perhaps even using the very short X-rays themselves, it may be possible to picture the guilty germs at present invisible.

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Edison was 30 years old when he invented the incandescent light.



Looking down from the ruins of Antioch toward the modern city, which has many historic stones from old Antioch built into its shops and homes.

### Antioch Unearthed

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Augustus. And here, set against a semi-circle of the native rock, stood the temple.

This religious center of the city proved a hiding place for a variety of valuable relics. When the expedition began to clear away the earth and piles of broken stones they discovered in the Square of Tiberius a stone circle six feet in diameter set in the paving. Holes in the circle had once been fitted with metal letters to spell out the inscription that a certain Roman aedile, or magistrate, had presented the pavement of the square to the city.

The stairway between the lower and higher squares was decorated at the top landing by three great arches elaborately carved, in the form of a memorial to the Emperor Augustus. Two powerful looking Pisidian chiefs with their hands bound are carved over the arch in token of Augustus' conquest. His victories on land are shown by a frieze of shields, breastplates, and other weapons, and his naval triumphs are represented by a frieze of ships, tritons, dolphins, and other marine symbols, with Poseidon himself, god of the sea, among them.

The temple in the upper square remains somewhat mysterious, as no inscription has yet been found stating in whose honor it was built. Study of fragments of the sculptures leads Dr. Robinson to believe that it may have been a shrine dedicated both to the Emperor Augustus and to the local god of fertility, known as Men.

"Enough parts of the temple have been found so that it could be rebuilt," says Dr. Robinson, "though there is small chance of the Turkish government carrying out such a project. The architect of the expedition spent many days examining the architectural units that were identified. From these he has been able to draw a very accurate reconstruction, even to the elaborately carved figure that crowned the pointed roof of the edifice."

Besides the temple, other traces of Augustus' influence on the city have been found by the excavators. One of the objects unearthed was a marble head which had been buried in a Byzantine house. The nose and mouth had been battered and there was no sign of any other part of the statue. But when a restoration of the nose and other features was made on a plaster cast of the head, the fine profile of the handsome Augustus was revealed.

After careful examination of the head, Dr. Robinson has concluded that it is an idealized portrait of the Roman emperor made by a sculptor who had never seen his royal subject.

"The head conforms so strictly to the Augustus type, and yet it is so academic and generalized," he says, "that it is safe to apply to it the explanation that waxen or clay portraits of Augustus were sent to the provinces to be copied by local artists who had never seen Augustus himself."

He believes that the statue was set up late in Augustus' lifetime, (Just Turn the Page)