

plete Assyrian chronology, which has heretofore been carried back only to 963 B.C. These Assyrian name-years form the main basis for fixed dates in early Bible history.

All the cuneiform tablets found at Tell Billa are dated to the earlier eponyms, including King Shalmaneser the First, who reigned in the first quarter of the thirteenth century B.C.

The clay tablets were discovered last year under leadership of Dr. E. A. Speiser. They were so poorly preserved that at first he could decipher just enough to convince him of their importance. For eight months the tablets were set aside to dry, and then were sent to Dr. Edward Chiera of the Oriental Institute of the University of Chicago, who treated them by special processes so that they could be more clearly read. His reading now confirms and amplifies Dr. Speiser's brief examination.

**Name Found**

It is also announced that the Tell Billa expedition has discovered the ancient name of the city being unearthed. A bronze bowl bearing the name Shibaniba has been found. The expedition had thought this might prove to be the name of the city, for one of the gates of Nineveh, fifteen miles away, was called the Shibaniba gate. The gate faced north and opened directly to the road toward Tell Billa.

By identifying the ruins as Shibaniba, an important Assyrian province is added to the definitely known section of the old Assyrian Empire.

*Science News Letter, February 11, 1933*

▼ The Science Service radio address next week will be on the subject

**R** **TRANSPLANTING YOUR MIND**

by

**A** **Dr. A. T. Poffenberger**

**D** Chairman of the Division of Anthropology and Psychology of the National Research Council and Professor of Psychology at Columbia University

**I** **FRIDAY, FEB. 17**

**O** at 1:15 P. M. Eastern Standard Time

Over Stations of The Columbia Broadcasting System

▲

PHYSIOLOGY

# Electrical Control of Cancer Suggested by Yale Professor

**A** METHOD for the control of cancerous growth, based on the knowledge of the electrical currents present in all living tissue, is suggested by Dr. Raymond Dodge, professor of psychology and a member of the Institute of Human Relations at Yale University, in the *Yale Journal of Biology and Medicine*. Experimental work thus far, Dr. Dodge says, supports his presumptions, which are published, he adds, so that investigators in the field of cancer research may substantiate or destroy his hypothesis.

This method of cancer control is still in the laboratory stage and has not reached the point where it can be used on actual cancer patients. Consequently do not let anyone sell you or your relatives an electrical cancer cure or diagnosis on the strength of Dr. Dodge's announcement. It will be years, probably, before any practical application of his theory can be made.

**Current From Tissue**

It is well known that any living tissue is internally electrically positive with reference to its surroundings, giving rise to a detectable negative current of action, Dr. Dodge says. When a direct current comes in contact with a tissue, he explains, there is a decrease in the metabolic activity at the positive, or anode end, causing death of the tissue if the current is of sufficient intensity.

"The obvious bearings of these facts on the study of cancer are three," Dr. Dodge says. "The negative current of action should provide a precise measure of the activity of the cancerous tissue. If, and when, any treatment is adequate to delay the growth, the negative current of action should be decreased or be reversed. If the growth is actually being decomposed by any necrotizing therapeutics the negative current of action should be transformed into a positive current. So far as I know, this should be the most precise and most reliable indication of the cancerous activity and its control. An appropriate electrical exploration of the regions should enable the experimenter to determine the margins of the growth and hypermetabolic activity by the points at

which the negative current of action ceases."

The fast rate of growth of cancerous tissue, producing a powerful positive charge giving rise to a strong negative current, depresses the metabolic activity of the surrounding cells, and actually kills them, a characteristic of all serious cancerous growths, Dr. Dodge says, in describing the electrical picture presented in cancer.

**Electrical Control of Growth**

"This gradient of electrical charge with corresponding currents gives the hint of an experimental attack on the treatment of cancer by the reversal of pathological currents. If a direct current is applied so that a positive superficial charge is superposed on the active area it should develop an anode block, producing depression of the metabolic activity or death of the cells within the area to which the current is applied, according to the amount and the direction of the current.

"If a corresponding positive charge is superposed on the immediate surroundings of the cancerous growth the disease gradient should be reversed and the normal activity of the surrounding tissue might be expected to be reinstated. The desired results and the magnitude of current employed might be kept under constant empirical control by the measurement of the metabolic activity of the cancerous region through its negative current of action. It should thus be possible at will merely to retard growth, to stop growth, or to produce necrosis of the growth, as circumstances seem desirable."

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HISTORY-ARCHAEOLOGY

## De Soto's Famous Route To Mississippi Traced

**P**ICKING up a cold track, almost 400 years old, science has traced with remarkable success the wanderings of that romantic Spanish adventurer Hernando De Soto.

Your school book history doubtless showed a rough sketch of the Spanish leader's wanderings. Thirst for gold

