

## ENDOCRINOLOGY

# Blood-Forming Organs May be Controlled by Pituitary Gland

## Specially Prepared Extract of Pituitary Found To Produce Anemia As Well As Stomach Ulcers in Rabbits

**T**HE PITUITARY gland, already recognized as "dictator" of most of the other glands in the body and largely the controlling factor in growth and reproduction, may have still another unsuspected role. It may control the way new blood replaces old blood in the body.

New experiments just reported in London, England, indicate that pituitary extract injections produce anemia in animals and two days later new blood cells start to appear to replace the old, depleted ones.

The pituitary gland's new role is suggested in a letter from Prof. E. C. Dodds, Director of the Courtauld Institute of Biochemistry, London, and Dr. R. L. Noble, to the editor of *Nature* (May 11). Dr. Noble is working at the Courtauld Institute with the Ellen Mickle Fellowship from Toronto University.

Last year the scientists reported their discovery that stomach ulcers can be produced experimentally by a specially prepared pituitary extract.

Now, they have found that this extract, when given to rabbits, has the additional effect of creating anemia. Marked poverty of the blood appears suddenly four or five days after the injection is given, they report. About two days later there appear cells of a certain type which show that active blood regeneration is taking place. Moreover they consider a series of experiments to have proved that the anemia can not be caused merely by loss of blood from the stomach ulcerations.

There is, therefore, a possibility that what doctors call the "reticuloendothelial system"—the system concerned with the production of new blood-cells and with the destruction of the old ones—may be to some extent controlled by the pituitary gland, the scientists point out.

"So far as we are aware, this is the first time these changes have been produced by an extract of a normal gland," they add in referring also to changes in the bone-marrow and in the secretion of bile which accompany the great change in the number of red blood-cells.

The action of the pituitary upon the blood-renewing system may not be direct.

One explanation might be that the possible hormone which stimulates the flow of acid in the stomach may also stimulate the production of an enzyme that in turn acts upon the blood-renewing bone marrow.

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## ARCHAEOLOGY

## Cave Found in Bible City Recalls Burial of Sarah

**D**ISCOVERY of a large burial cave in the Bible city of Mizpah, making plain the customs described in the burial of Sarah by Abraham as told in the Old Testament, is announced by Prof. William F. Badè, director of the Tell en-Nasbeh Expedition of the Pacific School of Religion.

"The very important materials from this cave are now being studied," said Prof. Badè.

From the badly crushed and disturbed skeletal remains, and the bronze and iron

ornaments worn by the Bible age people, the archaeologist has learned that at least 60 individuals were buried in this cave during the early Iron Age, between 1200 and 900 B.C. The sixty or more burials indicate a long family history, it is explained, and illustrate the story of Abraham's purchase of the cave of Machpelah to bury his wife Sarah. Abraham was told, "in the choice of our sepulchres bury thy dead." In other words, certain caves were cemeteries, and the archaeologist explains that Abraham purchased a cave long used as a burial place, such as the one now found at Mizpah.

The cave at Mizpah is revealed as a burying ground used even by the people of Canaan in the early Bronze Age, 2500 to 2000 B.C., before they were expelled by invading Israelites who became new masters of the land. Pottery mingled with human bones is attributed to these Canaanites. The Israelites had cleared out the old burials, depositing them near the cave entrance.

Israelite burials in this family cave are mainly women, as shown by bracelets and anklets still encircling the bones of arms and legs. Toggle pins of bronze six inches long held in place the garments that have long since vanished.

"Iron was still a scarce and mysterious metal," Prof. Badè says, "as shown by several iron finger-rings, which must have been intended to protect the wearer against evil spirits."

The part of Mizpah, or Tell en-Nas-



CAVE TOMB OF MIZPAH

*In such a cave burial place did Abraham lay his beloved Sarah to rest, scientists believe.*