

MEDICINE

Hope for Hormone To Control Anemia

➤ FURTHER HOPE that a hormone has been found that may aid in the eventual control of anemia is contained in a research report presented by two University of California scientists at the meeting of the Federation of American Societies for Experimental Biology in Atlantic City, N. J.

Drs. Alexander N. Contoupoulos and John H. Lawrence said that a new pituitary hormone has been found effective in controlling anemia in newborn rats.

The scientists and their colleagues reported the discovery of the pituitary factor, distinct from all other pituitary hormones, a year ago. (See SNL, May 2, 1953, p. 281.) They said then the factor promoted red blood cell production in the bone marrow of animals. They call the factor erythropoietic (red blood cell stimulating) hormone.

The new experiments are based on the well known fact that new-born rats develop anemia that increases in severity until the 18th day of life, when red cell count begins to pick up, reaching normal at 35 days.

Different groups of newborn rats were treated with a variety of possibly effective agents from the 4th to the 18th day of life. The agents included testosterone, thyroxin, ACTH, iron gluconate and the erythropoietic factor.

Only the erythropoietic factor prevented anemia. Animals treated with this factor had normal adult red cell levels at the 18th day of life, when the other animals suffered their severest anemia.

The results further support the existence of a red cell generating hormone of the pituitary. Research to purify and understand the hormone, which it is hoped may eventually be useful in controlling anemia, is continuing.

The hormone is not yet available for any but animal experiments. Not enough is known about it for use in humans, nor can it be obtained in sufficient quantities for this purpose at present.

The research is part of a collaborative study between the Institute of Experimental Biology and the Donner Laboratory on the Berkeley campus.

Science News Letter, May 1, 1954

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Iris

➤ BOTH THOSE who like to walk out to meet the Spring and those who are content to watch it blossom forth in the windows of the local florist keep an eye peeled for members of the iris family.

It is unlikely that either will be disappointed for it is a numerous and popular clan. There are about 800 species in the iris family, known technically as the *iridaceae*. One genus within the family is the iris itself. Other important genera are the *crocus* and the *gladiolus*.

Irises come in bright, assertive colors which is probably why the name "iris," Greek for rainbow, was applied to them. Irises are widely distributed throughout the north temperate zone. Many species have

been imported and they have been extensively hybridized to develop favored horticultural types. The best known native iris is the blue flag which is generally found growing in moist or marshy terrain.

The fleur de lis, the heraldic device associated with the French royal coat of arms and which is frequently seen in pins and other jewelry designs, is thought to be a conventionalization of the white iris. However, its claim is not undisputed, the white lily being another contender for the honor.

Whether the iris was the inspiration or not, in any case the fleur de lis is a very ancient design which appears in Indian, Egyptian and Etruscan decoration. Some scholars think it has nothing to do with the iris or any other flower, being merely a design based on the shape of certain weapons, notably arrow or spear heads.

The iris flower with its large leafy petals curving upward and drooping gracefully outward and down is remarkably designed. It is a piece of ingenious botanical engineering, organized so that a honeysucking bee will pollinate any flower but the one from which it picked up the pollen.

The bee comes in for its landing on the broad inviting surface of the outer petal. As the bee, or other insect, crawls in to tap the nectar, it brushes the stigma which is conveniently set for this purpose. Thus any pollen from flowers previously visited will brush off on the stigma, resulting in pollination.

Continuing on its way to the honey, the bee brushes the anther, picking up more pollen. When it is ready to leave, the bee must back out the way it came, but this time it touches the non-receptive lower surface of the stigma. In this way the flower does not pollinate itself.

Science News Letter, May 1, 1954

VETERINARY MEDICINE

New Disease Threats

➤ TWO NEW possible threats to human health from cattle diseases have been discovered in California.

One of the cattle diseases is an influenza-like ailment that began last fall in southern California and slowly spread from herd to herd. From five to 50% of animals in different herds have been attacked. About two out of every 100 cases are fatal.

So far, there has been no evidence pointing to a recognized case in humans, but the disease broke out in animals in a dairy soon after the arrival of a worker from an infected area. This, however, may mean that the disease is spread by a mechanical carrier, for example, by the hands or clothing of a human, as foot and mouth disease sometimes is spread.

Sudden stopping of milk flow in affected cows makes the disease an economic worry to dairy farmers. A virus is suspected as cause of the disease, but so far no virus or other germ has been isolated. The disease

is said to resemble Japanese bovine influenza.

Because of the possible threat to human health, Drs. L. S. Goerke and C. F. Pait of the Los Angeles City Department of Health have reported the situation to the Public Health Service in Washington, D. C.

The second new cattle disease that might affect humans is called sporadic bovine encephalomyelitis. The possibility of its attacking humans comes from finding, in human blood serum, complement fixing antibodies to the virus that causes the cattle disease.

This finding was made in routine blood testing of personnel and students by the Department of Public Health, School of Veterinary Medicine, University of California, Davis. It is reported by Drs. John B. Enright and Walter W. Sadler in the *Proceedings of the Society for Experimental Biology and Medicine* (March).

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