

## CHEMISTRY

## New Drugs From Glands

The repertory of the physician is to be enriched by two new extremely potent extracts obtained in purified form from a single gland by Dr. Oliver Kamm and associates working in the research laboratories of Parke Davis and Company at Detroit. These are the active principles or hormones of the back part of the pituitary body, a gland the size of a pea, lying at the base of the brain. It has been surmised for several years that the secretions from this gland produced two different effects when injected into the body. One is to cause a rapid rise in blood pressure and a constriction of the arteries. The other is to excite a violent contraction of the muscles of the uterus. This second effect is so pronounced that even an impure extract of the gland would produce a perceptible contraction in a solution diluted by several million parts of water. These two active components of the pituitary are now available in a practically pure form and this gives the physician two rifles instead of a shotgun to hit the mark at which he aims. The former will appear in the drug store under the name of vasopressin and is expected to give relief in cases of bronchial asthma. The second principle is to be called oxytocin.

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Pharaohs of the pyramid building age in Egypt never saw a horse.

The Sahara Desert once had plenty of rain and was covered by dense jungles.



GLADYS HENRY DICK

## MEDICINE

## Scarlet Fever Conquerors

Portraits of Dr. and Mrs. Dick at bottom of page.

Five years ago the story of scarlet fever was practically unknown. Today the mechanism of its cause, immunity, diagnosis and therapeutic control are almost as completely understood as diphtheria. The credit for unraveling its bacteriological history and putting it on the high road to becoming a preventable disease is due as much to the Doctors Dick as to any other persons living.

In 1923 they first announced, after many years of research, the production of experimental scarlet fever in volunteers by inoculating them with cultures of hemolytic streptococci of scarlatinal origin. They found that these streptococci when grown in media produced a toxin much as diphtheria bacilli do. By using a carefully determined strength of this toxin and injecting it under the skin they could determine which individuals were susceptible to the toxin and which were not.

This is the well-known Dick test now widely used to determine susceptibility or immunity to scarlet fever. They also found that this toxin could be used in gradually increasing doses to make susceptible individuals immune. A curative antitoxin developed by the Dicks themselves and other workers has done much to allay the fear with which this disease used to be regarded.

George Frederick Dick, the male member of this medical matrimonial partnership, was born at Fort Wayne, Indiana, July 21, 1881. He received his early medical training at Rush Medical College and the University of Indiana. After a year and a half as surgeon in the iron mines of Minnesota and a year of study at Vienna he began research at the John McCormick Institute for Infectious Diseases at Chicago with which he has been connected ever since.

Gladys Rowena Henry was born in Pawnee City, Nebraska, December 18, 1881. She graduated from the University of Nebraska at the early age of eighteen and after an interval of graduate work followed by teaching in high school, entered the Johns Hopkins Medical School. After leaving the Hopkins she spent a year in Europe and came to the University of Chicago in 1911. Here she met Dr. Dick to whom she was married in 1914. She started work with her husband this same year at the John McCormick Institute.

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## Atomic Hydrogen Blondes?

The lightest of the elements in its simplest form proves to be one of the most active agencies in the decoloration of dyes. Prof. E. Emmet Reid and associates at Johns Hopkins reported recently some interesting experiments on an unfamiliar form of hydrogen. This gas ordinarily consists of atoms connected two by two, but the coupling between these pairs may be momentarily broken by a strong electric current, for it takes the lonely atom some time to catch up another mate. During this period of isolation the unsatisfied hydrogen atom is in a peculiarly eager state and will seize with avidity upon almost any element it encounters. It is found possible to produce a stream of such atomic hydrogen nine inches long. When this sweeps over a surface coated with some coaltar dye the color, whatever it may be, is promptly reduced to white. It has long been known that hydrogen freshly released from its compounds was in an extremely energetic condition, called the nascent or new born state, and now the same effects can be produced on a commercial scale by means of atomic hydrogen. A blow-pipe burning a stream of hydrogen atoms has recently been invented for welding metals, since it gives a higher heat than any other kind of combustion.

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The United States takes 90 per cent. of the jutelong, used in chewing gum and electric cables, from the jungles of the East Indies.



GEORGE FREDERICK DICK