

## Nobel Prize to Eijkman, Hopkins

*Medicine*

Two men who gave to the world the earliest knowledge of the all-important vitamins, Prof. Christian Eijkman of the University of Utrecht in Holland and Sir Frederick Gowland Hopkins, professor of biochemistry at the University of Cambridge, England, have been awarded the 1929 Nobel Prize in medicine.

Prof. Eijkman was the first man to produce experimentally a disease of dietary origin. In 1889, when director of the hygienic laboratory at Batavia, Dutch East Indies, he succeeded in producing polyneuritis in fowl by feeding them a diet consisting exclusively of completely polished rice. He had previously noted that this disease resembled closely the disease beri-beri

occurring in human beings. In both the human and fowl diseases, the nerves show the same degeneration, and the symptoms are very similar. In 1921 Prof. Eijkman was made a foreign associate member of the National Academy of Sciences.

Professor Hopkins, in 1906, first demonstrated that an accessory food substance beside proteins, fats and carbohydrates was necessary for growth, reproduction and maintenance of life in animals. Since then he has done considerable research on the nature of these accessory substances, which we know by the name of vitamins. Professor Hopkins has been called discoverer of the vitamins.

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## Between the Ears

*Philosophy*

HENSHAW WARD, in the *Yale Review*:

If I could detach myself from all prejudice and could view the workings of the human intellect as if I were a supernal creature, I should see that only one definition of knowledge is broad enough to be correct: Knowledge is anything that happens between anybody's ears. I should explain my definition thus to a mortal: "Nobody has ever seen the Holy Ghost or an electron or a newly evolved species of animal; these are concepts that originated inside of craniums and that skeptical eyes cannot see outside of craniums. They are not visible to all eyes alike—as a lighthouse or a corpse is. Yet atoms are knowledge to a large group of intensely logical minds, and holy spirits are knowledge to another large group of deeply perceptive minds, and evolution is knowledge to a third large group of closely reasoning minds. A few capacious brains can accept all three sorts of knowledge; many highly organized brains can accept only one; and there are penetrating brains that discard all three. But every one of these and a thousand other kinds of cranial episodes has to be classed as knowledge. Knowledge is simply what anybody thinks.

That way of expressing the fact would sound satirical or hyperbolic to us mortals. We are all pretty well satisfied with the particular reasonings that appeal to us; we have thought our way through to them; we have analyzed the fallacies in other

reasonings; we know that thousands of reliable men see the cases just as we do—so we consider that the false is rather distinctly divided from the true, and go about our business.

Imagine that you are an archangel viewing the antics of human reason from some fourth dimension beyond the galaxies. You see that atomic creatures with two legs and a head are mostly concerned with pride and procreation, but you also see that their minds can reach to your kind of space and time. They are comical in one way, but glorious in another. You have to laugh, but you do not despise. You bend your observation around the corner into three dimensions and down to this fleck of a globe where reason cavorts. Your serene eyes behold the stacks of knowledge: trinities, monisms, vital principles, oversouls, inner lights, scientific observations, dogmas, canons of religion, modes of conduct, methodologies, verifications, mysticisms, humane totalities, inspirations, poetic insights, mathematical divinations, notions of progress and value, rectigradations, epistemologies, measurements, philosophic systems. All these whirlings of the human brain stand out with garish and steady detail to your heavenly consciousness. You perceive them simultaneously and separately, as parts of the chaos that men call "intellectual operations. You perceive that they are as diverse as the species of animals and as inimical to one another as rival organisms in the struggle for existence.

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## Drug Book Revised

*Pharmacology*

Physicians and pharmacists all over the country have been sent score sheets on which to record the popularity of various drugs and remedies which will be considered for admission to the new U. S. Pharmacœpia, to be issued shortly.

The U. S. Pharmacœpia is the collection of formulas for drugs and remedies recognized as standard by doctors and pharmacists of the United States. It is official but has no connection with the Federal Government, being published by authority of the United States Pharmacœpia Convention, a body composed of delegates from national or state associations of physicians and pharmacists, schools of medicine and pharmacy, and by certain government services. The convention, meeting once every ten years, selects a Committee of Revision to make desired changes in the Pharmacœpia then in force and to issue a new one. It is to aid this committee, to be selected by the convention which will meet in Washington next May. that the present questionnaire has been sent out. The next U. S. Pharmacœpia will be the eleventh. There is also a British Pharmacœpia.

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## Muscles Aid Singers

*Physiology—Music*

Team work between two sets of muscles, automatically provided for by nature, may be of advantage to singers, E. M. Josephson and Minnie K. Wilens have found.

The powerful muscles of the human breathing apparatus work in cooperation with the very delicate muscles of the voice apparatus. The biggest range and best tonal quality may be obtained with least effort and fatigue by taking advantage of this natural cooperation.

Instead of using only one type of breathing, involving only part of the breathing muscles, singers should vary the types of breathing according to the range of the notes they are singing. For higher tones Mr. Josephson recommends chest breathing, for the middle register or intermediate tones he advises costo-diaphragmatic breathing, and for lower tones abdominal breathing. The costo-diaphragmatic type is the single one now generally taught, Mr. Josephson stated. The method which he advises reduces to a minimum the strain on the voice muscles.

"Moreover, singing in this manner results in improvement of tonal range and quality and of vocal resonance," said Mr. Josephson.

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