

GENERAL SCIENCE

# American Institute Awards To Bell Laboratories, Davis

**T**HE AWARD of the Gold Medal of the American Institute of the City of New York for 1937 to the Bell Telephone Laboratories and of a fellowship to Watson Davis, director of Science Service, was announced by Gerald Wendt, director of the Institute. The awards will be made at a meeting of the Institute to be held February 4.

The gold medal, given annually by the American Institute in recognition of accomplishment in research, was awarded to the Bell Telephone Laboratories "for researches in electrical science which, as applied to communication, have promoted understanding, security and commerce among peoples by transmitting human thought instantly throughout the world," the announcement stated.

The fellowship in the Institute, conferred in recognition of outstanding success in the interpretation of science to laymen, was awarded to Mr. Davis "for interpreting to the people of the Nation the rapid progress of science upon which modern civilization depends and for the organized dissemination of research findings as news," the announcement continued.

One of the pioneer industrial organizations for scientific research, the Bell Telephone Laboratories, Dr. Wendt said, developed and perfected many of the valuable means of modern communication, the field in which it has pioneered. Trans-oceanic and ship-to-shore wireless telephone service, which enables persons to converse with privacy; long distance wire telephony spanning continents using vacuum tube amplifiers; high fidelity, high power voice and sound transmission and recording applied to sound records, talking motion pictures and public address systems; and commercial transmission of pictures by wire: these are among the many results of the work of men in this great research organization. The award will be received in the name of the more than 4,000 men and women of the Bell Telephone Laboratories by Dr. F. B. Jewett, its president.

Watson Davis, who will receive a fellowship in the Institute, is editor of the SCIENCE NEWS LETTER and author and editor of books and articles on scientific subjects. He is author of "The

Story of Copper" and editor of "Science Today" and "The Advance of Science."

The American Institute of the City of New York was incorporated in 1828 for the purpose of encouraging and promoting domestic industry in this State and in the United States. Each year important new inventions made their first bows to the public under the Institute's sponsorship. The Remington typewriter, the Morse telegraph, the Bell telephone, are only a few of them.

Through the years the Institute has fostered agriculture, engineering and science. Many present-day scientific societies in these fields were originally sections of the American Institute.

The American Institute is still the patron of industry. Through its weekly round table gatherings and monthly general meetings, pioneers in research still bring to the attention of the public the results of those efforts which continue to change our mode of living.

Among high school students—our embryo Einsteins and Edisons—the Institute carries on a program of science studies. These culminate in the Children's Science Fair, where liberal awards for prize-winning exhibits enable students to buy needed equipment for slimly-furnished laboratories.

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MEDICINE

## Gland Promises Weapon Against Severe Infections

**A** GLAND mystery has been solved and doctors may soon have a new weapon to use on severe infections.

Dr. Raymond L. Zwemer, College of Physicians and Surgeons, Columbia University, explained to the New York Academy of Sciences the mystery concerning the fighting glands of the body, the adrenals, which are perched like two cocked hats one on top of each kidney.

These glands produce the familiar adrenalin, and the less familiar but life-essential cortin. Dr. Zwemer and his associate, Dr. Richard Truszkowski, have apparently found why cortin, produced by the cortex of the adrenal

glands, is so essential to sustain life. Without cortin, the body would die of potassium poisoning, it appears from their experiments. The cortex of the adrenals regulates potassium in the body, somewhat as the islands of Langerhans in the pancreas regulate sugar.

Potassium, a metallic element familiar to first-year chemistry students, may be considered as the unknown poison, Dr. Zwemer said, "that we always have with us." This element belongs in the cells of the body but not in the body fluids. It is apparently the job of the adrenal gland cortex to keep potassium in the cells and out of the fluids. When the gland cortex, due to disease or injury, breaks down, potassium gets into the fluids, especially the blood, and death follows, apparently from potassium poisoning.

Drs. Zwemer and Truszkowski developed a method for detecting potassium in small quantities of blood. With this test, they found that the amount of potassium in the blood becomes increasingly high in animals suffering from lack of adrenal gland cortex. Giving cortin, or adrenal cortical extract, to these animals caused a decrease in the blood potassium. Final proof of the connection between the adrenal glands and potassium was obtained by giving potassium to normal animals. This caused symptoms of adrenal cortex insufficiency, including loss of appetite, weakness, disturbance of blood circulation and finally death.

Addison's disease, fatal malady due to injury or disease of the adrenal gland cortex, can be fought by giving the gland extract, cortin. Patients are saved from death and can be kept alive by this extract, much as diabetic patients are kept alive by insulin. But the treatment must be continued, and the supply of cortin is limited. Since these patients are actually suffering from potassium poisoning, they might be kept alive and healthy without cortin by a diet lacking in potassium.

Possibility that cortin, on the other hand, may be a valuable remedy in other conditions than Addison's disease was suggested by Dr. Zwemer. Bacterial infections which injure the cells, or cell injury due to accidents—burns or automobile accidents—may give potassium a chance to escape from the cells and get into the body fluids, where it is dangerous to life. Doses of cortin, to supplement that made by the body's glands, might be a life-saving treatment in such conditions.

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