

of a research program for the National Park Service.

The members of the Academy, who bear legal responsibility for its actions, now number about 650 of the most distinguished scientists and engineers of the United States.

The efforts of some 3,500 additional leading scientists and engineers of the country are joined with those of the members of the Academy in its two great purposes of furthering science and of serving the Government.

Its undertakings reach into every field of the natural sciences. They are concerned with the entire spectrum of science from its most basic to its most applied aspects. Its leadership, through its duly elected officers, is derived from the great body of U.S. scientists and engineers.

Its ties with the Federal Government are intimate and effective; yet its independence is complete.

The Academy receives financial support from both private and public sectors—from individuals, foundations, and private industry as well as the Federal Government.

These features, in combination, are unique among the organizations of science in the United States; taken together, they have enabled the Academy to complete a century of service to science, the nation, and the world of man, to embark hopefully upon a second century bright with promise.

• Science News Letter, 84:243 Oct. 19, 1963

GENERAL SCIENCE

Chemical Man Exhibit Tells Life Story

See Front Cover

➤ A NEW TYPE of exhibit designed to clarify for the layman the chemical activity that creates and sustains human life has been produced by Abbott Laboratories, North Chicago, Ill.

Unveiled in Chicago's Museum of Science and Industry, the first-of-its-kind production will be shown in the 1964 New York World's Fair Hall of Science.

The exhibit tells its story through a combination of three-dimensional models, photomicrography and animated sound motion pictures all taking place in a giant egg-shaped plastic shell 42 feet in diameter with a 70-person capacity.

The chemical man story starts with man as a recognizable being, then explores step-by-step cellular and subcellular levels of development.

The unit of life—the cell that performs the processes of a living organism—is seen magnified many thousands of times in the three-dimensional model shown on this week's front cover, a part of the chemical man exhibit. The large spherical body in the center is the nucleus in which can be seen spiral-like chromosomes that contain heredity-transmitting mechanisms. Other structures shown include the endoplasmic reticulum, which probably segregates and transports material within the cell; mitochondria, the "power plants" of the cell, and lysosomes, which contain enzymes that

break down large molecules into smaller ones.

"Chemical man is an educational exhibit, designed to bring viewers to an understanding of the miracle of life," George R. Cain, president and board chairman of Abbott, said.

"We hope it will stimulate talented younger people to have a greater interest in scientific careers—especially in life sciences which could lead us to new ways to control and cure disease."

• Science News Letter, 84:244 Oct. 19, 1963

GENERAL SCIENCE

Government-Supported Research Defended

➤ TWO TOP U.S. SCIENTISTS defended Government-supported research projects against a Congressman's charge that the projects seem to be "coming out of our ears."

They told a House appropriations subcommittee that much of the apparent overlapping in the projects cannot be avoided if we are to have scientific progress.

The scientists, whose testimony was recently made public, are Dr. Detlev W. Bronk, chairman of the National Science Board and president of the Rockefeller Institute, and Dr. Alan T. Waterman, retired first director of the National Science Foundation.

Rep. Harold C. Ostertag (R-N.Y.) told the two that he is disturbed by the possibility of duplication in research efforts.

Dr. Waterman said that research projects cannot be judged from their titles alone. He said two different scientists often have different approaches and interests in the same subject.

"Then also it is important that more than one individual investigate a certain problem in order to be sure that the results are consistent with the facts so that you have a test," Dr. Bronk said. "This evaluation is continually going on and this is a very essential part of the conduct and spirit of testing."

• Science News Letter, 84:244 Oct. 19, 1963

CONSERVATION

Ford Grants \$7 Million To Resource Study Group

➤ CONSTANTLY INCREASING problems concerning the use and abuse of our natural resources will be tackled with a \$7 million grant from the Ford Foundation.

The grant, made to Resources for the Future, Inc., Washington, D. C., will be used to support research and education programs in the fields of conservation and utilization of resources.

These programs include land-use studies, fellowships, and surveys on pollution control and on the probable effects of future changes in our pattern of living and our technology. Education for conservation and development, both here and in underdeveloped countries, is also being emphasized. Foundation grants to Resources for the Future since its beginnings in 1952 total almost \$17 million.

• Science News Letter, 84:244 Oct. 19, 1963

Questions

AGRICULTURE—How much does the U.S. Government pay per year for the storage of one bushel of wheat? p. 245.

GENERAL SCIENCE—When was the National Research Council established? p. 243.

On the average, at what age do children become interested in science? p. 250.

MEDICINE—Where is type E botulism mainly found? p. 246.

PHYSICS—How can the instability of plasma be inhibited? p. 248.

RADIOLOGY—How much higher are cesium-137 levels in Eskimos than in persons in the State of Washington? p. 249.

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