News of Science

German Atomic Energy Center

A documentation center for literature on atomic energy and radioactive isotopes has been opened in the House of Technology in Essen, Germany. About 70 scientists have volunteered to assist in collecting, sorting, and evaluating specialized material for the center. Pertinent foreign publications are to be translated into German, completely or in part.

Later, courses are to be held for training employees of industry in nuclear physics. Such courses are to include an introduction to the construction and operation of the approximately 20 types of atomic reactors now in existence; instruction on the production of isotopes; ways of destroying or using radioactive fission products; and information on German liability laws in the sphere of atomic energy.

In his speech at the inauguration of the Essen center, Undersecretary Professor Brandt of Düsseldorf suggested that chairs for nuclear research be established at German universities, for which, he said, a federal subsidy of about DM. 60 to 80 million would be needed. Brandt pointed out that the future role of German industry in the world market will largely depend on the progress of nuclear research in the Federal Republic.

Zoonoses

At least 89 infections of domestic and wild vertebrates represent threats to human health, according to a recent article by Meyer in the *Bulletin for Medical Research* [**10**, No. 1, 2 (Sept.–Oct. 1955)]. These zoonoses may invade the human body by way of the mouth, skin, mucous membranes, and respiratory tract. Transmission results most frequently from direct contact with diseased animals or contaminated animal products, but it may also occur through an intermediate vector.

The real problem of suppressing or eradicating these diseases lies in the discovery of their true reservoirs as well as in dealing with ineradicable mammalian or bird reservoirs. Some of the zoonoses represent major epidemiologic problems.

1) Bovine tuberculosis, which can produce both pulmonary and extrapulmonary tuberculosis in man, seems to be spreading to rural populations in Great Britain and Denmark.

2) The economically underdeveloped countries of Latin America and the Mediterranean area are the chief victims of brucellosis, which is acquired by man from cattle, goats, and sheep and causes extensive illness, misery, and economic loss.

3) Anthrax is an important disease in the eastern Mediterranean area and parts of Asia, Africa, and Latin America. It is acquired by man not only by contact with living or freshly killed animals, but also from their salvaged hides, hair, or wool.

4) No part of the world is free of rabies. Although the dog is the most important source of human infection, rabies in wild animals such as the fox, jackal, and wolf has reached epizootic proportions in both Europe and North America in recent years. The discovery in Mexico and South America that vampire bats act as symptomless transmitters has raised peculiar problems for rabies control in such areas.

5) Transmission of salmonellosis to man directly from animals and indirectly through food products presents a growing world-wide problem. Domestic fowls are large reservoirs, and cattle, dogs and cats can be symptomless excreters.

6) Until recently—with a few exceptions in Japan, Australia, Germany, and Italy—human leptospirosis has not been of great public health importance. Of late, however, it has been shown that this disease occurs more widely in domestic animals than had been believed formerly.

7) Q fever, which is chiefly acquired by man from goats, sheep, and cattle, is widespread; highly infected areas occur in many parts of Europe and in Turkey.

8) The chief reservoir of psittacosis in the United States is the parakeet, which causes about 40 to 50 clinical cases a year. Prevention of psittacosis is difficult because the disease is usually recognized only when it has reached epidemic proportions and also because quarantine regulations of imported psittacine birds are violated and reinfection is introduced by irresponsible trading and bartering. A similar viral agent, that of ornithosis, has been found in pigeons, ducks, turkeys and chickens.

Although the fact is often not appreciated, parasitic infections of other animals are quite as important as sources of human disease as those produced by bacteria and viruses. By way of illustration, three such parasitic diseases may be noted.

1) Hydatidosis, which is shared by man with sheep, cattle, and pigs, has an extensive geographical distribution but is prevalent only in countries where man, dog, and sheep—more rarely, cattle and pigs—are closely associated.

2) *Taenia saginata* occurs as an adult tapeworm only in human intestines; the larval stage develops in cattle tissues, causing "measly beef" more often than is usually realized. All populations eating raw or partly cooked beef are infected. The real problem of taeniasis is to keep cattle from contact with human feces.

3) Schistosomiasis can apparently be acquired by man from a variety of animals, but available data do not permit an evaluation of their relative importance. This disease is most prevalent in China, Formosa, the Philippines, the Celebes, and Japan.

Finally, it is pointed out that the cost of diseases of livestock and poultry in the United States alone in a single year was at least $1,316,620,000. The reduction of this great loss, with accompanying gain in health and food, should offer an attractive goal for a variety of interested groups.—W. L. S. Jr.

Research Associateship Program

Discussions by the personnel officer of the Naval Research Laboratory and his staff with representatives of the National Research Council and the Civil Service Commission have resulted in the establishment of a research associateship plan. Under the plan NRL prepares a series of specific research problems requiring research ability of a postdoctoral nature and falling within basic scientific and related areas in which the laboratory has need of assistance.

The National Research Council (i) prepares an announcement of these opportunities and distributes it to deans of colleges and universities; (ii) receives applications for the research opportunities and, after screening, establishes a list of eligible applicants in an order of competency for the individual research problem; (iii) provides supporting files for each eligible and a statistical summary of the distribution of applicants by scientific disciplines. NRL selects eligibles, in order of rank as determined by the NRC, to carry out the individual research problems, provided that the person also meets minimum Civil Serv-

ice requirements and security standards.

Under the research associateship program, each applicant must possess a Ph.D. in one of the physical sciences or in a related field, or he must have completed all of the academic requirements for the Ph.D. and be scheduled to receive the degree at the next commencement exercise of his academic institution.

The program further provides that each associate be appointed by NRL to the grade of GS-11 (base pay, $5940 per annum), the normal entrance grade in the Federal Civil Service system for an applicant having a Ph.D. degree in the physical sciences but who does not have additional professional experience. The length of an appointment is 1 year. Further information may be obtained by communicating with Dr. W. G. Torpey, Personnel Officer, Naval Research Laboratory, Washington 25, D.C.

New Synthetic Hormone

■ A new synthetic hormone, said to be three times as potent as aldosterone, is announced in the 20 Dec. 1955 issue of the *Journal of the American Chemical Society*. An article by John A. Hogg, Frank H. Lincoln, Robert W. Jackson, and William P. Schneider, all of the Upjohn Company, Kalamazoo, Mich., indicates that the new chemical is more effective in laboratory tests than any other known substance in stimulating the body's retention of salt, an ability that is characteristic of some adrenal cortical hormones.

Not produced in the body, the new synthetic hormone is described as a methyl derivative of fluorohydrocortisone acetate. It has no known usefulness in human therapy at present.

The new substance is about 40 times as powerful as hydrocortisone in its ability to influence glycogen deposition, another indication of hormonal activity. A second methyl hormone was also reported in the same article. This substance, named 2-methylhydrocortisone acetate, is ten times as active as hydrocortisone in the glycogen deposition assay.

New Medical Center at Brookhaven National Laboratory

The Atomic Energy Commission has announced that a medical research center, including a nuclear reactor designed specifically for medical research and treatment, will be constructed at Brookhaven National Laboratory. Brookhaven, one of the AEC's major research laboratories, is operated by Associated Universities, Inc.

Scheduled for completion in 2 years at a cost of $6 million exclusive of design and engineering, the new facility will house a nuclear reactor, a research hospital, an industrial medicine branch, and research divisions in medical physics, pathology, microbiology, biochemistry, physiology and clinical chemistry.

The present medical facility at Brookhaven consists of some 20 temporary buildings that were part of Camp Upton Hospital when the site was used by the Army during World War II. As the medical program has grown, the buildings have become inadequate as well as difficult and costly to staff and maintain.

The medical reactor at Brookhaven will be one of the first two in the United States. In July the AEC announced that the University of California had filed license applications with the commission for construction and operation of a medical reactor on the campus of the University of California at Los Angeles.

Medical research and treatment with neutrons have been conducted at Brookhaven since 1951 by utilizing the general-purpose research reactor already in operation there. Treatment of patients at this reactor, however, requires that other work cease during the medical run, interrupting the research programs of other laboratory departments. The new reactor, designed specifically for medical utilization, will make available a source of neutrons for experimental work on brain cancer, as well as a number of special short-lived radioisotopes, permitting a much wider range of medical investigation than is now under way.

Design specifications for the medical reactor are now being completed by Brookhaven scientists and engineers. When they are completed, proposals will be sought from firms in the equipment manufacturing field for fabrication of the reactor and its associated control equipment.

Reading Science Writing

A pilot study of how the public reacts to science news has recently been completed and a detailed report is being prepared. The study was carried out by the Survey Research Center of the University of Michigan among 200 people of varying backgrounds, social characteristics, and experiences. It was sponsored by the National Association of Science Writers and New York University with the aid of a grant from the Rockefeller Foundation. More than half of the interviews were taken in metropolitan Chicago and the rest in two rural counties in upstate New York—Onondaga and Cortland.

One of the chief purposes of the pilot study was to determine whether or not a larger survey would be worthwhile; both SRC and NASW now believe that it would. Some of the findings of the test survey follow:

More than three-quarters of the 200 persons interviewed read science news in their local papers. One-third of the sampling had attended college, far more than would be found in a typical U.S. cross-section.

One in four of those interviewed said they read all the science items that were published in their papers.

More than a third of the 200 persons interviewed wanted more science news. This point was further developed when they were asked to name what types of news they were willing to omit to make room for more science reporting. Some mentioned cutting down on sports news; others said society news. A sizable proportion of even those listed as occasional science news readers wanted some expansion in coverage, thus indicating what SRC calls "a potential for growth of the science audience at all levels of readership."

More than half of those interviewed were satisfied with the presentation of science news. Those who were dissatisfied complained of inaccuracies, sensationalism, insufficient details, too-technical language, and so forth. (These same points were mentioned by scientists who answered an earlier NASW-New York University questionnaire several years ago.)

All but three of the 200 interviewed had heard of the Salk vaccine. This represented close to saturation coverage. The pilot study found that the atomic bomb was the most common area for nonmedical science reading.

More than nine out of ten respondents had definite impressions of scientists, and the characteristics mentioned most frequently were superior intellect, dedication to work, and absent-mindedness.

Education, especially some high-school or college study in a field of science, was "positively related" to the desire to read more science news items. Apparently the avid science reader with intellectual preferences is the one who is most likely to want more science news.

Scientists in the News

OSCAR MARZKE, associate director of research for materials at the Naval Research Laboratory, Washington, D.C., has been appointed director of research at NRL. He succeeds EDWARD O. HULBURT, who is retiring from Civil Service and who has been named senior scientist for the U.S. National Committee for the International Geophysical Year.

PETER KING, superintendent of the