industry and by physicians who contribute to the fund through the American Medical Education Foundation. The AMA annually gives a direct contribution to the foundation.

During 1954–55, completed construction by medical schools had a value of more than $99 million and construction initiated had a value of more than $80 million. In addition, many hospital and clinic facilities used in teaching were financed by Government or private funds and not by the schools.

Among other items discussed in the report, which appeared in the 8 Oct. *Journal of the American Medical Association,* are the following:

There are 251 faculty vacancies reported for the 1955–56 session—seven less than in 1954–55. In view of the new schools and new faculty appointments, this slight improvement is perhaps more significant than it appears, the report said.

There were 1537 women attending medical school. This was a slight increase over the previous year. The 345 women graduates was the smallest number since 1947.

The year also witnessed the largest recorded attendance—105,466—at 1719 short courses, conferences, assemblies, seminars, and study and circuit courses for practicing physicians who wished to obtain additional training.

News Briefs

■ Electric wiring exposed for long periods of time to atomic rays from nuclear power may show various effects. In some types the insulation will break down, whereas others will show no ill effects, and some varieties will even improve. These observations were described by P. H. Klein and Clifford Mannal of the General Electric Company in a report delivered at the recent meeting in Chicago of the American Institute of Electrical Engineers.

For doses up to 10^8 roentgens, polyethylene tape and Formex wire enamel undergo discernible decreases in their resistance to short-time voltage breakdown. Cellulose acetate shows little change under the same conditions, and polyvinyl chloride shows some distinctly favorable alterations after irradiation. Mica-and-glass tape impregnated with silicone resin—an inorganic insulator—is virtually unaffected, even at radiation levels up to 10^{10} roentgens.

■ It is hoped that Britain's rabbit population, which was once 100 million, will be reduced to 3 million next year with the continued spread of the rabbit disease, myxomatosis, across the country. Derick H. Amory, Minister of Agriculture, has reported that since the disease took hold 2 years ago, the grazing season has been lengthened considerably, and crop yields in some places have been increased by 50 percent. He estimates that farmers have been saved approximately $42 million a year.

It is also reported that a strain of myxomatosis-resistant rabbits has appeared in an area of Nottinghamshire. Efforts are now being made to wipe them out.

■ A central laboratory building at Suffield Experimental Station, Suffield, Alberta, Canada, opened officially on 29 Sept. Facilities of the 1000-square-mile establishment, the Defence Research Board's largest station, are employed for experimental activities related to the defensive aspects of biological, chemical and radiological warfare. The staff scientists work closely with the Canadian Armed Forces and colleagues in the same fields in the United Kingdom and the United States.

The laboratory also accommodates station headquarters, the scientific administrative staff, a Canadian Army liaison office, a library, and other auxiliary services associated with the establishment's program. A conference room and a projection room will be used extensively for scientific discussions and films of trials and research and development techniques.

The $1.5 million building contains a diversified range of scientific installations. One is an electron microscope with a magnification of 20,000. In a nearby building associated with the central laboratory is a 2-million-electron-volt Van de Graaff generator.

■ Discovery of a new antibiotic in an organism obtained from East Pakistan earth was announced in the 1 Oct. issue of *Nature* by K. Ahmad and M. F. Islam of the University of Dacca, East Pakistan. The antibiotic has been named *ramnacin* after the place, Ramna, where the organism producing it was discovered. This organism is a *Streptomyces. Ramnacin* is a stable antibiotic showing activity against a number of bacteria, including some staphylococcus and streptococcus germs and two fungi.

■ Recently a Japanese seismologist, Takahiro Hagiwara, pointed out on his return from a 2-year UNESCO mission in Turkey that it may be possible to forecast earthquakes. Working under the UNESCO Technical Assistance Program, Hagiwara cooperated with the Turkish Government in establishing a Seismological Institute at Istanbul and three earthquake observation stations in other parts of Turkey, which is struck by earthquakes on an average of once a year. By correlating reports from these stations and from others all over the world, Hagiwara observed that it might be possible "to find a method of forecasting earthquakes so that people can be warned in time . . ."

The international cooperation that is required if earthquakes are to be understood, and perhaps forecast, is exemplified by the UNESCO project in Turkey. G. Gutenberg of California was in charge of the preliminary survey; preceding Hagiwara in Turkey were F. J. Roesli of Switzerland and M. Gaston Grenet of France.

■ Hormones circulating in the body of an expectant mother can cross into the unborn baby's body and there affect the baby's organs. This finding, which is contrary to current belief, was announced by William B. Ober, Charles C. Roby, Jay Bernstein and James E. Drorbaugh of Boston Lying-In Hospital at the recent meeting in Boston of the American Society of Clinical Pathologists.

■ After the Atomic Energy Commission turned over 961 papers on possible industrial uses of atomic energy to the Commerce Department's Office of Technical Services, sales by the office jumped about 400 percent.

Scientists in the News

ROBERT G. SPROUL was honored for his 25 years as president of the University of California with a Symposium on the Physical and Earth Sciences that was held 17–19 Oct. on the Berkeley campus as part of a state-wide commemoration of the anniversary.

It was during this symposium that Ernest O. Lawrence, Nobel laureate, inventor of the cyclotron, and director of the university's Radiation Laboratory, announced the discovery of a new atomic particle, the antiproton.

ELIZABETH L. HAZEN, microbiologist, and RACHEL BROWN, biochemist, of the division of laboratories and research of the New York State Department of Health, have received the $5000 Squibb award in chemotherapy for their discovery of nystatin, the first antifungal antibiotic safe enough for human use. The microorganism that produces nystatin was found by Hazen in a soil sample obtained from a farm near Warrenton, Va. The isolation of the active drug was carried out by Brown.

The discovery of nystatin resulted from a search started in 1946. Although many scientists were then screening soil samples for microorganisms possessing antibiotic activity, few, if any, were concentrating on antifungal agents.

Hazen examined soil samples from all parts of the United States, but it was not until 1948 that the microorganism that produces nystatin was discovered. That summer Hazen spent her vacation in Warranton, visiting the dairy farm of W. B. Nourse, who became interested in her research and helped her collect soil samples.

It was the sample taken nearest to the Nourse dairy barn, at the edge of the cow pasture, that yielded the nystatin-producing microorganism. Found to be a member of the genus *Streptomyces* and believed to be a new species, the organism was named *Streptomyces noursei* by Hazen in honor of her host. The name *nystatin* is derived from the words *New York State.*

Brown entered the project because of her previous experience in the extraction of active antibiotic ingredients from bacterial cultures. The extraction phase of the work presented difficulties, and many solvents were tried before one capable of performing the extraction was obtained. Brown then discovered that she had unknowingly extracted not one but two antifungal antibiotics. One was nystatin and the other a variety too toxic for human use.

BERNARD HOUSSAY, Nobel prize winner, has been reinstated as professor and director of the Physiological Institute in Buenos Aires University. Houssay was discharged from his post for disagreeing with former President Juan D. Peron's education policies.

KARL F. HEUMANN, for the past 3 years director of the Chemical-Biological Coordination Center at the National Academy of Sciences–National Research Council, has resigned to accept a position with *Chemical Abstracts* at Ohio State University.

GEORGE A. LIVINGSTON, who has been associated with the center since June 1953, was named acting director of the center on 1 Sept.

MAURICE HOLLAND, New York industrial research adviser to industry, foundations, and governments, was presented with a special Founder's award by the Industrial Research Institute during its recent fall meeting in Houston, Tex. He was honored for his services in originating the institute and for his contributions to industrial research and to the institute.

S. E. GOULD, editor-in-chief of the *American Journal of Clinical Pathology* for 10 years, has resigned this position effective 31 Dec. He will be succeeded by PARKER R. BEAMER, professor of pathology at Indiana University Medical School.

PAUL EMMETT, professor of chemistry at Johns Hopkins University and an expert in catalysis, has been named 1955 Baker lecturer in chemistry at Cornell University. Between 8 Nov. and 15 Dec., Emmett will lecture on "Current ideas on contact catalysis" each Tuesday and Thursday in Baker Laboratory.

CHARLES F. KETTERING, research consultant and a director of the General Motors Corporation, is to receive the 1955 Hoover medal for "great, unselfish, nontechnical services by engineers to their fellow-men." The presentation will be made at the diamond jubilee celebration and dinner of the American Society of Mechanical Engineers in Chicago, Ill., on 17 Nov.

Kettering, who has retired as vice president and general manager of the research laboratories division of General Motors, is now chairman of the Charles F. Kettering Foundation. He is directing research on chlorophyll and photosynthesis, artificial fever therapy, and cancer.

GEORGE F. KIRBY, who joined the Ethyl Corporation, New York, as a chemist 15 years ago, has been elected vice president in charge of research and engineering. He succeeds B. BYNUM TURNER, who has been elected executive vice president, a new position.

FRANCIS J. SERGEYS, director of the chemical engineering division, has been promoted to general manager of research and engineering operations at Baton Rouge, La., and Houston, Tex., to succeed Kirby. PAUL A. MCKIM, assistant director of process development, will assume Sergeys' post.

RUTH RHINES, a neuroanatomist who served last year as an associate in medicine at the University of Pennsylvania School of Medicine, has been appointed associate professor of anatomy in the University of Chicago division of biological sciences.

In the same division, WILLIAM K. BAKER, a geneticist and formerly a senior biologist with Oak Ridge National Laboratory in Oak Ridge, Tenn., has been named associate professor.

M. STARR NICHOLS, assistant director of the Wisconsin State Laboratory of Hygiene and professor of sanitary chemistry at the University of Wisconsin, has received the Charles Alvin Emerson medal from the Federation of Sewage and Industrial Wastes Association. The citation said: "You have earned this signal honor through your many years of devoted and unselfish service toward the work of the Federation." Nichols and his associates developed a test in stream pollution studies, called the biochemical oxygen (BOD) test, that is now a standard procedure in all parts of the United States.

The federation's Harrison Prescott Eddy medal for outstanding research in the field of sewage waste treatment was awarded jointly to Gerard A. Rohlich of the University of Wisconsin civil engineering department; William L. Lea of Madison, Wis., director of the division of industrial hygiene of the Wisconsin State Board of Health; and William J. Katz, sanitary engineer in the research department of the Chain Belt Co., Milwaukee, Wis. The three engineers studied the removal of phosphates from treated sewage when Lea was an assistant professor of civil engineering at the university and Katz was a graduate student completing his doctor's degree in civil engineering under Rohlich's supervision.

CARL J. WIGGERS of Cleveland, Ohio, has received the 1955 Albert Lasker award of the American Heart Association for "distinguished achievement in the field of cardiovascular research." Wiggers, who is one of the greatest contemporary authorities on the physiology of the heart and blood vessels, is editor of *Circulation Research,* the AHA's journal of fundamental studies.

JOSEPH GABERMAN, a psychologist, has for several years been involved in an unusual security case. The unique aspect of Gaberman's case is that the Navy has cleared him for retention of his reserve officer's commission, but has dismissed him from his Navy civilian post on loyalty-security grounds. The charges involve his associations of more than 20 years ago and the left-wing connections of relatives. He is now attempting to get back his civilian job.

ALFRED L. BOEGEHOLD, assistant to the vice president in charge of the General Motors research staff, has received the American Society for Metals 1955 gold medal "in recognition of his great versatility in applying science to the metal industry."

JOHN G. DOUGLAS, having retired from the Mene Grande Oil Co. at Maracaibo, Venezuela, has accepted a position as associate professor of geology at the University of Mississippi.

SAMUEL R. M. REYNOLDS, director of the department of embryology at the Carnegie Institution of Washington, has been appointed professor and head of the department of anatomy at the University of Illinois Chicago Professional Colleges, effective 1 Jan. Reynolds' appointment fills the vacancy created when Arthur Kirschbaum resigned in 1954 to head the anatomy department at Baylor University College of Medicine.

Necrology

WALTER N. BROWN, JR., University Park, Pa.; 37; physicist, director of Bone density Research and Evaluation Center at Pennsylvania State University; 12 Sept.

JOHN PIM CARTER, Philadelphia, Pa.; 75; anthropologist, staff member of the Academy of Natural Sciences of Philadelphia; 22 Oct.

JACOB LANGTHORN, Mount Dora, Fla.; 88; retired consulting engineer; 23 Oct.

IVAN MCDOUGLE, Baltimore, Md.; 63; professor of sociology at Goucher College; 25 Oct.

ROSS MARRIOTT, Swarthmore, Pa.; 72; astronomer, professor emeritus of mathematics at Swarthmore College; 19 Oct.

MORRIS NEWMAN, Teaneck, N.J.; 28; assistant professor of chemical engineering at New York University; 21 Oct.

RICHARD PAGET, London, England; 86; authority on speech and artificial speech production and specialist in the languages of the deaf and dumb; 23 Oct.

J. SPEED ROGERS, Ann Arbor, Mich.; 62; professor of zoology and director of the museum of zoology at the University of Michigan; 17 May.

JAMES W. SMITH, New York, N.Y.; 62; eye surgeon and clinical professor of ophthalmology at the Post-Graduate Medical School of New York University-Bellevue Medical Center; 24 Oct.

Education

■ Donald L. Benedict, director of Stanford Research Institute's physical sciences division, has announced the formation of a new department of chemical physics under his supervision. The department takes over functions of the former basic engineering sciences group that was until recently a part of the engineering division. Named to head the new department is Clinton M. Kelley, former head of the group in engineering.

■ Meharry Medical College, Nashville, Tenn., and North Texas State College, Denton, Tex., have been elected to membership in the Oak Ridge Institute of Nuclear Studies, which is now owned by 34 southern universities.

Other action during recent meetings of the ORINS council and board of directors included the election of Marten ten Hoor, dean of the College of Arts, University of Alabama, to a 3-year term as chairman of the council, which is composed of one representative from each of the member universities. W. M. Nielsen, chairman of the department of physics, Duke University, was named to a 1-year term as council vice chairman.

As council chairman, Ten Hoor automatically becomes a member of the 15-man board of directors, other new members of which are J. M. Dalla Valle, professor of chemical engineering, Georgia Institute of Technology; W. V. Houston, president of Rice Institute; Charles E. Dunlap, chairman of the department of pathology, Tulane University School of Medicine; C. C. Pfeiffer, chairman of the department of pharmacology, Emory University School of Medicine; Alvin M. Weinberg, director of Oak Ridge National Laboratory.

Reelected to 1-year terms are Paul M. Gross, vice president of Duke University, president of the corporation; Clifford K. Beck, professor and head of the department of physics, North Carolina State College, vice president; and William G. Pollard, ORINS executive director, corporation treasurer.

■ The School of Engineering at North Carolina State College now offers a degree of bachelor of metallurgical engineering. The new curriculum will complement others in ceramic and geological engineering in the college's department of mineral industries.

■ A new department of geography has been created at Michigan State University; it will offer an undergraduate and a master's degree.

■ The U.S. Civil Service Commission has announced a college student work-study program for scientific and technical personnel within the Potomac River Naval Command and other Federal establishments in Washington, D.C., and the nearby area. In this cooperative education plan, a student alternates at designated intervals during the year between academic college instruction while in residence at a participating college, and work-experience training at one of the Federal establishments.

Salaries range from $2690 to $3415 per year. Applicants who wish to be scheduled for the first written test to be held on 5 Dec. 1955 must have their Form 5000-AB on file *by 15 Nov.*

■ High-school seniors throughout the country have been invited to compete for prizes and honors offered by the sponsors of the 15th annual Science Talent Search. Winners, selected from entrants from participating public, private, and denominational schools, will share $11,000 in Westinghouse Science Scholarships.

Awards will be made in Washington, D.C., early next spring at a 5-day Science Talent Institute which the 40 finalists in the competition will attend as guests of the sponsors. The young scientists will have the opportunity to exhibit their work at the institute and to participate in discussions with some of the nation's leading scientists.

The boy or girl whose all-around Science Talent Search performance and whose personal qualities are judged the most outstanding will receive a $2800 grand science scholarship. Other scholarships ranging from $100 to $2000 will be awarded to the remaining 39 finalists. In addition, 260 other students who show "excellent promise of becoming creative scientists" will receive honorable-mention citations.

The awards are made by Westinghouse Educational Foundation, which is supported by Westinghouse Electric Corporation. The talent search is conducted by Science Clubs of America, which is administered by Science Service.

Entrants must report on an original science project and take an aptitude examination. Their schools then submit scholastic records and teachers' estimates of the entrants' ability. To be eligible, entries must be received in Washington *by midnight, 27 Dec.*

■ Bennington College has announced three new science courses specifically designed for students with no special interest in the natural sciences. A course entitled "Science and symbols" will deal with a sequence of problems in chemistry whose solution historically necessitated the development of a scientific language and method. A physics course will deal with the modern physicist's understanding of the universe, and conceptual structure of physics and its experimental bases, and the potentialities and limitations of the scientific method. The third course is "Mathematics in Western culture."

Grants, Fellowships, and Awards

The trustees of Colonial Williamsburg, Williamsburg, Va., have issued the following announcement:

"As part of its program to bring new strength in our time to the belief in human liberty and the dignity of the individual which made Williamsburg and its leaders a moving force in 18th century America, Colonial Williamsburg has established The Williamsburg Award. The Award will be made, as occasion warrants, to a person who in the course of contemporary events has made an outstanding contribution to the historic struggle of men to live free and self-respecting in a just society. If circumstances require, it may be made jointly to two or more persons. It will carry an honorarium of $10,000 and an appropriate emblem.

"The only limitation on eligibility for the Award will be clear and eminent achievement. Recipients may be natives