Research workers found out a long while ago that they could induce cancers to appear in animals by irritating the tissues with various physical or chemical agents. The agents which do this, the carcinogens, call forth benign growths as well, tumors doing no harm other than that which may result from their bulk. And they not only bring cancers into being which are capable of slaying the host but others which need aid if they are to progress and which, in the lack of it—as when the carcinogen is discontinued—dwindle and vanish. The occurrence of such hesitant cancers, forced upon the organism under the exaggerated conditions of experiment, was first noted in 1915; but almost no attention has been paid to them for the reason that in human beings one seldom sees them, or rather, seldom perceives them for what they are. The growths which drive people to seek medical attention have already been tried out by circumstances, they are the fit which have emerged, they are going concerns. Yet if pathologists had only searched they might long ago have seen that the prostates of many men over forty contain tentative cancers, which come to nothing as statistics show, being still microscopic nodules in old age. It is the exceptional prostatic cancer which extends beyond the capsule of the organ. All this is very recent knowledge.

The gross differences in the behavior of human cancers, including the prostatic, are of course merely the expression of difference in cell capability and form. Cancer cells are popularly supposed to be in a state of anarchy, but this is seldom the actual case. Nearly always they are more like delinquents which make attempts in their poor way to carry out the accustomed tasks of entities of their sort. Some of those arising from glands deviate so little from the normal as still to produce secretions in line of duty, and often they build glandular structures as they proliferate, though crazy structures to be sure. More important in the present relation, they respond in greater or less degree to the influences affecting normal cells. Only in extreme instances do they wholly disregard the laws of organism. Most tumor cells appear to do the best they can with their disturbed abilities, differentiating and functioning so far as their abnormal state will let them and the urge that is on them to multiply.

It was upon these facts that Dr. Huggins acted. He was aware, partly through his own researches, that the activities of normal prostatic cells are maintained by the male sex hormones, substances elaborated in the testicles. What he attempted was to learn whether any prostatic cancers are still sufficiently like normal gland tissues to undergo involution with the latter when the stimulation by hormones is withdrawn. Putting aside the assertions of the text-books that castration had no useful effects in such respect he removed the testes of patients with hopeless prostatic cancers, after obtaining their consent. Dramatic happiness followed of which he will tell you.[1] They throw a far light.

That Dr. Huggins should be a surgeon is one of the happy circumstances of his achievement. Surgeons of all men have most direct access to tumors—I do not mean to play on words—yet it is their sardonic fate to have to employ their energies mostly in taking growths out, not in reasoning why as concerns them. Dr. Huggins, like the great surgeons of the past, has proved stronger than the demands of his vocations, and most rewardingly has he reasoned.

There is no natural phenomenon which challenges scientists in a more peremptory way than cancer. To layman and scientist alike it will seem fitting that the first prize administered by the National Science Fund, the Charles L. Mayer Award, should have been offered for "a contribution to our knowledge of factors affecting the growth of animal cells, with particular reference to human cancer." I am privileged in presenting Dr. Huggins for this prize. For his is more than a contribution to knowledge; it is an immediate gift to the welfare of man.

SCIENTIFIC NOTES AND NEWS

A TESTIMONIAL dinner to Dr. Walter S. Landis, vice-president of the American Cyanamid Company, was given on the evening of May 15 at the twenty-first annual meeting of the American Institute of Chemists. The gold medal of the institute was presented to him in recognition of his contributions to the field of chemistry. Speakers at the dinner were: Dr. Gustav Egloff, president of the institute and research director of the Universal Oil Products Company; Harry L. Derby, president of the American Cyanamid Company; and Maximilian Toch, president of Toch Brothers, Inc. Dr. Landis gave an address entitled "The Personal Service of the Chemist to the Nation."

DR. GUSTAV EGLOFF was the recipient of the Columbia University Medal of Merit for 1943, which is awarded annually to "an outstanding scientific or technological leader in industry." The medal was presented on June 1 at the convocation of the university.

L. M. PIDGEON, of the National Research Council of Canada, has been awarded the platinum medal of the International Nickel Company by the Canadian Institute of Mining and Metallurgy and the special merit medal of the Professional Institute of the Civil Service of Canada for his development of a successful method of producing metallic magnesium.

THE annual award of the President and Visitors Research Prize of the Virginia chapter of the Society of Sigma Xi this year was made at the twentieth annual meeting on May 25 to Dr. Gordon T. Whyburn for his work in the field of topology. At this meeting there were initiated two alumni, two faculty members, ten members from the Graduate Department and nineteen associates from the college, graduate and professional schools of the University of Virginia.

THE Ohio State University at its commencement exercises on June 11 will confer the doctorate of laws

[1] This address will be published in SCIENCE.

on Dr. Henry H. Goddard, professor emeritus of psychology of the university.

BOSTON UNIVERSITY on May 24 conferred the doctorate of science on Dr. Frank Howard Lahey, of Boston, founder of Lahey Clinic and chairman of the directing board of the Procurement and Assignment Service for Medical Personnel for the armed forces.

THE doctorate of laws of the Massachusetts State College at Amherst was conferred at commencement on Dr. Ralph R. Parker, director of the Rocky Mountain Laboratory of the U. S. Public Health Service. The doctorate of science was conferred on Leonard S. McLaine, Dominion entomologist of Canada.

DUKE UNIVERSITY on May 22, at its commencement exercises, conferred the honorary degree of doctor of science on Brigadier General James Stevens Simmons, director of the Preventive Medicine Division, Office of the Surgeon General, U. S. Army, and on Thomas A. Morgan, president of the Sperry Corporation.

THE honorary doctorate of engineering was conferred at the commencement exercises of Lehigh University on Dr. Per Keyser Frolich, director of the Esso Laboratories, Chemical Division, of the Standard Oil Development Company.

AT the commencement of Franklin and Marshall College the doctorate of science was conferred on Dr. James I. Hoffman, chemist of the National Bureau of Standards, and on Professor G. C. Chandlee, chairman of the department of chemistry of the Pennsylvania State College.

AT the annual meeting in New Orleans of the American Oil Chemists Society, Lamar Kishlar, St. Louis, research director for the Ralston Purina Company, was elected president for the coming year.

DR. EARL H. HERRICK, professor of zoology and mammalogist of the Agricultural Experiment Station at Kansas State College, has been awarded the Elizabeth Clay Howald scholarship of the Ohio State University. This scholarship carries a stipend of $3,000 for the year. It was established by the late Ferdinand G. Howald in memory of his mother. Dr. Herrick will devote his time to a study of vitamin E in relation to anterior pituitary function.

Nature states that officers of the Royal Astronomical Society for the ensuing year have been elected as follows: *President,* Dr. E. A. Milne, Rouse Ball professor of mathematics, University of Oxford; *Treasurer,* J. H. Reynolds; *Secretaries,* Dr. H. R. Hulme, chief assistant, Royal Observatory, Greenwich, and D. H. Sadler, superintendent of the "Nautical Almanac"; *Foreign Secretary,* Sir Arthur Eddington, Plumian professor of astronomy, Cambridge; *Council,* Miss M. G. Adam, chief assistant (astronomy), University Observatory, Oxford; Dr. E. C. Bullard, Smithson research fellow of the Royal Society; Dr. J. A. Carroll, professor of natural philosophy, University of Aberdeen; Dr. T. G. Cowling, lecturer in mathematics, University of Manchester; Dr. G. C. McVittie, reader in mathematics, University of London (King's College); Professor L. M. Milne-Thomson, professor of mathematics, Royal Naval College, Greenwich; F. J. Hargreaves, Dr. A. Hunter, Captain W. N. McClean, H. W. Newton, F. J. Sellers and W. M. Witchell.

ON the retirement of Sir Arthur Smith Woodward as president of the Paleontographical Society at the annual general meeting on April 21 he was elected an honorary member in recognition of his services to the society. Sir Arthur had been president of the society for nine years, following thirty years as secretary. During his period of secretaryship, in addition to the ordinary duties of that office, he contributed two important monographs on Cretaceous fishes to the series of volumes issued by the society, which describe and illustrate British fossils. He is succeeded as president by Professor H. L. Hawkins, professor of geology at the University of Reading.

DR. JOHN B. PARKER, for thirty years a member of the faculty of the Catholic University, Washington, has been made professor emeritus of biology.

DR. A. L. MELANDER, professor of biology and head of the department in the College of the City of New York, will retire at the close of the academic year.

DR. ROBERT G. CROSEN, associate professor of chemistry and acting dean of Lafayette College, has been appointed dean.

DR. HENRY NELSON HARKINS, since 1939 associate surgeon of the Henry Ford Hospital, Detroit, has been appointed associate professor of surgery at the Medical School of the Johns Hopkins University.

ENDING his twenty-fourth year as a member of the faculty of the Military College of South Carolina at Charleston and a teaching career of nearly half a century, Dr. Newland Farnsworth Smith, since September, 1919, head of the department of physics, will retire from active teaching at the close of the academic year. He has been given leave of absence until next September, when his resignation becomes effective. The corps of cadets paraded on May 21 in his honor and after the ceremony the commander of the regiment presented him with gifts from the cadet corps. Dr. Smith plans to take up work as a research physicist in the Philco Laboratories in Philadelphia, where his son, Newland F. Smith, Jr., has been for a number of years.

DR. W. HARRY FEINSTONE has been appointed director of biological research of the Pyridium Corporation of Yonkers, N. Y. He will be in charge of the Biological Laboratories and of development work on chemotherapeutic agents as well as on other pharmaceuticals.

THE *Journal* of the American Medical Association reports that Lieutenant Colonel Loyal Davis, professor of neurologic surgery at Northwestern University, is a member of an Anglo-American Commission to visit Russia. Since his arrival in London on September 6 of last year he has been senior consultant on neurosurgery in Europe. Another American member of the mission to Russia will be Colonel Elliott C. Cutler, of Peter Bent Brigham Hospital, Boston, and professor of surgery at Harvard Medical School. Colonel Cutler is senior consultant on general surgery to the American Expeditionary Force.

DR. GRANT L. DONNELLY, associate professor of pharmacology in the School of Medicine of the University of North Carolina, has resigned his professorship in order to resume practice in western North Carolina.

DR. BARRY G. KING has recently resigned as assistant professor of physiology at the College of Physicians and Surgeons, Columbia University. He has received a commission as lieutenant in the U. S. Naval Reserve as a physiologist assigned to medical research at the Naval Research Institute, National Naval Medical Center, Bethesda, Md.

DEAN C. J. MACKENZIE, acting president of the National Research Council of Canada, arrived in England on May 8. He planned to stay about a month and will make his headquarters with the National Research Council of Canada. Conferences will be arranged with scientific men in Great Britain on questions of scientific research connected with the war.

THE *Times*, London, states in its issue of May 6 that Professor S. A. Sarkisov, representing the executive committee of the Soviet Red Cross and Red Crescent Societies, had arrived in Great Britain to establish contact with the British Red Cross and British medical men, in order to develop mutual exchange of experience in the medical treatment of wounded and sick soldiers and in assistance to the civilian populations that have suffered as a result of the war.

PROFESSOR MARSTON T. BOGERT, of Columbia University, addressed on May 8 the annual meeting of the Columbia Chapter of Phi Lambda Upsilon. He spoke on "Malaria and Antimalarials."

THE American Society for X-Ray and Electron Diffraction will meet at the University of Michigan from June 7 to 11 under the presidency of Professor M. J. Buerger, of the Massachusetts Institute of Technology.

THE American Home Economics Association will hold a Wartime Institute at the University of Maryland with 225 delegates representing all state associations from June 18 to 21. This session has been planned in compliance with the request of the U. S. Office of Defense Transportation that all organizations "voluntarily establish travel conservation." Instead of the usual summer convention for several thousand home economists, this is to be a workshop type of meeting for a small number of persons each of whom is in a state position and in direct contact with large numbers of people. There will be a program of papers on "Strengthening the Home for War and Postwar Living." Each morning speakers from both government and non-government agencies and specialists in various fields will address the delegates; and each afternoon groups of fifteen or twenty will work together on problems of the family and on the ways in which home economists can help the family to solve those problems.

THE nineteenth Exposition of Chemical Industries will be held in New York City during the week of December 6 to 11 at Madison Square Garden instead of at the Grand Central Palace, the army having commandeered the exposition floors of the palace as an induction center. All exhibition space will be on one large floor. The actual amount of space available will be approximately half that of the 1941 exposition, which was held in the palace. A diagram of floor plans can be obtained from the International Exposition Company, 480 Lexington Avenue, New York City.

APPLICATION of arc welding to the design and construction of a jig for use in manufacture of electrical equipment, an arc welded chair and a radio tower were the respective subjects of papers for which engineering undergraduates of leading universities received the first, second and third awards in the Engineering Undergraduate Award and Scholarship Program of the James F. Lincoln Arc Welding Foundation. For a paper entitled, "Arc Welding versus Casting in the Design of Jigs and Fixtures," Herman J. Brenneke, of New York University, received the first award of $1,000 and four scholarships of $250 each were presented in his name to the department of mechanical engineering. "An Arc Welded Chair" was the subject of a paper for which Robert Edson Lee, of Iowa State College, received the second cash award of $500 and two scholarships of $250 each presented in his name to the department of architectural engineering. Application of arc welding to the design and construction of a radio tower was described in the paper for which Charles L. Sammons and John

H. Stewart, of the Ohio State University, jointly received the third cash award of $250 and a scholarship of like amount presented in their names to the department of civil engineering. In all seventy-seven awards amounting to $5,000 were made to students representing thirty-three colleges and universities.

DURING the year ended September 30, 1942, according to its annual report, the National Foundation for Infantile Paralysis received an income of $1,896,257, of which amount $1,827,345 represented net proceeds from celebrations of the President's birthday, the remaining $68,912 representing miscellaneous donations and refunds and cancellation of grants and appropriations authorized in prior years. In the same year the foundation made grants and appropriations amounting to $1,142,009, all of which, with the exception of $278,706, had been actually disbursed prior to November 30, 1942. Of the net proceeds of the 1942 Birthday Celebration, $2,099,617 was given for direct relief in communities throughout the United States.

DR. C. J. ELMORE, professor of biology at William Jewell College, Liberty, Mo., who died on May 19, 1940, bequeathed his diatom collection to the New York Botanical Garden.

THE University of Chicago has instituted the Lichtstern research assistantship in anthropology. It carries a stipend of $1,000 for nine months' work and will be filled each year in which a suitable candidate appears on nomination made by the chairman of the department of anthropology. The incumbent will devote most of his time during the year to performance of a piece of library, laboratory or field research, although he may also take one course or seminar each quarter. Applicants for the position will be asked to submit their research plans. The assistantship is supported by the Lichtstern Fund and commemorates Adolph Lichtstern, who established the fund by bequest.

FORMATION of a committee of Chicago chemists and other scientific men which hopes to uncover new sources of industrial fats and greases to salvage for war needs is announced by officials of the War Production Board, Chicago. Working with the War Production Board and the Chicago section of the American Chemical Society, the committee will promote improved and new methods of fat collecting among industries such as dairies, meat packing and margarine processing. The national goal for 1943 has been set at 500,000,000 pounds and chemists are being asked to help in the drive, which has its headquarters in Chicago.

DISCUSSION

THE MOBILIZATION OF SCIENCE

IT is to be sincerely hoped that every one concerned with the welfare of the future of science gives careful reading to the so-called "Mobilization of Science" bill presented to the Senate (S. 702) on February 11 by Senator Kilgore of West Virginia and reprinted in SCIENCE in the issue of May 7. The bill has been referred to the Committee on Military Affairs.

Every scientist professionally or otherwise engaged in scientific research, whether allied to public, private or industrial institutions or independently pursuing a field of scientific investigation, and every benefactor and patron of science must needs be affected by this bill.

The bill includes the establishment of an Office of Scientific and Technical Mobilization which shall be administered by an administrator to be appointed by the President of the United States and to serve at his pleasure, to authorize such administrator to formulate and promote scientific projects and programs, to assess scientific and technical developments with relation to the national welfare, to coordinate scientific facilities and personnel, to make and amend appropriate rules and regulations which shall have the force of law, to appropriate the sum of $200,000,000 to carry out the provisions of this proposed act and to provide maximum penalties of $5,000 and/or one year's imprisonment for certain infringements of the regulations that such an administrator may set up.

It is of course gratifying to learn in the declaration of policy of this bill that "the Congress hereby recognizes that the full development and application of the Nation's scientific and technical resources are necessary for the effective prosecution of the war and for peacetime progress and prosperity. . . ." It is less gratifying to note that "serious impediments thereto consist in the unassembled and uncoordinated state of information concerning existing scientific and technical resources; the lack of an adequate appraisal, and the unplanned and improvident training, development and use of scientific and technical personnel, resources, and facilities in relation to the national need; . . . the trend toward monopolized control of scientific and technical data and; . . . the absence of an effective federal organization to promote and coordinate . . . scientific and technical developments."

It is some two years since the organization of the National Defense Research Committee and the Office of Scientific Research and Development together with the National Roster of Scientific Personnel. The remarkable results to the war effort which have already been obtained thereby with the large expenditures of over $100,000,000 during the current year may well make one wonder as to the implications of the impedi-