fessor Pillsbury for the large part he played in the development of the university's department of psychology and for his "noteworthy research, teaching and writing . . . his eminence as a scholar . . . and the genuine affection of students and colleagues inspired by his wholesome character and unassuming friendliness."

Action taken at a recent meeting of the Board of Regents included:

Appointments: Professor Arnold M. Keuthe was appointed acting chairman of the department of aeronautical engineering to take the place of Professor Edward A. Straiker, resigned.

Leaves of absence to staff members called to active military service: John C. Brier, professor of chemical engineering, university year, 1942–43, to serve as lieutenant colonel in the U. S. Army in charge of the Training School at the Ravenna Ordnance Plant at Ravenna, Ohio.

Drs. John M. Sheldon, Edgar A. Kahn, Walter G. Maddock, S. Milton Goldhamer, Moses M. Fröhlich, George Hammond, Harry A. Towsley, Marshall L. Snyder and E. Thurston Thieme, all serving with the U. S. Army Medical Corps in the 298th General Hospital Affiliated Unit.

Dr. Alexander Barry, instructor in anatomy, university year, 1942–43, commissioned in the Air Corps of the U. S. Army.

Dr. Richard C. Armstrong, resident in the department of ophthalmology, university year, 1942–43, commissioned in the U. S. Army Medical Corps.

Dr. Hayden C. Nicholson, associated professor of physiology, university year, 1942–43, commissioned as a captain in the U. S. Army Medical Corps.

Dr. G. Howard Gowen, professorial lecturer in epidemiology, July 9, 1942, to June 30, 1943, called to active duty in U. S. Army.

Steve Remias, instructor in epidemiology, July 15, 1942, to June 30, 1943, called to active duty in the U. S. Navy.

Dr. Herman H. Goldstine, instructor in mathematics, July 18, 1942, to June 30, 1943, for service as a First Lieutenant in the U. S. Army Air Forces.

Professor Harley Bartlett, chairman of the department of botany, university year, 1942–43, to carry on investigations for the U. S. Department of Agriculture.

Dr. James M. Cork, professor of physics, summer of 1942, to take part in the research program at the California Institute of Technology of adapting the cyclotron to war purposes.

Dr. L. H. Newburgh, professor of clinical investigations in the department of internal medicine, June 1, 1942, to December 1, 1942, to become a member of a subcommittee on clinical investigations for the Division of Medical Sciences of the National Research Council and to devote his entire time to medical problems arising out of the war.

Dr. Robert C. F. Bartels, instructor in mathematics, June 15, 1942, to June 14, 1943, to serve as a consulting mathematician in the Bureau of Navigation, U. S. Navy.

H. S. Bull, assistant professor of electrical engineering, university year, 1942–43, to engage in research for the U. S. Army Signal Corps.

Edwin M. Baker, professor of chemical engineering, summer term, to devote full time to work for the Houdaille-Hershey Corporation and other companies on the manufacture of armaments.

Dr. Clarence A. Siebert, associated professor of metallurgical engineering, summer term, to carry on work with the Houdaille-Hershey Corporation related to the war program.

Lewis N. Holland, assistant professor of electrical engineering, summer term, to term defense courses.

Arthur J. Decker, professor of civil engineering, summer term of 1942.

William S. Housel, associate professor of civil engineering, summer term of 1942.

Extensions of Leave: The leave of absence of Professor Ralph A. Sawyer, of the department of physics, has been extended for the university year 1942–43. Professor Sawyer is a lieutenant commander in the U. S. Navy in charge of the testing laboratory at the Naval Proving Grounds at Dahlgren, Va.

SCIENTIFIC NOTES AND NEWS

THE Royal Society of Canada has awarded the Flavelle Medal "for original research of special and conspicuous merit" to Dr. J. H. Craigie, head of the Dominion Rust Research Laboratory at Winnipeg, Man., in recognition of his work on the control of wheat rust.

AT the annual meeting of the Woods Hole Marine Biological Laboratory on August 11, Lawrason Riggs was elected president of the corporation and chairman of the board of trustees to succeed Dr. Frank R. Lillie, who was made president emeritus. The newly created position of vice-president was filled by the election of Dr. E. Newton Harvey, professor of physiology at Princeton University.

AT the annual meeting of the trustees of the Oceanographic Institution, Woods Hole, Dr. Alfred C. Redfield, professor of physiology at Harvard University, was elected associate director.

A PORTRAIT of Dr. John Bentley Squier, professor emeritus of urology of Columbia University College of Physicians and Surgeons, was unveiled on July 1 at the Squier Urological Clinic of the Presbyterian Hospital. The portrait, the work of Julian Lamar, is a bequest of the late Adolph S. Ochs, publisher of *The New York Times* from 1896 to 1935.

DR. ARTHUR J. HILL, chairman of the department of chemistry and director of the Sterling Laboratory of Yale University, has been appointed to the new Whitehead professorship in chemistry. The Whitehead professorship was named in honor of the late

Conkey P. Whitehead, of the class of 1919, who died in 1940, leaving a bequest to the university for the support of work in chemistry.

DR. BALDWIN M. WOODS, professor of mechanical engineering at the University of California, Berkeley, has been named director of university extension. Boyd B. Rakestraw, assistant director, who has been in charge of extension activities since the retirement of Professor Leon J. Richardson four years ago, has become associate director.

DR. CATHARINE MACFARLANE, professor of gynecology, has been made research professor of gynecology at the Woman's Medical College of Pennsylvania in recognition of her work in cancer research.

DR. A. CASTIGLIONI, formerly professor of the history of medicine at Padua, is giving a series of weekly lectures on medical history at the Yale University School of Medicine.

SIR HENRY TIZARD, since 1929 rector of the Imperial College of Science and Technology, London, known for his researches in aeronautics, has been elected president of Magdalen College, Oxford. *Nature* points out that this is a timely and important break with Oxford tradition, for he is the first man of science to become the head of a college there. Sir Henry is now a member of the British Air Council and of the Advisory Council of the Ministry of Aircraft Production.

DR. MYRON E. WEGMAN has been appointed director of training and research in the Bureau of Child Hygiene, New York City. A training unit has been established at the Kips Bay-Yorkville Health Center, 411 East Sixty-ninth Street, which, under his direction, will train new physicians employed by the bureau to replace staff members called into military service.

A. E. WHITE, director of the department of engineering research and professor of metallurgical engineering at the University of Michigan, has been nominated as manager of the American Society of Mechanical Engineers for 1943.

F. C. TODD, of the Pennsylvania State College, has joined the technical staff of Battelle Memorial Institute, Columbus, Ohio. He will undertake research work in industrial physics.

DR. LEONARD N. ALLISON, fish pathologist and district fisheries biologist of the Institute for Fisheries Research of the Michigan Department of Conservation, has joined the staff of the State Fish Hatchery, Grayling, Mich.

DR. PAUL HERGET, assistant professor of astronomy at the University of Cincinnati and astronomer at the Cincinnati Observatory, has leave of absence for the duration of the war to accept a war emergency appointment to the Nautical Almanac Office of the U. S. Naval Observatory, Washington.

DR. FRANK L. CAMPBELL, professor of entomology at the Ohio State University, has leave of absence to perform advisory service on insecticides in the Chemicals Division of the Office for Agricultural War Relations of the U. S. Department of Agriculture.

OLIVER BOWLES has been named chief of the Nonmetal Economics Division of the U. S. Bureau of Mines, succeeding Paul M. Tyler, who has become a member of the Board of Economic Warfare.

SIR GUY MARSHALL, who has been director of the British Imperial Institute of Entomology since its foundation in 1911, retired on July 31. Dr. S. A. Neave has succeeded him.

THE appointment of a committee of chemists and chemical engineers to advise the Government on technical processes is announced by Ernest W. Reid, chief of the Chemicals Branch of the War Production Board. The committee will pass upon the relative merits of competing chemical processes involved in the war effort. The basis upon which the findings will be made is (a) which process can be placed in production soonest and (b) which uses the smallest amount of critical materials. Donald B. Keyes, head consultant to the branch and professor of chemical engineering at the University of Illinois, is chairman of the committee. The members are Marston T. Bogert, Joel H. Hildebrand, S. C. Lind, Frank C. Whitmore, Gustavus J. Esselen, Carl S. Miner, Foster D. Snell, Charles C. Brown, Charles R. Downs, Sidney D. Kirkpatrick and Fred H. Rhodes.

A COMMITTEE has been formed in the British House of Commons to consider the question of synthetic rubber to be constituted as follows: F. W. Bain, chairman of the Chemical Control Board of the Ministry of Supply, *chairman;* Sir Edward V. Appleton, secretary of the Department of Scientific and Industrial Research; Dr. J. W. Armit, director-general of explosives at the Ministry of Supply; Sir Robert Robinson, Waynflete professor of chemistry at the University of Oxford; and Dr. F. Roffey, controller of chemical research at the Ministry of Supply.

THE British Government was on July 16 requested by an influential deputation, composed of scientific men, members of Parliament and peers, which was arranged by the War Cabinet Scientific Advisory Committee, to set up a full-time scientific and technical joint board. This would have as its aim the fullest strategic use of scientific man-power and resources and the proper organization and exchange of scientific and technical information relating to the

war effort. Members of the deputation included Lord Samuel, Captain Leonard Plugge, M.P. (chairman of the Parliamentary and Scientific Committee, from whom the deputation came), Dr. W. Wooldridge, C. S. Garland (British Association of Chemists), Professor W. Makower (Institute of Physics), Sir Lawrence Bragg, Professor B. W. Holman, Gower Pimm (Institute of Structural Engineers), Professor Bernal (Association of Scientific Workers), Colonel Thompson (president of the Institution of Mechanical Engineers), J. H. Wootton-Davies, M.P., Lord Pentland, Hugh Linstead, M.P., R. B. Pilcher (Institute of Chemistry), Lord Leverhulme and Lord Hinchingbrooke. It is reported that one of the points emphasized by some members of the deputation was that young scientific men of ability should be given more encouragement to exercise their inventive faculties. The view was expressed that not only the War Cabinet but the Chief of Staffs Committee should be advised by scientific men on appropriate matters.

IT is reported in *Nature* that at a recent meeting of the trustees of the Beit Memorial Fellowships for Medical Research, Dr. A. N. Drury, Huddersfield lecturer in special pathology in the University of Cambridge, was appointed to the advisory board in succession to the late Professor A. J. Clark. The trustees noted the election this year of three past fellows to the fellowship of the Royal Society, namely, E. Hindle (junior fellow, 1910–12, and senior in tropical medicine, 1927–33), F. M. Burnet (1926–27) and A. R. Todd (1935–36). Of the twenty-eight present fellows, there are now fourteen seconded for whole-time war-work. The following elections have been made, with permission for each fellow to be seconded at any time for war duties: *4th Year Fellowship* (£500 a year), E. G. L. Bywaters, to continue his studies of crush injuries in relation to kidney function, at the British Postgraduate Medical School, London. *Junior Fellowships* (£400 a year), Dr. D. Herbert, to study the biochemistry of toxoids for active immunization against gas gangrene, at the Dunn Biochemical Laboratory, University of Cambridge. Dr. F. W. Landgrebe, to study the separation of posterior pituitary hormones and their clinical uses, at the Medical School, University of Aberdeen.

THE seventeenth Congress of the French Medical Association of North America will be held at the Hôtel Mont-Royal, Montreal, from September 14 to 17.

THE London correspondent of the *Journal* of the American Medical Association states that the report on the work of London University during the past year shows that in spite of financial and other difficulties due to the war it remains a valuable institution which is producing skilled men and women both for war work and for playing a useful part in reconstruction after victory. In 1938–1939 there were 14,587 internal and 10,893 external students. In 1940–1941 (the first complete war year) the figures were 8,916 and 8,840. The smaller diminution on the external side is explained by the fact that evacuation has not hit it as much as it has dislocated the collegiate side. Moreover, many serving members of the armed forces are pursuing courses of study as external students. The figures for 1941–1942 are not yet complete, but according to the *Journal* there appears to be a slight increase in both internal and external students. In the latter it is in faculties whose work is most directly related to the war effort—science and engineering—that numbers are best maintained. Turning to students attending schools of the university, there is a sharp distinction between the medical and non-medical schools. In 1940–1941 medical students were nearly 90 per cent. of the number for 1938–1939, while non-medical students were only 56 per cent. Before the war 63 per cent. of the students at non-medical schools were men; now the proportion is only 50 per cent. In the medical schools the proportion of 90 per cent. has scarcely changed. The main new problem during the year has arisen from the government's decision to call up women for national service, which has had an immediate effect on the position of women students.

DISCUSSION

THE PRODUCTION OF TWO ANTIBACTERIAL SUBSTANCES, FUMIGACIN AND CLAVACIN

THE successful utilization of penicillin, produced by the fungus *Penicillium notatum,* for combating certain human diseases resistant to other treatments has focussed attention upon the possibility that various other fungi isolated from such natural substrates as soil or manure might produce different antibiotic substances. These might possibly supplement penicillin by acting upon pathogens not affected by this substance. Chemical compounds might thus be obtained which possess totally different antibacterial mechanisms. Several fungi, other than *P. notatum,* have already been shown to produce antibiotic substances; some of these have been isolated in crystalline form and identified chemically, whereas others have been obtained only in a concentrated active form.[1] In a study of the presence of antagonistic fungi in nature, the bacteria-enriched agar media[2] have been utilized.

[1] H. Raistrick and G. Smith, *Chem. Ind.,* 60: 828–830, 1941; A. E. Oxford, H. Raistrick and G. Smith, *ibid.,* 61: 22–24, 48–51, 1942; E. C. White, SCIENCE, 92: 127, 1940; G. A. Glister, *Nature,* 148–470, 1941.

[2] S. A. Waksman and H. B. Woodruff, *Jour. Bact.,* 40: 581–600, 1940.