aspects of chemotherapy of compounds of the sulfanilamide type.

DR. ROBERT BYRON JACOBS, of the research laboratory of physical chemistry of the Massachusetts Institute of Technology, to continue work with Dr. F. G. Keyes on the fundamental properties of materials at low temperatures.

DR. JOSEPH O. HIRSCHFELDER, research associate at the University of Wisconsin, to work with Dr. Linus Pauling, of the California Institute of Technology, in an investigation of the best ways and means for calculating the quantum mechanical energy of molecules.

DR. JANE ANNE RUSSELL, of the University of California, to continue biochemical investigations under Dr. C. N. H. Long at Yale University School of Medicine.

DR. ROBERT M. SIMHA, from the University of Vienna, to work with Professor V. K. LaMer at Columbia University on the statistical problems and kinetics of polymerization in long chain compounds.

DR. E. L. ROBERT STOKSTAD, biochemist, Western Condensing Company, Berkeley, Calif., to work with Professor H. Borsook at the California Institute of Technology on Vitamin Factor U and an unknown factor in polished rice.

DR. ROBERT P. WALTON, professor of pharmacology, School of Medicine, University of Mississippi, for chemical and clinical work at the University of Chicago.

The Selection Committee acting for the foundation consisted of Dr. Roger Adams, director of the Department of Chemistry of the University of Illinois; Dr. Hans T. Clarke, professor of biochemistry, Columbia University; Dr. Charles A. Kraus, director of the department of chemistry of Brown University; Dr. Arthur B. Lamb, dean of the Graduate School of Arts and Sciences of Harvard University, and C. Lalor Burdick, secretary of the Lalor Foundation.

THE WILLIAM LOWELL PUTNAM MATHEMATICAL COMPETITION AWARDS

THE Department of Mathematics of the University of Toronto, Toronto, Ontario, has won the first prize of $500 in the third annual William Lowell Putnam Mathematical Competition, Professor W. D. Cairns, secretary-treasurer of the Mathematical Association of America, has announced. The members of the winning team were W. J. R. Crôsby, J. C. Maynard, G. H. K. Strathy. The second prize of $300 is awarded to the Department of Mathematics of Yale University, New Haven, Connecticut, members of whose team were J. E. Brewster, A. M. Gleason, G. R. MacLane. For the third prize of $200 there is a tie between the Department of Mathematics of Columbia University and the Department of Mathematics of Cooper Union Institute of Technology, both in New York City. The members of the Columbia University team were Laurence Annenberg, Julius Ashkin, Paul Marcus; the members of the Cooper Union team were Murray Klamkin, Benjamin Lax, Samuel Manson.

In addition to these prizes to the departments of mathematics with winning teams, a prize of $50 each is awarded to the following five persons whose scores ranked highest in the six-hour examination: (names arranged alphabetically) W. J. R. Crosby, University of Toronto; A. M. Gleason, Yale University; E. L. Kaplan, Carnegie Institute of Technology; J. C. Maynard, University of Toronto; R. M. Snow, George Washington University. One of these five will later be chosen to receive a $1,000 year scholarship at Harvard University, this award to be announced later. The members of the four winning teams will receive individual cash prizes according to the ranks of their teams, and all individuals receiving prizes will also receive medals.

Honorable mention has been awarded this year to three teams and to five individuals. The teams are from the Department of Mathematics, University of California, Berkeley, members being Julia H. Bowman, W. M. Kincaid, C. W. Lippman; the Department of Mathematics, University of California at Los Angeles, members being Richard Arens, Robert James, Harold Shniad; and the Department of Mathematics, Carnegie Institute of Technology, Pittsburgh, members of the team being S. N. Foner, E. L. Kaplan, W. E. Stuermann. The five individuals receiving honorable mention are: G. R. MacLane, Yale University; Samuel Manson, Cooper Union Institute of Technology; Paul Marcus, Columbia University; G. H. K. Strathy, University of Toronto; J. E. Wilkins, Jr., University of Chicago.

The third annual William Lowell Putnam Mathematical Competition was held on March 2, 1940, and 208 undergraduate mathematics students from 68 colleges and universities in the United States and Canada took part. Qualified readers graded the examination books, complete anonymity being maintained throughout by the use of numbers instead of names for identification.

The first competition was held in April, 1938, and the second in March, 1939. This competition was designed to stimulate a healthful rivalry in the undergraduate work of mathematics departments in colleges and universities in the United States and Canada, and is open only to undergraduates. The examination questions were taken from the fields of calculus, higher algebra, differential equations and geometry.

The Putnam Competition is made possible by the trustees of the William Lowell Putnam Intercollegiate Memorial Fund, left by Mrs. Putnam in memory of her husband, a member of the Harvard class of 1882, and is sponsored by the Mathematical Association of America.

SYMPOSIUM IN THEORETICAL PHYSICS AT THE UNIVERSITY OF MICHIGAN

THE eighteenth Symposium in Theoretical Physics will be held at the University of Michigan in connec-

tion with the summer session between the dates of June 24 and August 16. While devoted largely to nuclear questions, other problems of present interest are included. In addition to the symposium lectures the regular bi-weekly colloquia will again be held. Further information about the symposium, including the opportunities for research and advanced study in the department during the summer, may be obtained by writing to the Director of the Department of Physics, University of Michigan.

The lectures will include:

Recent developments in the theory of the atomic nucleus, Professor Eugene P. Wigner, Princeton University, throughout the session.

Band spectra, Professor David M. Dennison, University of Michigan, throughout the session.

Theoretical aspects of cosmic rays, Professor George E. Uhlenbeck, University of Michigan, throughout the session.

Discussion of recent field theories, especially in connection with the theory of the meson, Assistant Professor Robert Serber, University of Illinois, June 24 to July 7.

Special topics of the theory of radiation and of the theory of radioactivity, Assistant Professor Wendell H. Furry, Harvard University, July 1 to July 14.

Low temperature physics; the properties of liquid helium; supra-conductivity, Professor Fritz W. London, Duke University, July 7 to July 28.

Recent experimental results in cosmic rays, Professor Bruno Rossi, University of Chicago, July 28 to August 5.

Holders of the Ph.D. degree in any of the physical sciences may attend the lectures as guests of the university without the payment of any fees. Requests for this privilege should be addressed to the president of the university.

THE SECTION OF PUBLIC HEALTH AND MEDICINE OF THE AMERICAN SCIENTIFIC CONGRESS

INFORMATION concerning the meeting of the American Scientific Congress, which will meet in Washington from May 10 to 18, has been printed in recent issues of SCIENCE. Surgeon-General Parran, secretary of the Section of Public Health and Medicine, has sent a tentative outline of the program of the section. It is as follows:

May 11, A.M.—General topic—*Education.* The bearing of popular, higher, professional and special education upon medicine and public health. (Joint session with Section on Education.)

May 13, P.M.—General topic—*Nutrition.* Summaries on status of recognized avitaminoses. Relation between nutritive state and some aspects of heart disease. Relation between drinking water and dental caries and mottled enamel. Recent observations on ariboflavinosis.

May 14, A.M.—Joint session with Section on Statistics. P.M.—Visit to National Institute of Health. Observation of current investigations in many branches. Visitors may concentrate if they desire on subjects of personal professional interest.

May 15, A.M.—General topic—*Tuberculosis.* Social and economic factors in etiology. Changes in clinical types encountered. Constitution of tubercle bacillus and its antigenic fractions. An epidemiological paradox of tuberculosis and possible explanations. New methods of treatment. P.M.—General topic—*Chemotherapy.* Chemistry and pharmacology of new compounds. Clinical applications to infections with streptococci, gonococci, pneumococci, meningococci, to lymphogranuloma venereum, and other infections. Experimental results of premise.

May 16, A.M.—General topic—*Heart Disease.* New conceptions from clinical viewpoint. Epidemiological features of rheumatic heart disease. Incidence and importance of etiologic forms of heart disease. Physiologic considerations of resuscitation. P.M.—General topic—*Cancer.* Present status of experimental cancer. Organization for cancer study and control. Newer aspects of therapy.

May 17, A.M.—General topic—*Tropical and Other Diseases.* Summaries and new contributions on yellow fever, pinto, leprosy, undulant fever, rickettsial diseases, plague.

ELECTIONS OF THE NATIONAL ACADEMY OF SCIENCES

AT the annual meeting of the National Academy of Sciences held in Washington on April 22, 23 and 24, under the presidency of Dr. Frank B. Jewett, new members of the academy were elected as follows:

Rollin Thomas Chamberlin, professor of geology, University of Chicago.

Carl Ferdinand Cori, professor of pharmacology, School of Medicine, Washington University, St. Louis.

George Washington Corner, professor of anatomy, Strong Memorial Hospital, University of Rochester.

Louis Frederick Fieser, professor of chemistry, Harvard University.

Wendell Mitchell Latimer, professor of chemistry, University of California at Berkeley.

Karl Friederich Meyer, professor of bacteriology and director of the Hooper Foundation, University of California.

James Bumgardner Murphy, member of the Rockefeller Institute for Medical Research.

Isidor Isaac Rabi, professor of physics, Columbia University.

Stephen Walter Ranson, professor of neurology and director of the Neurological Institute, Northwestern University.

William Jacob Robbins, director, New York Botanical Garden.

Richard Edwin Shope, Rockefeller Institute for Medical Research, Princeton, N. J.

William Hay Taliaferro, professor of parasitology, University of Chicago.

Stephen Timoshenko, professor of engineering mechanics, Stanford University.

Ernest Glen Wever, associate professor of psychology, Princeton University.