

Fig. 3. Hypothetical urease surface showing interactions with urea. Both amides are distorted into nonplanar configurations.

cance of other effects that might make the amide linkage more reactive, or of entirely different effects (16, 17). Steric inhibition of amide resonance is of special interest because it has been found in naturally occurring compounds, the penicillins, and it seems likely that it can be studied in other models. A consideration of the possible significance of a specific effect such as this may be of value in the development of experimental approaches to the important problem of enzyme action.

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# News and Notes

### Scientists in the News

F. K. Bannister has been appointed to a new chair of thermodynamics in the Department of Mechanical Engineering, University of Birmingham. The chair has been created in connection with the organization of the new graduate school in thermodynamics, and Dr. Bannister will be in charge of this school under G. F. Mucklow, head of the department. Professor Bannister was appointed lecturer in mechanical engineering in the University of Birmingham in 1941 and reader in thermodynamics in 1951. He has been closely associated with the Air Squadron at the university since its formation in 1941.

Christopher E. Barthel, Jr., has been elected chairman of the board of directors of the National Electronics Conference. Dr. Barthel succeeds Kipling Adams, of General Radio Company. The National Electronics Conference is a forum on electronics research, development, and application.

Eric Bradshaw has succeeded John Hollingworth in the chair of electrical engineering in the Faculty of Technology in the University of Manchester. He has been special lecturer in high-voltage engineering at the College of Technology since 1944.

E. Lucy Braun, botanist and forestlands expert, has been awarded the Mary Soper Pope Medal granted periodically by Cranbrook Institute of Science, for outstanding achievement in fields related to the study of plant life. Dr. Braun is professor emeritus of botany at the University of Cincinnati.

Colin G. Clark, recently under-secretary of state for labor and industry and financial adviser to the Treasury, Queensland, has been appointed director of the Institute for Research in Agricultural Economics at Oxford, to succeed A. W. Ashby, who is retiring under the age-limit provisions.

Eduard Farber, chief chemist of Timber Engineering Company, affiliate of National Lumber Manufacturers Association, has been elected a fellow of the Royal Society of Arts, and an honorary member of the Mark Twain Society.

Continental Can Company has announced the appointment of Raymond G. Fisher as director of economic research. His responsibilities will include supervision of the commercial research and sales analysis activities of the company.

Among the recent recipients of medals and awards given by sections of the American Chemical Society are Reynold Clayton Fuson, University of Illinois, the 1953 William H. Nichols Medal, from the New York Section, "for studies on nucleophilic substitutions and displacements of an unorthodox character, elucidation of abnormal organic reactions, discovery of stable enediols and vinyl alcohols;" Isadore Perlman, University of California (Berkeley), the California Section Award for contributions in nuclear chemistry; Paul L. Day, University of Arkansas, the 1952 Southwest Award, for research leading to the discovery of vitamin M; H. H. Lowry, Coal Research Laboratory, Carnegie Institute of Technology, the 1952 Pittsburgh Award for outstanding service to chemistry and to the community.

Chris A. Hansen, former executive officer of the Communicable Disease Center, PHS, Atlanta, Ga., has been appointed assistant officer in charge, a new position. He will be succeeded by George B. Tremmel.

Rufus Clay Hatfield, formerly bacteriologist in the Biological Sciences Department of California State Polytechnic College, San Luis Obispo, has moved to Frederick, Md., where he will become assistant chief of the Assessment Branch, Facilities Operation Division, Ralph M. Parsons Company.

D. E. Lindstrom, University of Illinois professor of rural sociology, has left for Japan to serve on the International Christian University staff in Mitaka, near Tokyo. He has been granted a three-year leave of absence to head a rural community and research project at the Japanese university.

F. T. Mavis, head of the Civil Engineering Department of Carnegie Institute of Technology, has been elected president of the Pittsburgh Section of the American Society of Civil Engineers for 1953. Dr. Mavis became professor and head of the Department of Civil Engineering at Pennsylvania State College in 1939 and remained in that capacity until he joined the Carnegie faculty in 1944.

The Polytechnic Institute of Brooklyn has added Angelo Miele, of Italy, to its group project in supersonic aerodynamics. He arrived recently from Argentina, where for five years he worked as an aerodynamicist in a government aircraft factory. At Brooklyn Polytechnic Dr. Miele will be associated in an Armed Forces project with a team headed by Antonio Ferri, concentrating on basic problems related to aircraft of supersonic speed. Dr. Miele will also teach applied aerodynamics.

Stanley W. Olson, of the University of Illinois College of Medicine, has resigned to become dean of Baylor College of Medicine in the Texas Medical Center at Houston. Dean Olson went to Illinois in 1950 from the Mayo Foundation, where he had been assistant director.

Ralph G. Owens, dean of engineering at Illinois Institute of Technology, has been named vice-chairman of the Illinois-Indiana section of the American Society for Engineering Education.

Marion W. Parker, biochemist, botanist, and plant physiologist, has become head of the U. S. Department of Agriculture's Division of Rubber Plant Investigations succeeding Robert D. Rands, who retired after

32 years of research work in the Bureau of Plant Industry, Soils, and Agricultural Engineering.

Arthur G. Rodgers has been appointed director of Binghamton, New York, State Hospital, succeeding Hugh S. Gregory.

William F. Roeser, consultant for the Building Technology Division of the National Bureau of Standards, recently received the Meritorious Service Award of Sigma Tau, national honorary engineering fraternity.

A Swedish archaeological expedition will investigate the old Indus culture at Suratgarh in the Bikaner Desert west of Delhi, where the ruins of a number of Bronze Age cities dating from 4000 to 3000 B.C. have been found. The expedition is headed by Hanna Rydh, who is already at New Delhi to prepare for the arrival of the party of four women and six men, including Holger Arbman, of Lund University. The first period of scheduled excavations is to last for three months.

Louis T. E. Thompson, vice president of The Norden Laboratories Corporation, has been named vice-chairman of the Department of Defense Research and Development Board. He will succeed Floyd L. Miller, who has been on a year's leave from the Standard Oil Development Company.

DeWitt C. Van Siclen, of Douglaston, N. Y., who was executive officer of the Office of Scientific Research at Air Research and Development Headquarters in Baltimore, has accepted a position as senior geologist with the Pan American Production Company in Houston. Captain Van Siclen has served with ARDC since 1951.

On the eve of his departure for Stockholm to receive the 1952 Nobel Prize in Physiology and Medicine, Selman A. Waksman was guest of honor at a banquet given by present and former associates now residing in New Jersey. Approximately 100 persons, including a majority of his former graduate students, joined in expressing their congratulations to Dr. Waksman.

Ciba Pharmaceutical Products, Inc., has elected Frederick F. Yonkman vice president in charge of research. Dr. Yonkman, who succeeds Ernst A. Oppenheimer, is an authority on the relationship between the sympathetic nervous system and high blood pressure. He previously was director of research under Dr. Oppenheimer, who retired on Jan. 1 Dr. Oppenheimer will continue as a consultant.

V. K. Zworykin, of RCA Laboratories, has been awarded the 1952 Edison Medal by the American Institute of Electrical Engineers "for outstanding contribution to the concept and design of electronic components and systems." The medal will be presented at the opening session of the winter general meeting of the institute in New York on Jan. 19.

## Education

Case Institute of Technology will offer in February a new motor design course in which electrical engineering students will see their own designs incorporated into manufactured motors. Robbins & Myers, Inc., Springfield, Ohio, will build the motors without charge to students' specifications. A. E. Hartman will be in charge of the class.

Hebrew Institute of Technology has many openings on its faculties of chemical, civil, electrical, aeronautical, and mechanical engineering and one opening on the faculty of architecture and town planning. Applications should be addressed to Myron X. Feld, American Technion Society, 80 Fifth Ave., New York 11.

The University of Illinois has appointed the following assistant professors to the staff of the College of Medicine: Lewis C. Hitchner, Grant C. Johnson, Walter S. Moos, and Max E. Rafelson, Jr.

The University of Minnesota has reorganized its Department of Agriculture, St. Paul, into the Institute of Agriculture. Head of the institute, where all the university's work in agriculture, forestry, home economics, and veterinary medicine is now centered, is Harold Macy, who succeeded C. H. Bailey on Jan. 1. A. A. Dowell is director of resident instruction and assistant dean of the College of Agriculture, Forestry and Home Economics. The directorship is a new position that includes many of the duties formerly performed by Henry Schmitz, who left last June to become president of the University of Washington. H. J. Sloan has succeeded Harold Macy as director of the Agricultural Experiment Station. T. H. Fenske is assistant dean of the institute and administrative assistant to Dr. Macy.

New York University will begin a program of graduate work in transportation engineering in February. The new courses will emphasize modern highway planning, design, and construction; traffic engineering; and airport design. The last two courses will not be given until 1953-54; courses in bituminous materials and mixtures, and in advanced transportation engineering, will be given in 1954-55.

The University of Pennsylvania, with the cooperation of the Chamber of Commerce of Greater Philadelphia, will establish a new course in industrial medicine, open to all firms, business concerns, and individuals with related interests in the Philadelphia area. Applications and information may be obtained from John P. Hubbard, professor and chairman of the Department of Public Health and Preventive Medicine.

The following continuation courses will be given at the Philadelphia College of Pharmacy and Science by the Philadelphia Section of the American Chemical Society: Mondays, starting Feb. 9, Development of Executives in the Chemical and Process Industries; Tuesdays, starting Feb. 10, High Polymers; and Mondays, starting Feb. 9, Molecular Spectroscopy Applied to Chemical Analysis. Further information may be obtained from N. M. Kapp, Box 427, Houdry Process Corporation, Marcus Hook, Pa.

The Computing Service at the University of Wisconsin has been renamed the Numerical Analysis Laboratory in recognition of its expanded function. All state and federal agencies, as well as university departments, with suitable problems may use the services of NAL, which is under the direction of Preston Hammer.

# Grants and Fellowships

The American Board of Nutrition invites applications of candidates for certification as Specialists in Human Nutrition. Application forms, returnable by Mar. 15, may be obtained from the secretary, Otto A. Bessey, School of Medicine, University of Texas, Galveston.

General Motors Corporation has established a graduate electrochemical fellowship in the Department of Chemistry of the University of Michigan. Applicants should write to Alfred L. Ferguson for further information.

Lavanburg Corner House has awarded a grant of \$420,000 to New York University for a new graduate program in social service education, to be administered as part of the Graduate Division of Public Service. The name of the division will be changed to the Graduate Division of Public Administration and Social Service. Initially, the courses will be open to a limited number only of full-time students. Beginning Feb. 1, applications for admission will be received for classes beginning next September.

Oak Ridge Institute of Nuclear Studies, Medical Division, is inviting applications for one-year residencies in experimental medicine. Two appointments will be made annually beginning in 1953. Stipends are \$2000, plus \$4.00 per day subsistence in lieu of maintenance. For full information address Marshall Brucer. Atomic Energy Commission Graduate Fellowships in Radiological Physics for 1953-54, tenable at Vanderbilt University, the University of Rochester, and the University of Washington, are also available. Basic stipend is \$1600, plus payment of tuition, laboratory, and other standard university fees, and up to 75 fellows will be appointed. The institute is also soliciting applications for AEC Graduate Fellowships in Industrial Hygiene. In this program a limited number of students will receive financial support for study at selected universities. For full information, address the Fellowship Office, University Relations Division, Oak Ridge, Tenn.

Rust Engineering Company, of Pittsburgh, has established a scholarship fund at Lehigh University with a gift of \$25,000; income from the fund is to be used for one or more students in engineering.

27

#### In the Laboratories

American Locomotive Company has elected Perry T. Egbert president and William S. Morris executive vice president.

Chrysler Corporation is financing a \$250,000 engineering research program at the University of Michigan as part of the Michigan Memorial—Phoenix Project. Work will include a study of the use of radioactive tracers and radioisotopes.

Esso Laboratories has formed a new section for work in the fields of wax, solvents, and agricultural products. Howard L. Yowell has been appointed head of the section.

International Business Machines Corporation will begin construction of a Research Center at its Pough-keepsie plant early this year, to provide centralized facilities for the company's electronics research program. The new buildings, which are expected to be completed before the end of 1954, will add 179,000 square feet of floor space to existing laboratory facilities.

Arthur D. Little, Inc., has established an International Division, to be headed by A. G. Haldane, formerly of the U. S. Department of Commerce. Mr. Haldane joined the Little staff last March.

Miner Laboratories, Chicago, have added the following to the research staff: Ralph S. Ahnberg, formerly with Universal Oil Products Company, and W. A. Faucette, of Los Alamos Scientific Laboratory.

Warner-Chilcott Laboratories will be formed early in 1953 by the merger of William R. Warner & Co. and Chilcott Laboratories, the two pharmaceutical divisions of Warner-Hudnut.

# Meetings and Elections

The American Association of Spectrographers will hold a symposium on Emission Spectroscopic Determination of Metals in Non-Metallic Samples in Chicago May 1. Contributed papers in the fields of petroleum, geology, agriculture, pharmacy, biology, and ceramics are invited. Address inquiries to J. P. Pagliassotti, Standard Oil Company (Ind.), Box 431, Whiting, Ind.

Divisional elections of the American Chemical Society include the following: Cellulose Chemistry: Kyle Ward, Jr., chairman, succeeding Joseph L. McCarthy; A. J. Stamm, chairman-elect; E. D. Klug, secretary-treasurer. Chemical Education: Paul H. Fall, chairman, succeeding Hubert N. Alyea; Alfred B. Garrett, chairman-elect; Frederick B. Dutton, treasurer. Fertilizer Chemistry: A. L. Mehring, chairman, succeeding Samuel F. Thornton; Jesse D. Romaine, vice-chairman; George H. Serviss, secretary-treasurer. Organic Chemistry: Walter M. Lauer, chairman, succeeding Robert C. Elderfield; Max Tishler, chairman-elect.

Petroleum Chemistry: Arthur L. Lauer, chairman, succeeding Frederick E. Frey; Frederick D. Rossini, chairman-elect; Alex G. Oblad, secretary. Polymer Chemistry: Paul J. Flory, chairman, succeeding William E. Hanford; Raymond M. Fuoss, vice-chairman. Water, Sewage and Sanitation Chemistry: Henry C. Marks, chairman, succeeding J. Fred Wilkes; Thurston E. Larson, vice-chairman; John T. Cross, secretary; Frederick K. Lindsay, treasurer.

The following officers have been elected by the American Pharmaceutical Association: president-elect, F. Royce Franzoni; vice presidents-elect, John A. MacCartney and Joseph B. Sprowls. The new officers will be inaugurated in Salt Lake City next August.

The Association for Research in Nervous and Mental Disease elected the following officers at its annual meeting in New York in December: president, Davenport Hooker; vice presidents, John C. Whitehorn and Lawrence H. Snyder; secretary-treasurer, Clarence C. Hare; assistant secretary, Rollo J. Masselink.

The Botanical Society of Washington has elected L. M. Hutchins president and Carroll E. Cox vice president.

The Inter-American Institute of Agricultural Sciences has named the following new members to its Administrative Committee to serve for four years: Claudio A. Volio, Adolfo Alarcón, Julius Wayne Reitz, Alvaro Barcello Fagundes, and Eduardo Mejía Vélez. Knowles A. Ryerson will continue as a member of the committee until 1953, when his term expires.

A National Collegiate-Industry-Government Conference on Instrumentation will be held Mar. 19–20 in the Department of Electrical Engineering of Michigan State College, in cooperation with the National Science Foundation, the National Bureau of Standards, the Instrument Society of America, and the American Society for Engineering Education. Participating in the program as representatives of the sponsoring groups will be Paul Klopsteg, A. V. Astin, Porter Hart, and E. A. Walker. Others on the program include G. M. Rassweiler, J. B. MacMahon, George Muschamp, R. T. Sheen, W. A. Wildhack, J. D. Trimmer, R. W. Jones, C. S. Draper, H. C. Roberts, D. P. Eckman, R. J. Jeffries, and M. Muelder. For additional information, address R. J. Jeffries, Michigan State, at once, as attendance will be limited.

First World Conference on Fertility and Sterility will be held May 25–31 at the Henry Hudson Hotel, New York. Twenty-three scientific sessions, sponsored by the International Fertility Association and the American Society for the Study of Sterility, will be held. The sessions will be conducted in English, French, and Spanish, with simultaneous translations. For full information address the chairman of the Local Arrangements Committee, 1160 Fifth Ave., New York 29.

### Miscellaneous

At its final meeting Dec. 30 in St. Louis the AAAS Council unanimously adopted the following minute in tribute to Howard W. Blakeslee, Associated Press Science editor who died last May: "He worked with words that the people might know. Reporting the hearts and minds of scientific men, he affected profoundly the knowledge and emotions of all the world."

The Newcomb Cleveland Prize (formerly the AAAS \$1000 Prize) was awarded to A. M. Gleason for his paper on "Natural Coordinate Systems," given at a meeting of the American Mathematical Society in St. Louis, Dec. 27. Dr. Gleason, 31 years old, is an assistant professor in the Department of Mathematics at Harvard University.

The Theobald Smith Award in Medical Sciences, consisting of \$1000 and a bronze medal, was given to F. J. Dixon, of the Department of Pathology, University of Pittsburgh School of Medicine, for his paper entitled "The Dynamics of Immune Response." The award, which was established in 1936 by Eli Lilly & Company, was given for the eighth time this year. Only scientists under 35 years of age are eligible for the prize.

# **Recent Deaths**

Bowman F. Ashe (67), educator, Coral Gables, Fla., Dec. 16; Oliver G. Ayer (53), electronics engineer, Yonkers, N. Y., Nov. 23; Harriet Babcock (75), psychologist, New York, Dec. 17; Augustus Baker, Sr. (67), of Dover, N. J., physician, New York, Dec. 9; Addison H. Bissell (64), surgeon, Stamford, Conn, Nov. 19; John L. Bray (62), metallurgist, West Lafayette, Ind., Dec. 6; Gladys Eugenia Bryson (58), sociologist, Northampton, Mass., Dec. 18; Norman W. Burritt (59), of Summit, N. J., eye, ear, nose, and throat specialist, Scotch Plains, N. J., Nov. 27; William T. Calman (80), zoologist, Sept. 29; Edwin G. Conklin (88), biologist, Princeton, N. J., Nov. 20; Gerald V. Cruise (56), civil engineer, New York, Dec. 9; Harvey N. Davis (71), of Montclair, N. J., engineer and educator, New York, Dec. 3; Lucien Eaton (73), mining engineer, Milton, Mass., Dec. 9; Clarence V. Ekroth (65), chemical engineer, Brooklyn, N. Y., Dec. 2; John T. English (-), orthopedic surgeon, Irvington, N. J., Dec. 11; Arthur W. Erskine (67), radiologist, Cedar Rapids, Ia., Dec. 10.

Ray C. Friesner (58), botanist, Indianapolis, Dec. 1; Francis M. Garver (77), educator, Ivyland, Pa., Dec. 8; A. Raymond Gilliland (65), of Evanston, Ill., psychologist, Menominee, Mich., Dec. 1; Albert Greenburg (52), obstetrician, Philadelphia, Dec. 11; Thomas W. Greene (57), engineer, New York, Nov. 27; Philip L. O. Guy (67), archaeologist, Jerusalem, Dec. 7;

Ernest H. Hahne (62), economist and educator, Oxford, Ohio, Nov. 25; Gilbert D. Harris (88), paleontologist and geologist, Ithaca, N. Y., Dec. 4; Arthur C. Hearn (75), oil expert, London, Nov. 24; Sven A. Hedin (87), explorer, Stockholm, Nov. 26; Ira A. Hinsdale (62), of New York, ear, nose, and throat specialist, Sharon, Conn., Nov. 23; Ralph T. Hinton, Sr. (71), of Quincy, Ill., physician, Atlanta, Ga., Dec. 19; Aaron C. Horn (76), chemist, New York, Nov. 26; Karen Horney (67), psychoanalyst, New York, Dec. 4; Moses M. Housepian (76), physician, New York, Dec. 11; Bedrich Hrozny (73), linguist and Assyriologist, Prague, Dec. 19; Edward V. Huntington (78), mathematician, Cambridge, Mass., Nov. 25; Thaddeus P. Hyatt (88), dentist, Stamford, Conn., Dec. 15.

Vladimir N. Ipatieff (85), chemist, Chicago, Nov. 29; Abraham E. Jaffin (68), chest and heart specialist, Jersey City, Nov. 25; Jacob Kalish (75), physician, Brooklyn, Dec. 5; David M. Kaplan (76), neurologist, New York, Nov. 29; Elizabeth Kenny (66), nurse, Toowoomba, Australia, Nov. 30; Geoffrey R. Kinkead (72), mechanical engineer, New York, Nov. 20; Frederick K. Kirsten (67), aeronautical engineer, Seattle, Nov. 19; John B. Kitchen, Jr. (36), dairy research specialist, New Brunswick, N. J., Dec. 4; J. G. Lawn (84), metallurgist, Oct. 21; Antonio Lucchetti (64), civil engineer, San Juan, P. R., Dec. 19; Leon McCullough (-), electrical engineer, Pittsburgh, Dec. 5; Rose J. McHugh (71), social worker, Washington, D. C., Dec. 12; William T. McNiff (51), physicist, Yonkers, N. Y., Dec. 6; John L. March (79), psychologist, Schenectady, Dec. 3; Forest R. Moulton (80), astronomer, former administrative secretary. AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF Science, Wilmette, Ill., Dec. 7.

Alberta Peltz (64), obstetrician, Philadelphia, Nov. 21; Earl G. Ports (51), radio engineer, Livingston, N. J., Dec. 4; Charles A. Prosser (81), educator, Minneapolis, Nov. 26; William F. Riedell (48), engineer, Washington, D. C., Nov. 29; Louis N. Robinson (72), of Swarthmore, Pa., penologist, Media, Pa., Nov. 25; Gaetano Rovereto (82), geologist, Genoa, Italy, Nov. 25; Kendall B. Rowell (51), engineer, Schenectady, N. Y., Dec. 12; James C. Sharp (73), anatomist, Mineola, N. Y., Dec. 5; Clarence E. Shepard (69), of Mount Carmel, Conn., chemist, New Haven, Dec. 7; Richard E. Sherrill (53), geologist, Haskell, Tex., Nov. 25; H. B. Siems (57), chemist, Chicago, Nov. 22; Lewis W. Smith (76), educator, Berkeley, Calif., Dec. 19; Moses J. Stone (57), chest surgeon, Boston, Dec. 13; Harry C. Van Buskirk (80), mathematician, Los Angeles, Nov. 21; Ernest Vessiot (87), former director, Ecole Normale Supérieure, Paris; Stanley Q. West (58), urologist, Philadelphia, Dec. 10; Reid White (52), of Lexington, Va., physician, New York, Dec. 4; Edward H. Wilson (61), orthopedic surgeon, Columbus, Ohio, Dec. 14.