

Meetings

Inheritance

Biochemical genetics, population genetics, cytogenetics, genetic counseling, and their relation to clinical medicine were the main topics on the program of the International Seminar on Medical Genetics held at the Medical Center, University of Alabama in Birmingham, 31 August to 3 September 1966. Participants came from the United States, Sweden, Poland, Italy, France, Great Britain, and Canada. J. F. Volker (vice president for Birmingham Affairs and director of the Medical Center of the University of Alabama in Birmingham) welcomed the guests. Alice Chenoweth (chief, Program Services Branch, Children's Bureau, Washington) expressed the hope that the rapid advances in biochemistry and cytogenetics would lead to knowledge of practical importance in solving heredity problems.

A. Motulsky (Seattle) opened the session on biochemical genetics. Using the abnormal hemoglobins as a model, he pointed out that details of the relation of molecular structure to pathologic function are better understood in the case of the hemoglobinopathies than in many other genetic diseases. In discussing advances in pharmacogenetics, Motulsky pointed out that drug reactions may serve as models for the interaction of genetically determined biochemical variability and exogenous agents. Neither the genetic abnormality nor the drug alone causes difficulty but the administration of the drug to the genetically susceptible individual results in disease. In relation to the feasibility of biochemical screening for the detection of heterozygotes, he emphasized that screening for X-linked diseases is practically more important in family counseling than screening for heterozygotes in autosomal disease.

The second day of the meeting was devoted to population genetics, and L. L. Cavalli-Sforza (Pavia), in discussing the structure of human popula-

tions, indicated that interest in the epidemiological aspects may help us to understand the heterogeneity of genetic traits. He discussed in particular some of his findings with the Pygmies. In comparing data on Western Pygmies, Negroes, and Eastern Pygmies, Cavalli-Sforza concludes that the Western Pygmies are nearer to the Negroes than surround them than to the Bushmen, while the Eastern Pygmies are nearer to the Bushmen than to the Negroes. The tentative conclusion is that it is possible and perhaps even likely that the Pygmies and Bushmen formed originally a single group. In response to the question, "Can one consider these Pygmies as a proto-African population?" Cavalli-Sforza says the answer is probably yes.

C. J. Witkop (Minneapolis) presented his group's medical and dental findings in the Brandywine Isolate, an inbred population of mixed Caucasian, Negro, and Amerindian ancestry. Its population of today represents a breeding isolate in which most marriage partners are selected among persons having one of fifteen surnames. It appears that the Brandywine Isolate owes its peculiar gene distribution largely to the founder effect. The phenotypic frequencies for dentinogenesis imperfecta and tyrosinase-positive albinism were the highest reported for any population, and the gene frequency for sickle-cell hemoglobin was the highest reported in a United States population. J. A. Böök (Uppsala) indicated that the genetical determinants in mental retardation are mostly specific major gene mutations or chromosome mutations. He also discussed the polygenic component of the variance in intelligence.

V. A. McKusick (Baltimore) discussed the ethnicity of disease in the United States, and pointed out that such studies are useful in diagnosis and management as well as for the design of screening programs. Diseases with relatively high frequency in four Amish groups that appear to represent separate demes

include the Ellis-van-Creveld syndrome, hemolytic anemia associated with pyruvate kinase deficiency, hemophilia B, and autosomal recessive limb girdle muscular dystrophy. Familial dysautonomia is also being studied on a total ascertainment basis.

The third day was devoted to papers and discussion in cytogenetics and genetic counseling. J. Lejeune (Paris) discussed "Gene Dosage Effects." Excess or missing chromosomal material which is associated with abnormal clinical findings was the basis for his remarks on types and countertypes. Examples cited included Down's Syndrome (mongolism) with extra chromosome-21 material, in contrast to antimongolism with material missing; the *cri du chat* or deletion of the short arm of chromosome-5 syndrome in contrast to trisomy of the short arm of chromosome-5; and chromosome-18 trisomy versus 18-deletion syndrome. Lejeune pointed out that, in chromosomal imbalance, children may have all of their biochemical machinery at hand but that some of the reactions in vivo are running too fast or too slow. His concluding remarks were "This way of research must be investigated, for it is our only hope that someday we will be able to do something for those children, who, not having received an equitable patrimony, are, in the true sense of the term, the most disinherited of the children of man."

Irene Uchida (Winnipeg) presented the dermatoglyphic findings in chromosomal aberration syndromes, it being apparent that the strongest association exists between dermatoglyphics and the autosomal trisomy syndromes. Loss of part of the chromosome appears to have less effect on dermatoglyphic patterns than has extra chromosomal material.

J. A. F. Roberts (London) closed the 3-day meeting with a talk on "Reflections on twenty years' experience of genetic counseling." Roberts presented data regarding the attitudes of parents to genetic counseling advice which they had received. Approximately one-half of the couples given a good prognosis were, in fact, completely reassured. The other half were either doubtful, or did not believe the advice, or considered that even a very small risk was too big. People referred for genetic advice are, on the average, much above the general run of hospital patients in intelligence and in sense of responsibility. Although it is only a relatively small proportion

of people who need genetic advice, those who need it need it badly.

Numerous others, expert in the various aspects of medical genetics, contributed to the meeting by participation in panel discussions pertinent to the role of human genetics in disease. There were approximately 350 attending the meeting, and proceedings of the meeting are being published.

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Calendar of Events

National Meetings

June

25-27. **Mountain Meteorology**, symp., Fort Collins, Colo. (J. L. Rasmussen, Dept. of Atmospheric Science, Colorado State Univ., Fort Collins 80521)

25-28. **American Soc. of Agricultural Engineers**, annual mtg., Saskatoon, Sask., Canada. (O. L. Symes, Dept. of Agricultural Engineering, Univ. of Saskatchewan, Saskatoon)

25-28. **American Dairy Science Assoc.**, Ithaca, N.Y. (C. Cruse, The Association, 903 Fairview Ave., Urbana, Ill. 61801)

25-28. **American Leather Chemists Assoc.**, Lake Placid, N.Y. (W. T. Roddy, Executive Secretary, The Association, Univ. of Cincinnati, Cincinnati, Ohio 45221)

25-30. **American Soc. for Testing and Materials**, 70th annual mtg., Boston, Mass. (H. H. Hamilton, Public Relations, The Society, 1916 Race St., Philadelphia, Pa. 19103)

26-27. **American Soc. of Pharmacognosy**, annual mtg., Ann Arbor, Mich. (A. G. Paul, College of Pharmacy, Univ. of Michigan, Ann Arbor)

26-28. **Computer Workshop**, Columbia Univ., New York, N.Y. (Workshop Director, College of Pharmaceutical Sciences, Columbia Univ., 115 W. 68 St., New York 10023)

26-30. **American Schools for the Deaf**, conf. West Hartford, Conn. (E. W. Tillinghast, Arizona State School of Deaf and Blind, P.O. Box 5545, Tucson 85703)

26-30. **Computers in Chemistry**, conf., Univ. of California, San Diego. (P. James, Chancellor Office, Univ. of California at San Diego, La Jolla)

26-30. **Workshop on Graduate Training in Scientific Writing**, Rockefeller Univ., New York, N.Y. (F. P. Woodford, Rockefeller Univ., New York 10021)

26-8. **Immunology**, summer course. Lake Forest, Ill. (S. Dray, Univ. of Illinois at Medical Center, P.O. Box 6998, Chicago)

27-29. **Western Soc. of Crop Science**, University Park, N.M. (B. A. Melton, Jr.,

New Mexico State Univ., University Park 88001)

28-30. **American Scientific Glassblowers Soc.**, 12th annual symp., Atlanta, Ga. (R. W. Poole, 100 Cedar Lane, Oak Ridge, Tenn. 37832)

28-30. **Joint Automatic Control Conf.**, 8th annual mtg., Philadelphia, Pa. (L. Winner, 152 W. 42 St., New York 10036)

28-30. **Society of Protozoologists**, Toronto, Ont., Canada. (R. W. Hull, Dept. of Biological Sciences, Florida State Univ., Tallahassee 32306)

29-1. **Navigation in the Last Third of the 20th Century: Where Do We Stand; What Needs to be Done**, Inst. of Navigation, 23rd annual mtg., Washington, D.C. (The Institute, 711 14th St., NW, Suite 912, Washington 20005)

July

5-8. **National Soc. of Professional Engineers**, annual mtg., Hartford, Conn. (P. H. Robbins, 2029 K St., NW, Washington, D.C. 20006)

9-13. **American Veterinary Medical Assoc.**, 104th annual mtg., Dallas, Tex. (Executive Secretary, 600 S. Michigan Ave., Chicago, Ill. 60605)

10-11. **American College of Laboratory Animal Medicine**, annual mtg., Dallas, Tex. (R. H. Yager, Secretary, ILAR-NRC, 2101 Constitution Ave., NW, Washington, D.C. 20418)

10-12. **Aviation and Space Transportation**, symp., New York, N.Y. (American Soc. of Mechanical Engineers, 345 E. 47 St., New York 10017)

10-14. **Nuclear and Space Radiation Effects**, Columbus, Ohio. (IEEE, Technical Activities Board, 345 E. 47 St., New York 10017)

14-15. **Rocky Mountain Cancer Conf.**, 21st, Denver, Colo. (N. P. Isbell, Colorado Medical Soc., 1809 E. 18 Ave., Denver 80218)

17-19. **Sixth Aerospace Reliability and Maintainability Meeting**, Cocoa Beach, Fla. (Meetings Manager, ASME, 345 E. 47 St., New York 10017)

17-21. **Neutron Thermalization and Reactor Spectra**, Ann Arbor, Mich. (J. H. Kane, Intern. Conf. Branch, Technical Information Div., Atomic Energy Commission, Washington, D.C.)

17-21. **Third Propulsion Joint Specialist Conf.**, Washington, D.C. (Meetings Dept., American Inst. of Aeronautics and Astronautics, 1290 Sixth Ave., New York 10019)

18-20. **Electromagnetic Compatibility**, 9th symp., Washington, D.C. (F. T. Mitchell, Atlantic Research Corp., Shirley Hwy. and Edsall Rd., Alexandria, Va.)

18-22. **American Medical Technologists**, 29th annual mtg., Washington, D.C. (C. B. Dziekonski, 710 Higgins Rd., Park Ridge, Ill. 60068)

19-21. **Marine Chemists Assoc.**, 9th annual mtg., San Francisco, Calif. (K. M. Savage, c/o National Fire Protection Assoc., 60 Batterymarch St., Boston, Mass.)

24-27. **American Soc. for Metals**, W. H. Eisenman Conf. on Metal Ceramics Composites, San Francisco, Calif. (The Society, Metals Park, Ohio 44073)

24-28. **Solid Waste Research and Development**, conf., Milwaukee, Wis.

(United Engineering Center, 345 E. 47 St., New York 10017)

24-29. **Fluorine Chemistry**, 4th intern. symp., Estes Park, Colo. (P. Tarrant, Dept. of Chemistry, Univ. of Florida, Gainesville 32601)

27-29. **Linguistic Soc. of America**, annual summer mtg., Ann Arbor, Mich. (A. A. Hill, Box 8120, University Station, Austin, Tex. 78712)

30-3. **American Soc. of Animal Science**, mtg., Reno, Nev. (A. M. Pearson, Dept. of Food Science, Michigan State Univ., East Lansing 48823)

31-2. **International Soc. for Human and Animal Mycology**, 4th conf., New Orleans, La. (R. Baker, Louisiana Univ. School of Medicine, New Orleans)

31-4. **Mammalian Oviduct**, symp., Pullman, Wash. (E. S. E. Hafez, Reproduction Lab., Washington State Univ., Pullman 99163)

31-4. **Association for the Advancement of Medical Instrumentation**, annual mtg., San Francisco, Calif. (J. J. Post, Box 314, Harvard Sq., Cambridge, Mass. 02138)

31-4. **Particulate Matter Systems**, conf., Milwaukee, Wis. (United Engineering Center, 345 E. 47 St., New York 10017)

International and Foreign Meetings

July

1-5. **European Orthodontic Soc.**, 43rd annual congr., Bern, Switzerland. (P. Herren, Hirschenger, 6, Bern)

1-9. **Women Engineers and Scientists**, 2nd intern. conf., Cambridge, England. (Mrs. W. D. Gifford, Soc. of Women Engineers, 345 E. 47 St., New York 10017)

2-4. **Canadian Soc. of Clinical Chemists**, annual mtg., Montreal, P.Q. (M. Francoeur, Dept. of Biochemistry, Hotel-Dieu Hospital, 109 Pine Ave. W., Montreal)

2-6. **Forest Products Research Society**, annual mtg., Vancouver, B.C., Canada. (The Society, 417 N. Walnut St., Madison, Wis. 53705)

3-5. **British Orthoptic Soc.**, intern. mtg., London, England. (Conference Secretary, Tavistock House North, Tavistock Sq., London, W.C.1)

3-5. **Electron Diffraction**, anniversary mtg., London, England. (Meetings Officer, Inst. of Physics and the Physical Soc., 47 Belgrave Sq., London, S.W.1)

3-7. **Instruments and Techniques for Assessment of Airborne Radioactivity** in Nuclear Operations, Vienna, Austria. (International Atomic Energy Agency, Kartner Ring 11, Vienna 1)

4-7. **Federation of European Biochemical Societies**, 4th mtg., Oslo, Norway. (F. Gran, c/o Inst. for Nutrition Research, Univ. of Oslo, Blindern, Norway)

5-7. **Canadian Federation of Biological Societies** (Canadian Physiological Soc., Pharmacological Soc. of Canada, Canadian Assoc. of Anatomists, Canadian Biochemical Soc., Nutrition Soc. of Canada), 10th annual mtg., Montreal, Que. (Honorary Secretary, c/o Faculty of Medicine, University of Western Ontario, London, Ontario)

5-7. **Congress of Medicinal Chemistry**, 3rd intern. mtg., Paris, France. (Société de Chimie Thérapeutique, 2 rue d'Alesia, 75-Paris 14°)