

A PROPOSAL FOR A PROGRAM IN HUMAN GENETICS

University of Wisconsin

March 6, 1956

Although the University of Wisconsin is recognized as a center of genetic research, the focus of interest in this subject has been in the College of Agriculture with its Department of Genetics, and medical aspects of genetics have not been emphasized. Several developments in recent years have pointed to the growing importance of genetics in medical education and research -- the problem of hazards from radiation and other mutagens; the etiological role of genetic factors in psychiatric disorders and related diseases; forensic and clinical applications of blood groups; new understanding of metabolic diseases, especially blood dyscrasias; the basis of histocompatibility in surgical transplantation and in cancer research; the contribution of microbial genetics to the understanding of drug resistance and the evolution of infectious disease agents; these are only a few of the developments. In medical education, above all, we are stressing the importance of human individuality but its genetic bases have not been as well taught as the concepts of anatomical, biochemical or psychosocial man.

Because of the strong place which genetics already holds at this University and because of the way in which the medical and other colleges are closely knit together in space, as well as in a tradition of cooperation, Wisconsin should afford a rare opportunity for the vigorous development of medical genetics. For the past six months, we have been studying possible ways of implementing this opportunity, looking towards the establishment of a chair in medical genetics. From several alternative proposals, we recommend that the program be launched with the appointment of an assistant professor to be attached to the Department of Anatomy, which has been allocated quarters in a new wing under construction. We would be less confident of the success of this modest approach except for 1) the support and interest of

several members of the Department of Genetics in the College of Agriculture and
2) the outstanding qualifications of the appointee, Dr. Newton Morton.

Dr. Morton is a recent graduate of the Department of Genetics where he studied with Professor J. P. Crow on natural selection in *Drosophila*, and on mathematical methods in human genetics, in which he has already made solid contributions to the analysis of linkage. In addition to his academic experience, he was on the staff of the Atomic Bomb Casualty Commission in Japan. In the Genetics Department he was early recognized as one of the most brilliant students in the eminent history of that group, and he conducted his studies with a minimum of interference from the staff. He has found that a regime of purely theoretical work is not to his taste and plans to spend a year or so in collaboration with Professor Lederberg for experimental orientation in microbial genetics before fixing on a definite field of laboratory work to supplement his theoretical interests.

Dr. Morton will participate in the teaching program by offering a course in Human Genetics for Sophomore students according to the attached outline developed for consideration by the Curriculum Committee.

A second area of teaching activity will be through integrated efforts with existing Departments, aiming toward an emphasis on genetic aspects of medical, surgical, pediatric and other problems.

Third, we are developing a thesis program under which all students will be required to participate in a research project through the period of their medical education. We will steer an interested student each year to work with Dr. Morton.

As will be noted from a review of Dr. Morton's bibliography, his major research activity has been in the field of statistical human genetics. At present, he is acquiring the skills necessary for research relating to biochemical aspects of microbial genetics. With these diverse skills, we are confident that Dr. Morton will develop a broad and vigorous research program which at this time it is impossible to detail.

Medical genetics is often narrowly construed as human genetics, and its esoteric statistical aspects at that, but this is not our conception. A comprehensive program in medical genetics ideally would include experimental studies on microbes and mammals, as well as man. With his broad background, and the support of his colleagues in other departments Dr. Morton should be remarkably well qualified to set the program in motion, to help give us the perspective for possible future development, and to be a focus for the interest of the medical faculty in his field.

To initiate this venture, we request a grant of \$25,000 for a three-year period, July 1, 1956 to June 30, 1959. The larger part of this sum would be for the principal's salary and for a technician according to University standards (approximately \$6000.00 as a beginning annual salary with increments as indicated.) The University of Wisconsin Medical School will take over the salary by gradual increments through the three year period. The remainder, about \$5000.00, is intended for major equipment installation. His office and research facilities will be furnished by the Anatomy Department and new laboratory space is being designed to meet his specific needs. Additional costs of assistance and supplies will be met from intramural sources and from applications elsewhere on Dr. Morton's own initiative, when he is ready to make them. During this three year interval, the Medical School will study the success of the program and if its performance meets our confident expectations will endeavor to find the means for its long-term support.

Yours sincerely,

Committee on Medical Genetics
J. Z. Bowers, Professor of Medicine
and Dean
J. Lederberg, Professor of Genetics
O. A. Mortenson, Professor of Anatomy