

## MEDICAL RESEARCH COUNCIL BLOOD GROUP UNIT

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In 1946 in parallel with the organization of the National Blood Transfusion Service, the Medical Research Council created the Blood Group Research Unit, later called the Blood Group Unit, for Dr R.R. Race to study the inheritance of blood groups and their application to problems of human genetics. The Unit was opened in August 1946 at the Chelsea Bridge Road site of the Lister Institute of Preventive Medicine. In 1975, it transferred to Wolfson House in University College London. Dr Race attracted a small but distinguished staff: Dr (later Professor) Sylvia Lawler and Dr Ruth Sanger. This team collaborated with other groups at the Lister Institute, chiefly the Biochemistry department, and the MRC Blood Group Reference Laboratory, and with many International laboratories. The MRC Blood Group Unit was involved in the initial description of or made basic contributions to understanding all the main blood group systems. The contributions of Dr Race and Dr Sanger were recognised by their election to Fellowship of the Royal Society in 1952 and 1972 respectively.

Five new systems were recognised between 1946 and 1951, two of which were identified in the Unit. Family studies of these systems established their mode of inheritance and showed them to be independent of each other and the four known systems. The MN system was split and several unusual Rh phenotypes recorded. This initial flowering was followed by a decade in which most systems, particularly MNS and Rh, were expanded. Investigation of rare red cell phenotypes and of antigens of very high or very low incidence identified null phenotypes in all blood group systems. These phenotypes provided basic tools for biochemists and later for molecular geneticists. Identification of Xg<sup>a</sup> in 1962, the first blood group gene to be assigned to a chromosome and the first to be X-linked, triggered an intensive study of the X chromosome: testing families with X-linked conditions in an attempt to map the X chromosome and studying patients with X aneuploidy.

The six editions of *Blood Groups in Man*, spanning 25 years, by Drs Race and Sanger introduced the Unit and its interests to many workers in Britain and worldwide who shared their problems with us. The Unit looked for new blood group antigens and applied those already known to study problems of human genetics and blood transfusion; of particular interest were developmental abnormalities such as mosaics and chimeras. Originally only manual serological techniques were used and results of family studies analysed mathematically. Some immunochemical techniques were introduced in 1984 and molecular techniques in 1992.

Dr R.R. Race retired in 1973; he was succeeded by Dr Ruth Sanger who retired in 1983. Dr Patricia Tippett was the third and final director but unfortunately reached retirement age in 1995 and the Medical Research Council closed the Unit after 49 years and 2 months. Some of the expertise and resources were transferred with Dr Geoff Daniels (author of *Human Blood Groups*) and his new Blood Group Unit to the Bristol Institute of Transfusion Science.