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Eloise R. Giblett, Blood Research Leader, Dies at 88

By VICKI GLASER

Eloise R. Giblett, whose lifelong research on blood helped make transfusions safer and bone marrow transplants more likely to succeed and led to her discovery of the first recognized immunodeficiency disease, died in Seattle on Wednesday. She was 88.

The [University of Washington](#) School of Medicine in Seattle, where Dr. Giblett began and ended her 32-year academic career, announced her death.

Dr. Giblett (pronounced GIB-let) did pioneering work identifying and characterizing antigens (proteins or sugars that evoke an [immune response](#)) present on the surface of red blood cells; this led to improved methods for matching donor blood to patients in need of a transfusion, transforming blood banking practices. The result was safer and more effective blood transfusions, with less chance for immune rejection of the donor blood.

Dr. Paul G. Ramsey, dean of the University of Washington School of Medicine, said Dr. Giblett had made pioneering contributions to transfusion medicine, the cross-matching of blood and the understanding of [genetic markers](#) in blood. Dr. Ramsey said she had combined her expertise in blood serum proteins and enzymes of the red blood cells with a keen understanding of genetics to explore the underlying causes of blood [cancer](#) and [immunodeficiency disorders](#).

Dr. Giblett was a proponent of bone marrow transplantation, and her research on transplantation immunity demonstrated the feasibility of using bone marrow transplantation to treat leukemia. She devised ways to make community blood banks safer at a time when blood-borne infections like [hepatitis B](#) and [H.I.V.](#) were emerging as a major threat.

Dr. Janis L. Abkowitz, head of the division of hematology at the University of Washington, said of Dr. Giblett, "She thoughtfully and effectively dealt with the unexpected consequences of the AIDS epidemic on blood banking, defining policy on how to screen donors, before H.I.V. was identified and specific tests were available."

Before the emergence of AIDS, Dr. Giblett discovered the first known immunodeficiency disease, called adenosine deaminase (ADA) deficiency. An inherited metabolic disorder, it is caused by a lack of the ADA enzyme, preventing the normal maturation of lymphocytes, a component of the human immune system, and making the body more vulnerable to disease.

She unraveled the cause of another genetic disease, purine nucleoside phosphorylase deficiency, which also compromises the immune system.

Dr. Giblett combined her understanding of red blood cell antigens and her expertise in genetics to link variations in the antigens found in different ethnic and racial groups to their risk for genetic diseases. Red cell antigens could

then be used as markers for disease inheritance. She wrote "Genetic Markers in Human Blood" (Blackwell Scientific, 1969).

Eloise Giblett, known as Elo, was born in Tacoma, Wash., on Jan. 17, 1921. She received B.S. and [M.S.](#) degrees from the University of Washington and worked for a short time as a clinical microbiology technician.

In World War II, she served as a member of a corps of medical support personnel in the Waves, the women's division of the Navy. Inspired by this experience, she became one of only five women in a class of 52 to graduate in the second class of the new University of Washington School of Medicine in 1951.

Postgraduate work in hematology at the University of Washington under Dr. Clement A. Finch led to a joint paper published in 1956, a seminal work in which they presented a method for measuring the lifespan of red blood cells in the circulation and described hemolysis, in which red blood cells break open and release [hemoglobin](#).

In 1955, Dr. Giblett joined the faculty of the University of Washington School of Medicine; she became a research professor in 1967, a position she held for 20 years, until she retired in 1987 and took emeritus status.

A postdoctoral fellowship that took her to a blood transfusion research laboratory at the Postgraduate School of Medicine in London, stimulated her interest in blood banking and blood transfusions. In 1955, after her return to the United States, she also became associate director of the Puget Sound Blood Center, where she supervised the [blood typing](#) and cross-matching laboratory and introduced new methods to ensure the safety of the donor blood supply and to advance cross-matching procedures.

In 1979, she became executive director of the Puget Sound Blood Center, from which she also retired in 1987. No immediate family members survive.

She had a red blood cell antigen named for her: the ELO antigen.