



Photo Courtesy of the Judson Family

George Judson

Continuous-Flow Blood Cell Separator

U.S. PATENT NO. 3,489,145: Method and apparatus for continuous separation of blood in vivo

Inducted in 2025 Born: Jan. 7, 1918 Died: Dec. 4, 1992

Primary Connections:

- IBM: Development Engineer in Advanced Technology
- Pratt & Whitney: Engineer, worked on jet engines
- Curtiss-Wright Corp.: Engineer

Education:

- University of Kansas: B.S., Civil Engineering, 1943

Key Memberships/Awards:

- IBM Fellow, 1966
- The George T. Judson Blood Donor Center at IBM's East Fishkill, New York, location was named in his honor

Engineer George Judson and oncologist Emil J Freireich developed the first continuous-flow blood cell separator, advancing the treatment of leukemia and enabling breakthroughs in new approaches in fighting cancer and other diseases.



Full Bio: <https://www.invent.org/inductees/george-judson>

Things You Should Know:

- Judson was born in 1918 in Beacon, New York.
- During his last years of high school, he lived on his own and supported himself trapping along the Hudson River and working as a custodian in the school he attended. He also built bird houses as a teenager.
- A family friend paid for him to start college, but without additional funds, he left school and went to work as a surveyor for a railroad and took correspondence courses. He later moved to Kansas and earned a degree from the University of Kansas.
- In 1952, he began working at the IBM Development Laboratory in Endicott, New York, where he contributed to the design of card readers, printers and other peripheral equipment.
- In 1962, after Judson's 17-year-old son Tom was diagnosed with chronic myeloid leukemia, a cancer characterized by an excess of abnormal white blood cells, he wondered if the regular removal of diseased white blood cells from the bloodstream could be done on a continuous-flow basis.
- IBM gave Judson a year's paid sabbatical to develop a continuous-flow blood cell separator device with Emil Freireich at the National Institutes of Health (NIH), where Judson was given the title Guest Scientist.
- "I was given the opportunity to pursue my interests in the field of blood cell separation, and I am truly grateful," he said shortly before his retirement.
- Judson had five U.S. patents.