

John Gearhart, PSOM

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John Gearhart

John D. Gearhart, James W. Effron University Professor in the department of cell and developmental biology at University of Pennsylvania's Perelman School of Medicine and former director of the Institute for Regenerative Medicine (IRM), died May 27 following a long battle with gastric cancer. He was 77.

Born in western Pennsylvania, Dr. Gearhart lived on his family's farm located in the Allegheny Mountains for the first six years of his life. After his father, a coal miner, died, Dr. Gearhart's mother and younger brother stayed on the farm while he and his older brother were sent to Girard College, an all-male school for orphans located in Philadelphia. He then went on to earn his bachelor of science in agricultural biological sciences in 1964 from The Pennsylvania State University and his master of science in plant genetics in 1966 from University of New Hampshire. He earned his PhD in genetics and development from Cornell University in 1970.

Interested in congenital birth defects in humans, specifically Down syndrome, Dr. Gearhart moved away from plants toward studying genetics in animals. During his doctorate studies at Cornell, he analyzed the model genetic system in fruit flies. After completing his PhD, he pursued a postdoctoral position at the Institute for Cancer Research in Philadelphia where he studied genetic influences on mouse development.

He became an associate professor of anatomy at the University of Maryland School of Medicine before moving to the Johns Hopkins University School of Medicine, where he taught from 1980 to 2008. In 1998, Dr. Gearhart led a research team that first identified and isolated human embryonic stem cells, and he has been a leading advocate for the federal funding of stem cell research. His groundbreaking research focused on the role of genes in regulating the formation of human tissues and embryos, especially in causing mental retardation, Down Syndrome and other congenital birth defects. His studies helped to revolutionize and define what his field could do.

In 2008, Penn President Amy Gutmann and Provost Ronald Daniels announced the appointment of Dr. Gearhart as the eighth Penn Integrates Knowledge (PIK) University Professor (*Almanac* September 2, 2008 (<https://almanac.upenn.edu/archive/volumes/v55/n02/gearhart.html>)). He became the James Effron University Professor as well as director of the IRM. His appointment was jointly shared between the department of cell and developmental biology in the School of Medicine and the department of animal biology in the School of Veterinary Medicine. From 2009 to 2015, he also served as a professor of obstetrics and gynecology at PSOM.

According to the tribute written by the IRM, Dr. Gearhart made more than 160 trips to Washington, DC, to advocate for stem cell research funding, noting that his activities were occasionally risky, as he received death threats and needed police protection in the early days of his work, but that he persevered due to his unwavering confidence in the potential of stem cells. He strongly promoted efforts to expand the reach of stem cells and regenerative medicine. He was instrumental in founding the International Society for Stem Cell Research (ISSCR), which now serves many thousands of stem cell scientists from around the world. He also ensured that outreach was a core part of the IRM's mission and championed initiatives to share our science with the public.

He is survived by his brothers, Donald Gearhart and Gary Gearhart; and daughters, Sarah Vater and Elizabeth Fisher. A small family service is planned for a later date.

The IRM will host a virtual memorial for Dr. Gearhart in the coming weeks; information forthcoming.