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## **U. of Pennsylvania to Pay \$500,000 to Settle Federal Accusations Over Gene-Therapy Death** [By JEFFREY BRAINARD](#)

The University of Pennsylvania has agreed to pay the federal government \$517,496 to settle allegations that Penn researchers misled regulators and failed to protect patients during a 1999 gene-therapy study that led to the death of an 18-year-old research volunteer, Jesse Gelsinger.

The civil settlement, announced on Wednesday by the U.S. Justice Department, also restricted future clinical research by three scientists involved, including the principal investigator, James M. Wilson.

Dr. Wilson remains a faculty member at Penn, but the Food and Drug Administration barred his research group from studying human subjects shortly after Mr. Gelsinger's death. Under the settlement, Dr. Wilson is prohibited from leading clinical research involving human subjects until 2010. He may resume participation in studies involving human subjects before then if he undergoes additional training in such research and his work is independently monitored.

Neither Dr. Wilson nor Penn admitted liability in the death, and they have contended that their conduct was at all times lawful and appropriate. Penn has strengthened its oversight of clinical research and increased training for investigators running such studies, the settlement documents said.

Mr. Gelsinger's death shook Penn and the young field of gene therapy, a technique for repairing genetic deficiencies in human patients. Mr. Gelsinger, of Tucson, Ariz., lacked a gene that made an enzyme that helped to detoxify ammonia in the liver. He had taken conventional medication that successfully controlled the condition. But he volunteered for the Penn experiment, which aimed to study the safety of a technique that might correct the genetic deficiency.

That involved inserting a genetically engineered cold virus that would carry a corrective copy of the gene into the participants' livers. Investigators later determined that Mr. Gelsinger had died after an overwhelming immune reaction to the virus. He was the first known human subject to die during a study of gene therapy.

Government investigators later alleged a series of lapses by Penn and Dr. Wilson: that they should have stopped the study before Mr. Gelsinger's death because other patients given the gene therapy had also experienced serious reactions; that the researchers had failed to notify fully the Food and Drug Administration about adverse side effects in

study participants; and that the consent form given to study participants did not disclose all anticipated toxicities from the experimental treatment.

Dr. Wilson was also criticized for a potential conflict of interest because he had established a biotechnology firm to commercialize his findings about gene therapy. His company, Genova Inc., helped to underwrite the costs of Penn's gene-therapy studies. The company was sold in 2000, and Dr. Wilson received as payment shares of stock then worth \$13.5-million. Dr. Wilson has said financial considerations did not affect how he ran the study.

This week's settlement carries no monetary penalty for Dr. Wilson personally, but it requires him to lecture and write an article about "lessons learned" from the study involving Mr. Gelsinger. Dr. Wilson pledged to advocate for the inclusion in the article of any unedited statements from Mr. Gelsinger's family. In 2000 Dr. Wilson and Penn settled a lawsuit filed by Mr. Gelsinger's father, Paul.

That same year, the Food and Drug Administration announced that it was considering whether to prohibit Dr. Wilson permanently from conducting any clinical trials. But in Wednesday's settlement, the FDA agreed to drop those deliberations.

Besides Dr. Wilson, the settlement restricts clinical-research activities of two other Penn scientists involved in the study for three years.

Since Mr. Gelsinger's death, the field of gene therapy has proceeded more cautiously amid continuing safety concerns, and federal regulators have stepped up oversight of such studies and other human-subjects research. To date, however, gene-therapy studies have yet to yield the major new medical treatments for which supporters have long hoped.

In a written statement, Penn said: "Out of this tragedy has come a renewed national effort to protect the safety of those who help to advance new treatments and cures through clinical research. As this investigation closes, we reaffirm our commitment to the safe conduct of research, strengthening our resolve to continue to set the highest standards possible in this important area."

Penn also issued a written statement from Dr. Wilson that reads in its entirety: "In the last few years, I have focused my research on the discovery and design of new gene-transfer vectors for gene therapy and genetic vaccines. Reaching this agreement means that I may continue to devote myself fully and without restriction to my laboratory research and that I may conduct clinical research when it would be appropriate for scientific advancement."