

HHS Request for Comments regarding Embryonic Stem Cell Research

History of federal funding for embryonic stem cell research

In 1998 scientists at the University of Wisconsin derived human embryonic stem cells from a procedure that results in the death of a living human being at the embryonic stage of development. Since then, public controversy has centered on whether taxpayer dollars should support research that requires the destruction of living human embryos to obtain stem cells. These embryos are typically surplus products of in vitro fertilization (IVF) treatments, but it is also possible that embryos could be created solely for the purpose of embryo-destructive research (though stem cell lines derived from these sources would not be eligible for federal funding).

From the late 1970s until the early 1990s, federal policy was a de facto moratorium. In the late 1970s, the National Commission on Protection of Human Subjects recommended that Congress establish a permanent Ethics Advisory Board (EAB) to review any federally funded research involving in vitro embryos. This requirement became federal regulation. The EAB's 1979 report endorsed such research in principle, but its charter expired before it approved any specific proposals. The board was never reconstituted, yet the legal mandate for EAB approval remained, effectively blocking funding until 1993. That year, Congress—urged by newly elected President Bill Clinton—repealed the EAB requirement.

Clinton then tasked the NIH with developing guidelines. The NIH Human Embryo Research Panel's 1994 report recommended federal funding for embryo research. Clinton accepted most of the Panel's recommendations but rejected funding for embryos made exclusively for research. Preparations to implement funding were underway when Republicans gained control of Congress in 1994. In 1996, lawmakers attached the Dickey Amendment to the annual Labor-HHS appropriations bill. This rider prohibited federal funds for (1) creating human embryos for research or (2) research in which embryos are destroyed, discarded, or subjected to greater risk than allowed under relevant federal guidelines governing research involving human subjects. Reauthorized annually ever since, the amendment appeared to end Clinton-era efforts to open the door to federally funded embryo-destructive research.

The 1998 scientific breakthrough in deriving embryonic stem cells prompted a pivotal “creative” reinterpretation of the law. HHS's General Counsel under Clinton ruled that the Dickey Amendment barred only the use of federal money to *destroy* embryos. Once embryos were destroyed with private or state funds, subsequent research on the resulting stem cell lines was permissible. This narrow reading would have allowed funding to proceed, but the 2000 election intervened.

President George W. Bush, upon taking office in 2001, suspended pending initiatives for review. His August 9, 2001, policy balanced scientific opportunity with a robust ethical commitment. Legally, Bush agreed that the Dickey Amendment permitted funding for research on already-derived lines. His policy therefore authorized federal support only for

(1) non-embryonic (“adult”) stem cell research and (2) embryonic stem cell lines derived before August 9, 2001, using nonfederal funds. Initially, more than sixty genetically diverse lines qualified; the number later reached seventy-eight, though only twenty-one proved usable due to scientific and intellectual-property barriers. By July 2007, the administration had allocated over \$3.7 billion for eligible stem cell research, including \$170 million specifically for embryonic lines, with nearly 1,000 shipments distributed to researchers. Later, the discovery of induced pluripotent stem (iPS) cells—reprogrammed from adult cells without embryos or eggs—prompted Bush to prioritize NIH funding for the most promising research on pluripotent cells, maximizing scientific progress while honoring ethical limits.

Congress twice passed bills to override Bush’s restrictions and expand funding to new embryonic lines. He vetoed both. A separate measure supporting alternative (non-embryonic) sources passed the Senate overwhelmingly but stalled in the House. The President’s Council on Bioethics issued balanced reports examining the policy and related issues, while the FDA assured stakeholders of its readiness to regulate resulting therapies.

On March 9, 2009, President Barack Obama rescinded Bush’s executive actions and directed the NIH to fund embryonic stem cell research “to the extent permitted by law.” Within 120 days, NIH guidelines limited eligibility to cell lines derived from IVF embryos originally created for reproduction but later donated because they were no longer needed. The rules excluded funding for embryos created solely for research due to lack of social consensus on this issue. Notably, neither Obama nor the NIH guidelines addressed the moral status of the human embryo.

This history illustrates how divergent presidential visions have produced a legislative stalemate punctuated by executive action, appropriations riders, and administrative reinterpretations. The Dickey Amendment remains in force, but successive administrations have interpreted and implemented it according to fundamentally different normative frameworks. The result is a policy landscape that continues to reflect the nation’s debates over the moral standing of the human embryo and the proper limits of government-supported science in a pluralistic democracy.

Ethical Considerations

Drawing on modern embryology, we can say with certainty that an embryo is a complete, living, self-directing human organism—genetically distinct, integrated, and on a developmental trajectory toward maturity. The classical liberal principle of human equality at the heart of America’s founding must apply without discrimination based on age, size, developmental stage, degree of dependency, or utility. The intentional destruction of human embryos for research violates this principle; creating embryos solely for destruction (by IVF or cloning) is even more objectionable.

In its policy considerations, the NIH should reject “contingent personhood” theories that would grant or withhold moral status according to others’ judgments about capacities or

usefulness. Such an approach subverts equality by empowering the strong to decide the fate of the weak. This undermines our inalienable rights and risks adopting a sliding scale of legal protections based on cognitive ability or societal value. The NIH should also reject utilitarian arguments that would sacrifice embryos for potential therapies, even if personhood were granted, and refused to treat “spare” IVF embryos as mere raw materials simply because others had deemed them unwanted.

Practical Considerations

As of April 2026—28 years after their first derivation and 25 years after federal funding was authorized—there are no fully approved or marketed therapeutic applications derived from human embryonic stem cells (hESCs) anywhere in the world. In contrast, stem-cell based therapies based on sources that do not require the use and destruction of embryos (e.g., “adult” stem cells derived from more differentiated tissues such as bone marrow, placenta, and adipose cells, and “induced pluripotent state cells” derived from “reprogramming” adult cells to behave like embryonic stem cells) have shown great therapeutic promise.

Applications for adult stem cells include, for example, cardiomyocyte sheets/patches for severe heart failure due to ischemic cardiomyopathy¹, dopaminergic neural progenitor cells for Parkinson’s disease², and ovarian support cells for ex vivo oocyte maturation to treat infertility.³ Approved stem cell therapies globally are exclusively from adult sources (e.g., hematopoietic stem cells from bone marrow/cord blood for blood cancers, or certain mesenchymal stem cell products), not embryonic cells. Adult stem cells offer several clinical advantages, including easier generation of patient-specific (autologous) or HLA-matched allogeneic lines, reducing immune rejection and immunosuppression problems. Most importantly, they do not require embryo destruction, thereby avoiding the ethical problems that historically plagued research on embryonic stem cells.

In light of this, and given NIH’s responsibility to carefully steward its limited resources, respect ethical boundaries, and to protect the consciences of American taxpayers in a pluralistic society, federal funding should focus on the kinds of stem cells that have been proven therapeutically beneficial (e.g., adult stem cells) and ethically acceptable (e.g., iPSCs), and eschew those (embryonic stem cells) that have failed to live up to previous promises and pose serious ethical problems.

¹ “World’s First iPSC-Derived Cardiomyocyte Therapy for Heart Failure Receives Conditional Approval in Japan,” *CUORIPS*, March 6, 2026. <https://cuorips.co.jp/en/news/2026/03/06/512/>

² “iPSC Therapies Make History: Japan Authorizes World’s First Two iPSC-based Cell Therapies,” *BioInformant*, April 3, 2026, <https://bioinformant.com/ipsc-therapies-make-history-japan-authorizes-worlds-first-two-ipsc-based-cell-therapies/>

³ “Gameto Presents Data Supporting Manufacturing Process for its In Vitro Maturation Solution for Fertility Care at 2024 International Society for Stem Cell Research Annual Meeting,” *Gameto*, July 10, 2024. <https://www.gametogen.com/news/gameto-presents-data-supporting-manufacturing-process-for-its-in-vitro-maturation-solution-for-fertility-care-at-2024-international-society-for-stem-cell-research-annual-meeting/>

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