



Ohio Legislative Service Commission

Bill Analysis

Brian D. Malachowsky

H.B. 308

130th General Assembly
(As Introduced)

Reps. Thompson, Hood, Lynch, Johnson, Becker, Derickson, Buchy, Beck, Grossman, Stebelton, Henne, Hottinger

BILL SUMMARY

- Prohibits the performance of human cloning, the creation of a human-animal hybrid, and certain activities associated with the prohibited acts.
- Establishes the following penalties for violations: (1) regarding the human cloning prohibitions, imprisonment of up to five years and, if financial gain resulted from the violation, a fine of at least \$1 million, and (2) regarding the human-animal hybrid prohibitions, imprisonment of up to one year and, if financial gain resulted from the violation, a fine of \$250,000 to \$500,000.
- Exempts certain research activities, scientific procedures, and imported products from the prohibitions regarding human-animal hybrids.

CONTENT AND OPERATION

Prohibitions regarding human cloning

The bill prohibits a person or governmental entity from knowingly doing any of the following in Ohio:¹

- (1) Performing or attempting to perform human cloning;
- (2) Participating in the performance or attempted performance of human cloning;
- (3) Sending or receiving a human embryo that is produced by human cloning.

¹ R.C. 3701.94(B).

The bill defines "human cloning" as the use of asexual reproduction to create a human zygote, human blastocyte, or human embryo that is genetically virtually identical to an existing or previously existing human organism. "Asexual reproduction" is defined as the creation of a human zygote, human blastocyte, or human embryo by any means other than fertilization of a human egg by a human sperm. "Human zygote" is defined as a one-cell human embryo. "Human blastocyte" is defined as an early stage human embryo that is five to seven days after conception and has an outer layer of cells known as the trophoblast and an interior group of cells that is the inner cell mass. "Human embryo" is defined as an organism of the species *Homo sapiens* during the earliest stages of development from one cell up to eight weeks.²

Prohibitions regarding human-animal hybrids

The bill prohibits a person from knowingly doing any of the following:³

- (1) Creating or attempting to create a human-animal hybrid;
- (2) Transferring or attempting to transfer a human embryo into a nonhuman womb;
- (3) Transferring or attempting to transfer a nonhuman embryo into a human womb;
- (4) Transporting or receiving for any purpose a human-animal hybrid.

The bill defines "human-animal hybrid" as any of the following: (1) a human embryo into which a nonhuman cell or a component of a nonhuman cell is introduced so that it is uncertain whether the human embryo is a member of the species *Homo sapiens*, (2) a hybrid human-animal embryo produced by fertilizing a human egg with a nonhuman sperm, (3) a hybrid human-animal embryo produced by fertilizing a nonhuman egg with a human sperm, (4) an embryo produced by introducing a nonhuman nucleus into a human egg, (5) an embryo produced by introducing a human nucleus into a nonhuman egg, (6) an embryo containing at least haploid sets of chromosomes from both a human and nonhuman life form, (7) a nonhuman life form engineered with the intention of generating functional human gametes within the body of a nonhuman life form, or (8) a nonhuman life form engineered such that it contains a human brain or a brain derived wholly from human neural tissues. "Human embryo" is defined as an organism of the species *Homo sapiens* during the earliest stages of

² R.C. 3701.94(A).

³ R.C. 3701.95(B).

development from one cell up to eight weeks.⁴ According to a medical dictionary, "haploid" denotes the number of chromosomes in sperm or ova, which is half the number in somatic (diploid) cells. In humans, the haploid number is "23."⁵ A "gamete" is one of two haploid reproductive cells, male and female, whose union is necessary in sexual reproduction to initiate the development of a new individual.⁶

Exemptions for research, xenotransplantation, and imported products

The bill specifies that its prohibitions regarding human-animal hybrids do not prohibit any of the following:

(1) Research involving the use of transgenic animal models containing human genes.

(2) Xenotransplantation of human organs, tissues, or cells into recipient animals, including animals at any stage of development, so long as the procedure does not violate the bill's prohibitions regarding human-animal hybrids.⁷ According to a medical dictionary, "transgenic" means pertaining to the experimental incorporation of a segment of DNA from one genome into a different genome; it is often used specifically to denote transfer across species.⁸ "Xenotransplantation," according to the United States Food and Drug Administration, is any procedure that involves the transplantation, implantation, or infusion into a human recipient of either (a) live cells, tissues, or organs from a nonhuman animal source, or (b) human body fluids, cells, tissues, or organs that have had *ex vivo* (outside the living body) contact with live nonhuman animal cells, tissues, or organs.⁹

(3) Receipt by an individual of organs, tissues, or cells delivered from outside of Ohio.

⁴ R.C. 3701.95(A).

⁵ *Stedman's Medical Dictionary* (online version), available at <http://www.medilexicon.com/medicaldictionary.php?t=39232>.

⁶ *Dorland's Illustrated Medical Dictionary* (32nd ed.), p. 756.

⁷ R.C. 3701.95(C).

⁸ *Dorland's Illustrated Medical Dictionary* (32nd ed.), p. 1953.

⁹ U.S. Food and Drug Administration, *Vaccines, Blood & Biologics: Xenotransplantation*, available at <http://www.fda.gov/BiologicsBloodVaccines/Xenotransplantation/default.htm>.

Penalties

A person who violates the bill's prohibitions regarding human cloning is subject to a term of imprisonment not to exceed five years. If the offender derives pecuniary (financial) gain as a result of the violation, the offender is subject to a fine of not less than \$1 million and not more than an amount equal to two times the amount of the gross pecuniary gain if that amount is more than \$1 million.¹⁰

A person who violates the bill's prohibitions regarding human-animal hybrids is subject to a term of imprisonment of not more than one year. If the offender derives pecuniary gain as a result of the violation, the offender is subject to a fine of at least \$250,000 but not more than \$500,000.¹¹

HISTORY

ACTION	DATE
Introduced	10-22-13

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¹⁰ R.C. 3701.99(D).

¹¹ R.C. 3701.99(E).

