



Ohio Legislative Service Commission

Bill Analysis

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H.B. 171

129th General Assembly
(As Introduced)

Reps. Thompson and Johnson, Derickson, Blessing, Beck, Slaby, J. Adams, Stebelton, Henne, Hall, Gardner, Carey, Hayes, Combs, Blair, Hottinger, Balderson, Mecklenborg, Dovilla

BILL SUMMARY

- Prohibits knowingly performing or attempting to perform human cloning, creating, or attempting to create a human-animal hybrid, or engaging in certain activities associated with the prohibited acts.
- Establishes a criminal penalty of imprisonment of up to five years and, if pecuniary gain resulted from the violation, a fine of at least \$1 million.
- Exempts certain research activities and scientific procedures from the prohibitions regarding human-animal hybrids.

CONTENT AND OPERATION

Human cloning

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

- (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.

"Human cloning" is defined by the bill as the use of asexual reproduction to create any of the following that is genetically virtually identical to an existing or previously existing human organism:

(1) A human zygote (a one-cell human embryo);

(2) A human blastocyst (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);

(3) A human embryo (an organism of the species *Homo sapiens* during the earliest stages of development from one cell up to eight weeks).

"Asexual reproduction" is defined by the bill as the creation of a human zygote, human blastocyst, or human embryo by any means other than fertilization of a human egg by a human sperm.¹

Human-animal hybrids

Prohibitions

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

- (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.

For purposes of the bill, a human-animal hybrid is 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;

¹ R.C. 3701.94.

(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 ("haploid" means "a set of chromosomes containing only one member of each chromosome pair"²);

(7) A nonhuman life form engineered such that human gametes develop within the body of a nonhuman life form (a "gamete" is a mature male or female germ cell (also known as a sex cell) "usually possessing a haploid chromosome set and capable of initiating formation of a new . . . individual by fusion with a gamete of the opposite sex"³); or

(8) A nonhuman life form engineered such that it contains a human brain or a brain derived wholly or predominately from human neural tissues.⁴

Research and xenotransplantation exemption

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

(1) Research involving the use of transgenic animal models containing human genes ("transgenic" means "being or used to produce an organism or cell of one species into which one or more genes of other species have been incorporated"⁵);

(2) Xenotransplantation of human organs, tissues, or cells into recipient animals other than animal embryos⁶ ("xenotransplantation" means "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* contact with live nonhuman animal cells, tissues, or organs"⁷).

² MedTerms Medical Dictionary, *Haploid Definition* (last visited April 20, 2011), available at <<http://www.medterms.com/script/main/art.asp?articlekey=3653>>.

³ MedlinePlus Medical Dictionary, *Definition of Gamete* (last visited April 20, 2011), available at <<http://www.merriam-webster.com/medlineplus/gamete>>.

⁴ R.C. 3701.95.

⁵ MedlinePlus Medical Dictionary, *Definition of Transgenic* (last visited April 20, 2011), available at <<http://www.merriam-webster.com/medlineplus/transgenic>>.

⁶ R.C. 3701.95(C).

⁷ U.S. Food and Drug Administration, *Vaccines, Blood & Biologics: Xenotransplantation* (last visited April 20, 2011), available at <<http://www.fda.gov/BiologicsBloodVaccines/xenotransplantation/default.htm>>.

Penalty

A violator of the bill's prohibitions regarding human cloning or human-animal hybrids is subject to a criminal penalty of a term of imprisonment of not more than five years. If the offender derives pecuniary gain as a result of the violation, the offender is also 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.⁸

HISTORY

ACTION	DATE
Introduced	03-23-11

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⁸ R.C. 3701.99(D)).