





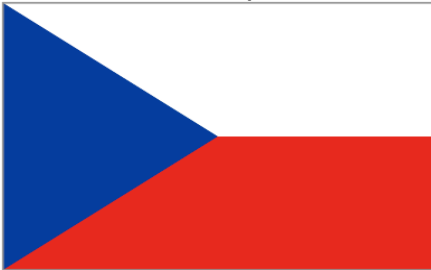

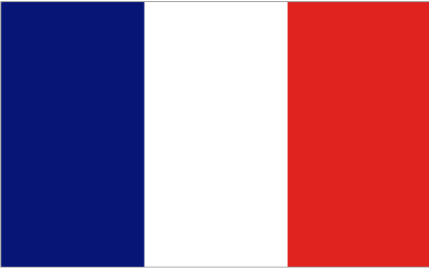






<p>Australia</p> 	<ul style="list-style-type: none"> • Research Involving Human Embryos Act (2002) and Prohibition of Human Cloning Act (2002): Allow research on excess IVF embryos including for derivation of human embryonic stem cells and prevent cloning • Prohibition of Human Cloning for Reproduction and the Regulation of Human Embryo Research Amendment Bill (2006): Allows somatic cell nuclear transfer (SCNT) and prohibits reproductive cloning • Use of non-human animal eggs to make SCNT cell lines prohibited
<p>Austria</p> 	<ul style="list-style-type: none"> • Reproductive Medicine Act (Fortpflanzungsmedizingesetz) (2004): Research on embryos, including derivation of stem cell lines, is banned • Use of embryos created legally abroad or for non-research purposes is legal • Use of imported embryonic stem cell lines is permissible and can be used for assisted reproduction
<p>Belgium</p> 	<ul style="list-style-type: none"> • Allow creation of human embryos for procurement of human embryonic stem cells
<p>Bulgaria</p> 	<ul style="list-style-type: none"> • Bulgarian Health Act (2005): Surplus embryos can be used for research purposes, subject to informed consent from donors • Reproductive cloning prohibited

<p style="text-align: center;">Canada</p> 	<ul style="list-style-type: none"> • Assisted Human Production Act (AHRA) (2004): Prohibits the creation of human embryos solely for germline engineering (inheritable genetic modification), the creation of human or non-human hybrids and chimeras, all use of SCNT cloning—whether for research or reproduction, and sex selection except to prevent, diagnose, or treat a sex-linked disorder or disease. Research involving human embryos permitted, using created embryos not used during IVF procedures¹
<p style="text-align: center;">China</p> 	<ul style="list-style-type: none"> • Restrictions in place for human embryonic stem cell research and derivation²
<p style="text-align: center;">Czech Republic</p> 	<ul style="list-style-type: none"> • Act on Research on Human Embryonic Stem Cells and Related Activities (2006): Research may be conducted on embryonic stem cell lines imported into the country or derived from surplus IVF embryos not older than 7 days with donor informed consent. It is permitted if it will advance scientific or medical knowledge, lead to the development of new treatments or cures for serious diseases, and where expected scientific benefits can't be reached by other methods • Reproductive cloning banned


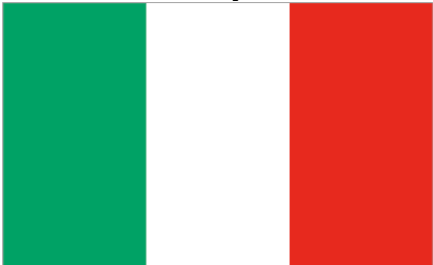
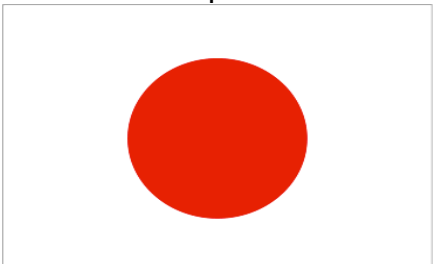
¹ <http://www.geneticsandsociety.org/article.php?id=335>

² www.stemgen.org

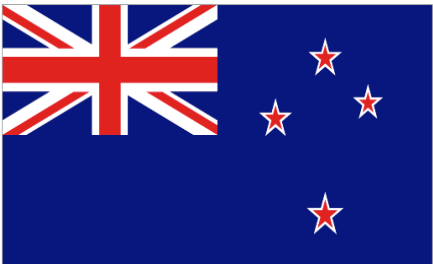
<p style="text-align: center;">Finland</p> 	<ul style="list-style-type: none"> • Medical Research Act 1999/4888: Can derive legally from excess IVF embryos up to 14 days after fertilisation or must be destroyed. May also be frozen for up to 15 years and then must be destroyed. Creation of embryos for research banned unless specifically for finding new cures and treatments for serious diseases • Act on Medical Use of Organs and Tissues (2001): Embryos can only be used for fertility treatment or medical research • Embryo: “Living group of cells resulting from fertilisation not implanted in a woman’s body” • SCNT not forbidden
<p style="text-align: center;">France</p> 	<ul style="list-style-type: none"> • Law on Bioethics (2004) and Amendment (2011): Prohibit use of IVF human embryos and embryonic stem cells for research unless: <ul style="list-style-type: none"> ○ 1) Research is scientifically relevant ○ 2) Research is likely to allow major medical advances ○ 3) Expressly established research can’t be performed unless cells derived from embryos are used ○ 4) Project respects French ethical principles for research on embryos and embryonic stem cell lines • Human cloning banned • Creation of embryos specifically for research is banned. • Embryonic stem cells can be imported with permission by Agence de la Biomedicine
<p style="text-align: center;">Germany</p> 	<ul style="list-style-type: none"> • Constitution (Grundgesetz): Embryo is protected. “Human dignity is inviolable”. “Everyone has the right to life and inviolability of his person” • Embryo Protection Act (Embryonenschutzgesetz) (1991): Derivation of embryonic stem cell lines is a criminal offence • Stem Cell Act (2002) (amended in 2008): Lengthened cut-off point to May 1, 2007 as to when embryonic stem cell lines must have been derived • Banned human cloning • Importation of embryonic stem cell lines permitted under strict conditions and must be approved by the Central Ethics Commission for Stem Cell Research • Embryonic stem cell lines can only be used if vital in developing new scientific and medical knowledge

<p style="text-align: center;">Greece</p> 	<ul style="list-style-type: none"> • Article 1459 of Law 3089/2002: Use of surplus reproductive material for research allowed, subject to donor's consent. Embryos may be frozen for as many as five years and then must either be destroyed or used for therapeutic or research purposes. Fertilized eggs not frozen must be destroyed 14 days after fertilisation • Human reproductive cloning expressly prohibited
<p style="text-align: center;">Hungary</p> 	<ul style="list-style-type: none"> • Art. II of the Constitution: Human dignity shall be inviolable. Every human being shall have the right to life and human dignity; embryonic and foetal life shall be subject to protection from the moment of conception³ • No specific legislation regarding human embryonic stem cell research
<p style="text-align: center;">Ireland</p> 	<ul style="list-style-type: none"> • Constitution: Protects “the right to life of the unborn and, with due regard to the equal right to life of the mother” in cases of pregnancy terminations • <i>M.R. v. T.R. Case</i> (2009): An embryo created outside of the womb is not protected under the Constitution • Irish Medical Council (2009): Banned medical practitioners from creating embryos specifically for research • No regulation for stem cell research

³ https://www.constituteproject.org/constitution/Hungary_2011

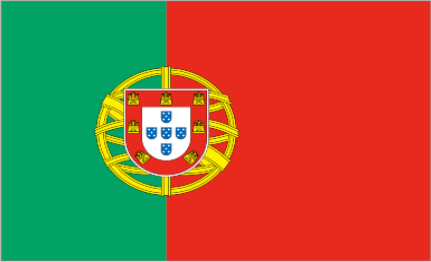
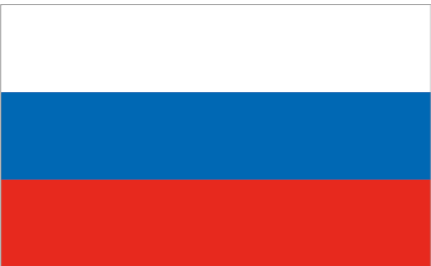

<p style="text-align: center;">Israel</p> 	<ul style="list-style-type: none"> • Ban human cloning • Permit therapeutic cloning
<p style="text-align: center;">Italy</p> 	<ul style="list-style-type: none"> • Law 40 (2004): Embryo has rights from moment of fertilisation. No research on the embryo unless it specifically helps improving the therapeutic and medical condition of that particular embryo • Ban deriving embryonic stem cell lines • Allow use of imported embryonic stem cell lines
<p style="text-align: center;">Japan</p> 	<ul style="list-style-type: none"> • Ban human cloning • Permit therapeutic cloning • Permissive approach to human embryonic stem cell research derivation⁴

⁴ www.stemgen.org

<p>Lithuania</p> 	<ul style="list-style-type: none"> • Law on Ethics of Biomedical Research No. VIII-1679 (2000): Use of embryos for research restricted to observation and non-interventional trials • Prohibit import and export of tissues of human embryo, embryonic stem cells, and lines • Prohibit research on human embryos
<p>New Zealand⁵</p> 	<ul style="list-style-type: none"> • Human Assisted Reproductive Technology Act (2004): Prohibit artificially forming a cloned or hybrid embryo for reproductive purposes. Prohibit implanting into a human being a cloned embryo; an animal gamete or embryo; a hybrid embryo; a genetically modified gamete, human, or hybrid embryo; or a gamete or embryo derived from a foetus. Prohibit implanting an animal with a human gamete or embryo, or a hybrid embryo • Illegal to commercially supply human embryos
<p>Poland</p> 	<ul style="list-style-type: none"> • Art. 38 of the Constitution: Guarantees protection of human life at any stage (including prenatal) during the development phase and protection of the health of the foetus and its smooth development • Art. 39 of the Constitution: No one shall be subjected to scientific experimentation, including medical experimentation, without his voluntary consent⁶ • Act 7.01.1993: Right to life is protected, including in the prenatal phase • <i>Constitutional Court:</i> The principle of the rule of law includes safeguards for the protection of human life at every stage of its development and guarantees the protection of health of the foetus and its smooth development. The unborn have a right to life from conception • No specific legislation regarding human embryonic stem cell research



⁵ <http://www.legislation.govt.nz/act/public/2004/0092/latest/whole.html>



⁶ https://www.constituteproject.org/constitution/Poland_1997

<p>Portugal</p> 	<ul style="list-style-type: none"> • Law No 32/2006: Research limited to frozen or surplus embryos that can bring potential therapeutic and medical benefits to humanity. Bans creation of embryos for research and makes it criminal to improperly research into embryos • Allow derivation of human embryonic stem cell lines from surplus IVF embryos
<p>Russia</p> 	<ul style="list-style-type: none"> • Art. 20 of the Constitution: Everyone shall have the right to life⁷ • Art. 21 of the Constitution: Human dignity shall be protected by the State. Nothing may serve as a basis for its derogation. Nobody may be subjected to medical, scientific, or other experiments without voluntary consent • Ban human cloning⁸
<p>Spain</p> 	<ul style="list-style-type: none"> • Law 14/2007: Allows research on embryos for therapeutic and research purposes. Prohibits creation of embryos for research. Forbids reproductive human cloning • Law 35/1988: Bans research on viable embryos unless for purposes of diagnosing, treating, or preventing disease in that embryo • Law 45/2003: Permits donation of embryos for research • Law 22/2006: Allows surplus embryos to be donated for reproductive purposes towards a specific research objective or to be disposed of

⁷ https://www.constituteproject.org/constitution/Russia_2008

⁸ www.ruf.rice.edu

<p style="text-align: center;">Sweden</p> 	<ul style="list-style-type: none"> • Activities Involving Human Eggs for Research of Treatment Purposes Act (1991): Permits research on excess IVF embryos up to 14 days after fertilisation and their destruction afterwards • Act on Genetic Integrity (2005): Allows creation of human embryos for research using SCNT therapeutic cloning after ethics committee approval • Reproductive cloning banned
<p style="text-align: center;">Switzerland</p> 	<ul style="list-style-type: none"> • Constitution: Human dignity enjoys protection especially from being misused by regenerative medical therapies, gene technology, and other reproductive technologies • Federal Act on Research Involving Embryonic Stem Cells (2003): Surplus IVF embryos can be used for research under strict licensing conditions and are subject to consent. Surplus embryos can only be kept for research purposes and must be destroyed following their use. Allows importation of embryonic stem cell lines specifically for research purposes • Embryonic stem cells can be derived from surplus IVF embryos up to seven days old

<p>United Kingdom</p> 	<ul style="list-style-type: none"> • Human Fertilisation and Embryology Act (1990) and Human Fertilisation and Embryology (Research Purposes) Regulations (2001): Embryonic stem cell research must be absolutely necessary for research purposes and only done with a license from the Human Fertilisation and Embryology Authority (HFEA), including: promoting advances in treatment of infertility; increasing knowledge about causes of congenital disease, causes of miscarriages, development of embryos, and serious disease; developing more effective techniques of contraception and methods for detecting presence of gene or chromosome abnormalities; and enabling any such knowledge to be applied in developing treatments for serious disease • Human Reproductive Cloning Act (2001): Illegal to use cell replacement to create child⁹ • Amendment (2008): Allowed to add limited mounts of animal cells to human chimeras, true hybrids, and transgenic human embryos • Bans human reproductive cloning • Permits therapeutic cloning • Legally permits creation of human embryos for procurement of human embryonic stem cells • Can only research embryos up to 14 days old created through IVF
<p>United States</p> 	<ul style="list-style-type: none"> • Dickey-Wicker Amendment: Prohibits destruction of human embryos¹⁰ • Human embryonic stem cell research permitted • Impossible to create new human embryonic stem cell lines from viable embryos using federal funds at the federal level • Much variance among the states, but in California, researchers may create new human embryonic stem cell lines • Private funding of embryonic stem cell research has never been prohibited or regulated¹¹

⁹ www.eurostemcell.org

¹⁰ www.nature.com

¹¹ www.eurostemcell.org

European Union



- Ban funding of human cloning
- Refuse to fund research using somatic cell nuclear transfer to create embryos
- Support funding embryonic stem cell research