Appendix C

Fetal Research Laws Possibly Affecting IVF

ARIZONA: Arizona bans use of "any human fetus or embryo" in nontherapeutic research, but specifies that research on embryos "resulting from an induced abortion" is at issue. Since preimplantation embryos created in vitro do not result from "an induced abortion," this statute probably does not apply to embryo research designed to improve or extend in vitro fertilization (IVF). Artificial insemination followed by lavage for fertilized ovum retrieval and transfer might be covered.

CALIFORNIA California bans research on the "product of conception" but is specific that the "aborted product of conception" is at issue. Thus this statute would not apply to preimplantation embryos that have not been transferred and implanted, for they cannot yet have been aborted. It is unclear whether it would apply to research on embryos created by artificial insemination and removed by lavage.

ILLINOIS: Illinois bans sale or experiments "upon a fetus produced by the fertilization of a human ovum by a human sperm unless such experimentation is therapeutic to the fetus thereby produced," making intentional violation of the section a misdemeanor. Yet, another section specifies that it is not "intended to prohibit the performance of in vitro fertilization."

Although this formulation leaves open several questions about what IVF activities might be allowed, the proscriptions of the statute are elsewhere directed to research activities with "fetuses ." Since the preimplantation embryo is not clearly a fetus under Illinois law, the statute does not necessarily apply to embryo research.

LOUISIANA: Three statutes appear to apply to embryo research. First, Louisiana's IVF law (see ch. 13) specifically prohibits the use of IVF to create an embryo exclusively for the purpose of doing research. By its terms, however, the statute does not cover embryos created by artificial insemination and then recovered by lavage prior to implantation. Nevertheless, this statute is the most far-reaching with respect to discouraging embryo research.

Another statute makes "human experimentation" a crime, defining it to include "the conduct, on a human embryo or fetus in utero, of any experimentation or study except to preserve the life or to improve the health of said human embryo or fetus." This statute could be read to require that the embryo in question

be in utero, which would exempt preimplantation embryos, for a subsequent section speaks of the "complete extraction or expulsion from its mother of a human embryo or fetus, irrespective of the duration of pregnancy."

The third statute bans experiments "on an unborn child... unless the experimentation is therapeutic to the unborn child." If '(unborn child" is broadly construed, it could extend to preimplantation embryos. Arguments about the scope of this statute are moot, however, since it was struck down on vagueness grounds (see ch. 13).

MAINE: The Maine statute against donating or selling "any product of conception considered live-born for . . . any form of experimentation" is defined to mean a "product of conception after complete expulsion from the mother, irrespective of the duration of the pregnancy, which breathes or shows any other evidence of life, etc. "This statute does not appear to refer to preimplantation embryos.

MASSACHUSETTS: The Massachusetts statute prohibits the use of "any live human fetus whether before or after expulsion from its mother's womb, for scientific, laboratory, research or other kind of experimentation." Since a preimplantation embryo is not easily defined as a "live human fetus," the statute would appear to place no barrier in the way of research with unimplanted embryos. Another section defines "live fetus" in terms of "the same medical standards as are used in determining evidence of life in a spontaneously aborted fetus at approximately the same stage of gestational development," thus reinforcing the notion that only embryos or fetuses that have implanted and initiated a pregnancy are subject to the statute's prohibitions on research.

A subsection of this statute penalizes a person who "shall knowingly sell, transfer, distribute or give away any fetus in violation of the provisions of this section." The next sentence reads: "For purposes of this section, the word 'fetus' shall include also an embryo or neonate." The meaning of "section" in this sentence is unclear. The most plausible reading is that it means the "subsection" in which it appears, addressing the sale and transfer of fetuses. It is also unclear whether the term "embryo" refers to fertilized eggs and zygotes or only to more fully developed embryos that have implanted in the uterine wall. If this expansive defini

tion were taken to apply to every use of "fetus" in the statute, it would ban all research with preimplantation embryos. This seems the less plausible interpretation, especially in a criminal statute that ordinarily is narrowly construed.

MICHIGAN: Michigan bans use of a "live human embryo for nontherapeutic research if . . . the research substantially jeopardizes the life or health of the embryo." It also bans such use if the embryo is the subject of a planned abortion.

MINNESOTA: Minnesota makes it a gross misdemeanor to "use or permit the use of a living human conceptus for any type of . . . research or experimentation except to protect the life or health of the concepts." However, it permits research "which verifiable scientific evidence has shown to be harmless to the concepts."

Although this law appears explicit in its ban on research on embryos, it was passed in 1973 in reaction to *Roe v. Wade*, before IVF was even possible. It is possible that research on an unimplanted embryo that is not intended for implantation would be considered "harmless."

NEW MEXICO: New Mexico's statute on "Maternal, Fetal and Infant Experimentation" defines regulated research to include that involving IVF, but not IVF performed to treat infertility. This might seem to apply to research on discarded or nontransferred embryos or embryos created solely for research. Yet the operative section of the statute, which prohibits clinical research not meeting its provisions, applies only to clinical research "involving fetuses, live-born infants or pregnant women." Thus the restrictions possibly may not apply to extracorporeal embryo research, notwithstanding the broad definition of clinical research to include IVF.

NORTH DAKOTA: The North Dakota fetal research law is modeled on the Massachusetts law, with some organizational differences. The section prohibiting "live

fetal experimentation" clearly does not apply to embryos that have not yet implanted.

A later section that prohibits the sale of fetuses also defines fetus to include "embryo or neonate." However, it appears that this expansive definition applies only to sales and transfers in violation of that section.

OHIO: Ohio prohibits "experiments upon the product of human conception which is aborted." Thus even though a "product of conception" would include fertilized eggs and preimplantation embryos, the statute's prohibition applies only to "aborted" embryos. Since embryos that have not yet been transferred to a uterus and implanted arguably are not '(aborted, " the most likely reading of this statute is that it would not apply to research on embryos in vitro. Its application to eggs fertilized by artificial insemination and recovered by lavage is unclear.

OKLAHOMA: Oklahoma also refers to use of an "unborn child" in research, but in language that clearly refers to the results of an abortion. Once again, unless preimplantation embryos created by artificial insemination can be considered aborted because they were recovered by lavage, the section would not apply.

RHODE ISLAND: Rhode Island's statute is similar to Massachusetts' and thus raises the same issues of scope and interpretation.

PENNSYLVANIA: Pennsylvania prohibits "any type of nontherapeutic experimentation upon any unborn child," making it a third degree felony. This would not appear to prevent embryo transfer after IVF. The status of research on discarded or nontransferred embryos is less clear and depends on whether preimplantation embryos are considered "unborn children."

UTAH: Utah also prohibits experimentation on "live unborn children ." But the statute appears to be aimed at abortion, since it is included under a heading of abortion laws. As in the Oklahoma law, the provision would not likely apply to IVF embryos, and it is unclear if it could apply to embryos recovered by lavage.