embodied in the 2009 Executive Order, NIH issued Guidelines on Human Stem Cell Research (these can be found at http://stemcells.nih.gov/policy/2009guidelines.htm). The NIH Guidelines on Human Stem Cell Research require written informed consent in all cases from the individuals donating the embryos. (In contrast, OHRP's "Guidance on Research Involving Coded Private Information or Biological Specimens" states that consent is not generally required if the cells cannot be linked to specific living individuals by the investigators, either directly or indirectly through coding systems.) In addition, NIH made a policy decision to honor any restrictive language in the informed consent signed by individuals donating human embryos for research, such as statements limiting research using the cells to studies on a particular disease or aspect of development.

Investigators planning to undertake research using human embryonic stem cells should also review the National Academies of Science Guidelines for Human Embryonic Stem Cell Research (see http://dels-old.nas.edu/bls/stemcells/guidelines.shtml).

12.3 PROTECTIONS FOR PRISONERS

Prisoners are considered a vulnerable research population because of the potential constraints on their voluntary decision-making and the heightened possibility of coercion. Federal regulations identify prisoners as another "vulnerable" population, and Subpart C of 45 CFR 46 outlines special protections for such individuals when they are subjects of biomedical or behavioral research. The constitution of the Lurie Children's IRB does not meet Subpart C requirements and therefore cannot review research involving prisoners as research subjects.

However, the institution complies with 45 CFR 46 Subpart C, with one exception: Subpart C will not apply to non-federally funded social-behavioral research (not biomedical research) where the incarcerated participant was not a prisoner at the time of enrollment into the research. Whenever it is practicable, these subjects may continue to participate in the study that they enrolled in prior to becoming incarcerated. Because Illinois law prohibits medical, pharmaceutical or cosmetic experiments involving prisoners, subjects in this type of research who become prisoners will need to be withdrawn from the study in a manner which protects the safety and welfare of the subject. The plan for this process should be provided to the IRB for their review and approval when reporting the incarceration.

If a human subject involved in ongoing federally funded research becomes a prisoner during the course of the study, and the relevant research proposal was not reviewed and approved by the IRB in accordance with the requirements for research involving prisoners under subpart C of 45 CFR part 46, the investigator must promptly notify the IRB. All research interactions and interventions with, and obtaining identifiable private information about, the now-incarcerated prisoner-subject must be suspended immediately, except when it is in the best interests of the subject to remain in the research study while incarcerated.

Definition of Prisoner:

Federal regulations define a prisoner as any individual involuntarily confined or detained in a penal institution (45 CFR 46.303(c)). The term is intended to encompass the following:

i. Individuals sentenced to a penal institution under a criminal or civil statute,

ii. Individuals detained in other facilities by virtue of statutes or commitment procedures which provide alternatives to criminal prosecution or incarceration in a penal institution, and

iii. Individuals detained pending arraignment, trial, or sentencing.

Individuals are prisoners if they are in any kind of penal institution, such as a prison, jail, or juvenile offender facility, and their ability to leave the institution is restricted or if they are being monitored by the penal system (i.e., probation, house arrest, halfway house, etc.). Prisoners may be convicted felons, or may be untried persons who are detained pending judicial action, for example, arraignment or trial. The regulatory definition of prisoner likewise includes people who are under house arrest but are mobile (i.e. are monitored with an ankle bracelet or other similar device).

12.4 PROTECTIONS FOR CHILDREN

Subpart D of 45 CFR 46 (DHHS regulations) and Subpart D of 21 CFR 50 (FDA regulations) outline special protections for children (including viable neonates). According to federal regulations, a "child" is a person who has not attained the legal age for consent to treatments or procedures involved in the research, under the applicable law of the jurisdiction in which the research will be conducted.

A. Risk Level Determinations

From a federal regulatory perspective, research is classified as involving *no risk, minimal risk, or greater than minimal risk*. According to the regulations [45 CFR 46.102(i)] "*Minimal risk* means the probability and magnitude of harm or discomfort anticipated in the research are not greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests." It is the IRB's responsibility to determine whether or not research can be considered minimal risk. The investigator may request that the IRB consider designating the study as minimal risk, but the investigator may not make this determination on his or her own.

The risk categories set forth in the federal regulations below are used by the IRB when reviewing a study that involves children as subjects.

i. Research not involving greater than minimal risk. (45 CFR 46.404 and 21 CFR 50.51)

Taking into consideration the level of risk and prospect of direct benefit, the IRB can approve research that presents no greater than minimal risk to children.

ii. Research involving greater than minimal risk but presenting the prospect of direct benefit to the individual subjects. (45 CFR 46.405 and 21 CFR 50.52)

Taking into consideration the level of risk and prospect of direct benefit, the IRB can approve research that carries the potential for *greater than minimal risk* to children. Most importantly, the IRB must determine if the research holds out a prospect of direct benefit for the subjects. An IRB can itself approve research on children involving more than minimal risk if the proposed study presents such a prospect of benefit and "(a) The risk is justified by the anticipated benefits to the subjects; (b) The relation of the anticipated benefit to the risk is at least as favorable to the subjects as that presented by available alternative approaches."