Attachment B: Comparison between NIH Draft Guidelines and CIRM MES Regulations

Draft NIH Guidelines	CIRM MES Regulations	Comments
I. Scope of Guidelines		
▷ NIH Guidelines apply to all hESC lines regardless of derivation date	▷ CIRM regulations apply to all "covered" (pluripotent) stem cell lines, includes blastocysts, SCNT and somatic cell (iPS)	
II. Guidelines For Eligibility Of Human Embryonic Stem Cells For Use In Research		
▷ hESC lines may be used if they were derived from embryos created for reproductive purposes, to the extent permitted by law.	▷ hESC lines derived from any source may be utilized (SCNT, parthogenesis or IVF for research are ok)	▷ PGD lines are eligible for use since they are created for reproductive purposes ▷ Note any embryo created for reproductive purposes is eligible for research use. CIRM has some restrictions on IVF-embryos if gamete donors were paid. CIRM might consider (a) allowing use of all lines that conform to NIH standards or (b) eliminating payment restriction on embryos created for reproductive purposes.
Assurance Criteria: [Note Numbering Reflects NIH guidelines, some criterion not discussed]		Note some assurance criteria there may be concerns over what constitutes appropriate documentation.

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	CIRM (and the NAS) adopt a two-part framework for determining whether a hESC line may be utilized for research. CIRM/NAS have established an "acceptably derived" standard for lines derived prior to the effective date of the regulations or lines derived outside CIRM jurisdiction. The "acceptably derived" standard stipulates hESC lines must meet 3 criteria: 1. Donors provided informed consent (without specifying specific consent criteria) 2. Donors were not paid to provide balstocysts for research use 3. There was oversight by an IRB or equivalent For derivations funded by CIRM, more detailed consent and oversight requirements, largely consistent with the draft NIH guidelines apply.	Conceptually CIRM policy is substantially similar to the draft NIH guidelines with the desire to ensure comprehensive consent and oversight for hESC derivation. However, in drafting the CIRM regulations the SWG/ICOC felt the more comprehensive requirements should apply prospectively (once the regulations took effect) to CIRM funded research. The "acceptably derived" standard is designed to accommodate established lines that were (1) derived prior to the formulation of more detailed regulatory requirements and (2) lines derived in jurisdictions not governed by the same guidelines and policies.
1. All options pertaining to use of embryos no longer needed for reproductive purposes were explained to the potential donor(s).	Not explicitly included in CIRM regulations	▷ NIH indicated there are reasonableness considerations; **consider comment requesting clarification**.
4. There was a clear separation between the prospective donor(s)'s decision to create human embryos for	Not explicitly included in CIRM regulations	▷ In practice this situation should always exist for "excess" IVF-embryos ▷ Consider comment requesting how this

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reproductive purposes and the prospective donor(s)'s decision to donate human embryos for research purposes.		criterion would apply in PGD context
5. At the time of donation, consent for that donation was obtained from the individual(s) who had **sought reproductive services**. That is, even if potential donor(s) had given prior indication of their intent to donate to research any embryos that remained after reproductive treatment, consent for the donation should have been given **at the time of the donation**. Donor(s) were informed that they retained the right to withdraw consent until the embryos were actually used for research.	**Donors** of human gametes, embryos, somatic cells or tissue gave voluntary and informed consent.	▷ CIRM regulations require consent from "genetic contributors" where as NIH delegates donation decision to individuals with dispositional authority. ▷ CIRM does not specify the timing of consent.
Consent Criteria:		
a. A statement that donation of the embryos for research was voluntary;	There is no explicit criterion for this statement in the consent. However, there are numerous references throughout the text of the regulations stipulating that donation must be voluntary. In addition, "acceptably derived" standard for cell lines imported from other institutions or jurisdictions mandates that consent to donate was "voluntary and informed."	▷ Such statements are generally included in consent forms as a matter of practice. ▷ Consider comment requesting whether established CIRM regulatory framework satisfies this requirement.
b. A statement that donor(s) understood	There is no explicit criterion for this	

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alternative options pertaining to use of the embryos.	statement in the consent.	
d. Information about what would happen to the embryos in the derivation of human embryonic stem cells for research;	CIRM regulations include a statement that embryos will be destroyed in the process of deriving hES cells.	▷ Consider comment requesting whether established CIRM regulatory framework satisfies this requirement.
Prior to the use of NIH funds: Funding recipients must ensure that: (1) the human embryonic stem cells were derived consistent with sections II.A and B of these Guidelines; and (2) the grantee institution maintains appropriate documentation demonstrating such consistency in accordance with 45 C.F.R. Part 74.53, which also details rights of access by NIH. The responsible grantee institutional official must provide assurances with respect to (1) and (2) when endorsing applications and progress reports submitted to NIH for projects that utilize these cells.	SCRO committees provide a mechanism for institutions to fulfill these responsibilities. CIRM regulations require SCRO to provide assurances of compliance.	▷ There may be a need for clarification of what constitutes appropriate documentation.
III. **Research Using Human Embryonic Stem Cells and/or Human Induced Pluripotent Stem Cells That, Although The Cells May Come From Allowable Sources, Is Nevertheless Ineligible For NIH Funding** This section governs research using human embryonic stem cells and human		▷ Note this section applies to iPS and hESCs.

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induced pluripotent stem cells, i.e., human cells that are capable of dividing without differentiating for a prolonged period in culture, and are known to develop into cells and tissues of the three primary germ layers. There are some uses of these cells that, although they may come from allowable sources, are nevertheless ineligible for NIH funding, as follows		
B. Research involving the breeding of animals where the introduction of human embryonic stem cells (even if derived according to these Guidelines) or human induced pluripotent stem cells may have contributed to the germ line.	Breeding any animal into which stem cells from a covered stem cell line have been introduced.	▷ NIH focus is on germ line contribution; CIRM may consider revising standard to be consistent with NIH approach.
IV. **Other Non-Allowable Research**		
A. NIH funding of the derivation of stem cells from human embryos is prohibited by the annual appropriations ban on funding of human embryo research (Consolidated Appropriations Act, 2009, Pub. L. 110-161, 3/11/09), otherwise known as the Dickey-Wicker Amendment.	No such restriction in California	

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B. NIH funding for research using human embryonic stem cells derived from other sources, including somatic cell nuclear transfer, parthenogenesis, and/or IVF embryos created for research purposes, is not allowed under these Guidelines.	Proposition 71 authorized SCNT, parthenogenesis and research embryos.	