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Embryonic stem cells still needed, panel says

WASHINGTON - Although researchers have discovered ways to make powerful stem cells without the use of human embryos, the controversial use of embryonic stem cells is still necessary, a panel of experts said on Friday.

But some regulation is needed of these new sources of stem cells, especially if they are spliced into animals for experiments, the U.S. National Academy of Sciences panel said.

The Human Embryonic Stem Cell Research Advisory Committee, appointed by the Institute of Medicine and the National Research Council, revised a 2005 report on stem cells because of the recent advances.

Stem cells are the body's master cells. Scientists are studying them for the emerging field of regenerative medicine, in the hope of creating tailor-made repair kits for the human body.

They also want to use them to study disease and to seek better treatments for cancer, diabetes and other conditions.

Those found in days-old embryos are called human embryonic stem cells and can produce any cell type found in the body. So-called adult stem cells are found in the blood and in all tissues and are less flexible.

Opponents of embryo research include some members of Congress and President George W. Bush, and they have restricted federal funding of work involving human embryonic stem cells, although researchers may use private funds.

In the past year, teams of scientists have discovered ways to transform ordinary cells into what look like stem cells. These are called induced pluripotent stem cells.

Just last week a team at Harvard Medical School reported they had transformed cells in a living mouse from one type into another. Both advances could bypass the need for embryonic stem cells.

But not yet, the report concludes.

SOME UTILITY

"It is far from clear at this point which cell types will prove to be the most useful for regenerative medicine, and it is likely that each will have some utility," the panel, chaired by Richard Hynes of the Massachusetts Institute of Technology, wrote.

"Research that uses human embryonic stem cells remains controversial in the United States and is still subject to intense political scrutiny. Therefore, it is important to sustain public confidence in the integrity of the institutions and researchers conducting human embryonic stem cell research," it adds.

Anyone working with any of the cells should have an independent embryonic stem cell research oversight or ESCRO committee, the report recommends.

"At a minimum, an institutional registry of stem cell lines should be maintained," it adds, to ensure that the sources of all batches of stem cells are clearly noted.

The induced pluripotent stem cells do not involve human embryos but their use in animals should be monitored, the report suggests.

If a human cell is spliced into an animal in such a way that it could transmit human DNA to offspring, called germline transmission, the animal should not be allowed to breed, the report says.

The group also tweaked guidelines on reimbursing women who donate eggs for stem cell research, saying they could be compensated for lost wages as well as transportation costs without this being considered payment or inducement, the report concludes.