

2008

Stem Cells without Embryo Destruction: Ending the Ethical Debate?

Adam W. Scott

Follow this and additional works at: <https://digitalcommons.library.uab.edu/inquiro>

 Part of the [Higher Education Commons](#)

Recommended Citation

Scott, Adam W. (2008) "Stem Cells without Embryo Destruction: Ending the Ethical Debate?," *Inquiro, the UAB undergraduate science research journal*: Vol. 2008: No. 2, Article 5.

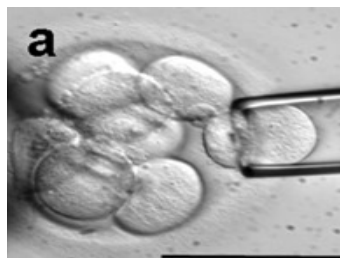
Available at: <https://digitalcommons.library.uab.edu/inquiro/vol2008/iss2/5>

This content has been accepted for inclusion by an authorized administrator of the UAB Digital Commons, and is provided as a free open access item. All inquiries regarding this item or the UAB Digital Commons should be directed to the [UAB Libraries Office of Scholarly Communication](#).

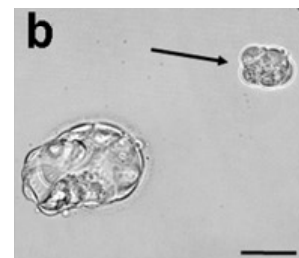
Stem Cells without Embryo Destruction: Ending the Ethical Debate?

Adam W. Scott

Until recently, the derivation of all human embryonic stem cell (hESC) lines involved the destruction of embryos, which has caused considerable ethical concerns. In fact, the process is prohibited in many countries, and in the United States, there is no federal funding for research involving use of hESC lines from destroyed embryos. However, the firm Advanced Cell Technology was able to derive five hESC lines without embryo destruction. In their technique, a single cell (blastomere) was removed from each embryo. The hESC lines generated appeared to have the same characteristics of other hESC lines, including pluripotency, self-renewing capacity, and ability to differentiate into derivatives of all three germ layers. Their method has the potential to end the ethical debate surrounding the use of embryos to derive stem cells, and could double or triple the number of stem cell lines available within a few months.



Blastomere Biopsy



Biopsied blastomere (arrow) and parent embryo developing next to each other