

Roundtable: Embryonic or adult stem cells: scientific and ethical considerations

## **Can human embryonic stem cells be an acceptable ethical alternative to animal experiments?**

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Amongst the proposals for alternatives to animal toxicology testing, perhaps the most ethically radical is to use human embryos to derive different human cell lines as the subjects for testing. Is it valid to replace one big ethical problem, if our alternative poses an equally large issue? How do we weigh the relative merits of two opposing arguments of principle, or is this trying to 'compare apples and oranges'? Most justifications of human embryo stem cell (hESC) research are made on the basis of an appeal to the direct therapeutic benefits expected for currently incurable human diseases or injuries. The ethical argument for their use in toxicity testing of pharmaceutical has been comparatively little discussed so far, but the case seems less compelling. When weighed against our duties to a human embryo with at least some degree of moral status, the compassionate benefit is indirect, it is more complicated by commercial motivations, and some alternative approaches do exist. The use of hESCs for testing cosmetics or ordinary chemicals is still more problematic. Comparable arguments can be made about what constitutes a justification for animal use in research. The underlying value positions of two communities of belief, one opposed to experimental use of animals, the other of human embryos, tend to have a liberal view of the other's ethical objection. For those less fundamentally committed, how do we weigh the merits of the two cases, and can some common ground or acceptable compromise be found? How far should we pursue an aim of essentially risk-free chemical products, if the means to achieve this leads to serious pressures on other ethical concerns?

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