Stem Cell-Derived Cardiomyocytes Demonstrate Arrhythmic Potential

To the Editor:

We applaud the work by Zhang et al1 demonstrating abnormal action potential characteristics in cardiomyocytes derived from pluripotent stem cells. This offers experimental evidence confirming our hypothesis2 that primordial cells may provide the foundation for ultimate repair of the myocardium, but, owing to their immaturity, may also create an environment conducive to malignant arrhythmias. These factors must be weighed as we pursue avenues of therapy based on introduction of pluripotent cell lines.

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Response

Although we were not aware of the correspondence at the time we wrote our article,1 we are gratified to think that other investigators share our idea that myocyte regrowth, by whatever means, may be complicated by arrhythmia.2 At least for the addition of exogenous cells, this suggestion seems to be consistent with the incidence of arrhythmia in some recent reports in humans.3,4

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