From the Editor

Two Steps Forward, One Back

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Just when biologists have started to transition their labs and test the waters of stem cell research, a late summer court decision could derail numerous experiments and hold up millions of dollars in funding for stem cell researchers working in the United States. On August 24, 2010, US District Judge Royce C. Lamberth issued an injunction against federal funding for human embryonic stem (ES) cell research. The ruling effectively suspended ongoing intramural research projects using human ES cells at the NIH and put on hold millions of dollars in grant money already earmarked for external researchers on specific ES cell projects.

This latest flap in the stem cell wars could be the most divisive yet. The legal grounds for Judge Lamberth's decision rest on a 1996 law prohibiting the use of federal money for research in which any human embryo is destroyed. The ramifications of the ruling are far-reaching: all currently available human ES cell lines, including the 21 approved by former President Bush, violate the 1996 law and therefore fall under the injunction.

The promise of stem cells to help better understand basic developmental biology—as well as their potential as therapeutic agents—rests on the ability of scientists to study these cells in an uninterrupted manner without the fear that their labs could be shuttered at any time. Although this injunction may quickly be lifted and stem cell researchers returned to their early summer 2010 experiments and funding, one has to wonder when the next shoe may drop. Is it only a matter of time before another court decision halts experiments, resulting in potential loss of cell lines and precious resources? And how many young

investigators will move away from the field for fear of losing tenure over such a delay in their research programs? As a young field, stem cell research needs nurturing at all levels: from the scientific community, through NIH funding opportunities, and with the understanding and support of the public in general.

This injunction presents a moment for the entire scientific community to rally around the idea of stem cell research, and is also a chance for Congress to show strong support for this potentially life-saving avenue of scientific inquiry. Furthermore, it is an opportunity for the public to better understand the realities and possibilities of ES cells.

There is, of course, still private funding. But researchers cannot rely on these sources alone. A lack of public funding not only limits the total dollar amount devoted to ES cells, but weakens any feelings of security for those already in the field. Such uncertainty is bound to cause new scientists to hesitate about entering the field in the first place.

It is critical to realize that this ES cell injunction may last only a short period of time (it may even have been lifted by the time this editorial appears), but its psychological impact will be longer-lasting. The response of the scientific community, government, and public to the situation will reverberate for many years to come. Please share your thoughts and comments with us by posting at our Molecular Biology Forums under “To the Editor” (<http://molecularbiology.forums.biotechniques.com>) or send an email directly to the editors (bioeditor@biotechniques.com).

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