Reviewer's report

Title: Evaluation of dendritic cells loaded with apoptotic cancer cells or expressing tumour mRNA as potential cancer vaccines against leukemia

Version: 1 Date: 8 November 2004

Reviewer: Michael Morse

Reviewer's report:

General

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

The authors should at least mention whether they have done any experiments to show that in their system, apoptotic cells are better than necrotic cells or tumor lysates. If they have not, the discussion should at least mention the literature on loading of DC with necrotic versus apoptotic versus whole cells.

I am confused by the comment:
“The aim of these model experiments was not to use this allogeneic system to prove that we could elicit tumour specific T-cell responses in this way.”

This would have been a far more interesting goal (eliciting tumor specific immune responses) than to just show that DC can take up mRNA and then be matured which has been demonstrated by other groups. It would have been most interesting if they actually had childhood AML or ALL cells and could activate tumor specific immune responses. In these experiments it would be important to compare immune responses activated against tumor mRNA or apoptotic tumor cells and the immune responses activated against normal white blood cell antigens. Given how rapidly immune responses could be activated, I suspect all the immune response was against allo-antigens anyway which is also a less interesting result.

The discussion should at least mention these points.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

In figure 3 demonstrating DC phagocytosis of the tumor cells, it would help to show these with an arrow (I may be color-blind but I didn’t see Red dye in more than a minority of the green cells)

Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests