Reviewer’s report

Title: Human desmoid fibroblasts: matrix metalloproteinases, their inhibitors and modulation by Toremifene

Version: 1 Date: 10 February 2004

Reviewer: Rafael Fridman

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Desmoid tumors are benign neoplasms of the fibromatosis group characterized by proliferation of mesenchymal cells and intense deposition of extracellular matrix material. The study of Balduci et al describes the expression and degradation of collagen and expression of matrix metalloproteinases and their inhibitors in cultured of human normal and desmoid fibroblasts. The findings are not particularly interesting and may not be physiologically relevant.

Major points.

1. The authors should discuss why previous studies (Anticancer Res. 1997 May-Jun;17(3C):2099-104 and Eur J Cancer Clin Oncol. 1986 May;22(5):583-7.) showed presence of estrogen binding sites in desmoid samples but they cannot show it in their cells. These experiments should also include a positive control for the binding studies. What is the effect of toremifene in cell viability and proliferation?

2. Most of the figures are poorly labeled. Gels are cut and molecular weight markers are not shown. For example the northern blot should indicate the size of the transcripts and show also the loading control. Instead of number, the figures could be labeled with the cell type making it easier to identify what is what. In the various gels, the proteins should be indicated with an arrow and name. Also, the gels can be placed together to reduce the number of figures.

3. The zymograms are unclear. What is the band showed in the collagen zymogram? What type of enzyme is that? Zymograms should include positive controls to identify the MMPs present in the media.

4. RNA interference or antisense approaches to reduce TIMP levels and thus alter the MMP/TIMP balance will help to confirm the author’s hypothesis regarding the rate of collagen degradation in normal versus desmoid fibroblasts.

5. Examination of two cell lines in culture may not represent the situation in vivo. Analysis of the same proteins in tissue samples will provide more relevant information.

What next?: Reject because too small an advance to publish in any journal

Level of interest: Too insignificant to warrant publication in any journal

Quality of written English: Acceptable

Statistical review: No