Reviewer's report

Title: Response rate of fibrosarcoma cells to cytotoxic drugs on the expression level correlates to the therapeutic response rate of fibrosarcomas and is mediated by regulation of apoptotic pathways

Version: 1 Date: 25 February 2005
Reviewer: Abdelhadi Rebbaa

Reviewer's report:

General

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

The authors investigated gene expression profiles in fibrosarcoma cells in response to doxorubicin, actinomycin D and vincristine with particular emphasis on the effect of doxorubicin. The following points should be addressed however:

1- The authors stated in the abstract that expression levels of 45 selected candidate genes were validated by quantitative PCR however no quantitative data concerning these genes was displayed in the figures.

2- The authors used a quite high doxorubicin concentration (1 ug/ml) known for inducing primarily apoptotic death in various cellular models therefore it is not surprising that the major changes in gene expression observed in this case were related to those implicated in apoptosis. It is also known that drug amounts of about 5 to 10 times less than the drug concentration used in this study are able to induce proliferation arrest without affecting the apoptotic pathway. It is recommended that lower concentrations be tested and related changes in gene expression determined.

3- The study will be strengthened if the authors determined how general these changes in gene expression are. It is recommended that findings from this study are compared with other published array results that describe response to doxorubicin in other cellular models and identify common genes that are altered in both fibrosarcoma and other types of cancer in response to this drug.

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

Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field
Quality of written English: Needs some language corrections before being published

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests.