Reviewer's report

Title: Acquisition of Anoikis Resistance in Human Osteosarcoma Cells Does Not Alter Sensitivity to Chemotherapeutic Agents

Version: 1 Date: 21 October 2004

Reviewer: Jorge Filmus

Reviewer's report:

General
In this paper the authors demonstrate in SAOS-2 cells that acquisition of anoikis resistance does not result in a generalized resistance to other apoptotic stimuli such as chemotherapeutic agents. This is an interesting and potentially important observation. In general, the experiments are well performed, and support the conclusions presented by the authors. The main problem of this paper is that is merely descriptive, and there is no mechanistic insight. There is not enough novel information to warrant publication.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
The authors should investigate some of the molecular mechanisms that have been already associated with anoikis such as Bid and Bax translocation to the mitochondria, downregulation of Bcl-x expression, activation of DISC, change in integrin levels. The involvement of these mechanisms should be assessed in both the cells that are resistant to anoikis, and in the sensitive ones.
In the Introduction the authors state that the process of de-adhesion acts as a driving force towards anoikis resistance. This statement is incorrect. As recognized in a previous paper by the authors, the SAOS cell line is heterogeneous. Most likely, there are some cells within this cell line that are more anoikis-resistant than others (after all this is a cancer cell line). Culturing these cells in suspension for 72 h can certainly select the more resistant cells since they will survive longer.

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 page 12 the authors indicate that in reference 33 "anoikis sensitivity can be restored by induction of ILK". This is incorrect, restoration of ILK induces resistance to anoikis.
In the same page the it is said " our work suggests that in human osteosarcoma cells". This generalization is not appropriate, since only one cell line has been tested.

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 whose findings are important to those with closely related research interests

Quality of written English: Acceptable
Statistical review: No

Declaration of competing interests:

None