Reviewer’s report

Title: Hyperoxia retards growth and induces apoptosis and loss of glands and blood vessels in DMBA-induced rat mammary tumors

Version: 1 Date: 7 October 2006

Reviewer: AG Tsai

Reviewer’s report:

General
Interesting study which supports the previous work by these authors that hyperbaric hyperoxia enhances the anti-tumor with the possible mechanisms being the increase in plasma oxygen solubility. Using hyperbaric hyperoxia thus delivers more oxygen to the tumor which leads to increased apoptosis and blood vessel density due to possibility of increased levels of reactive oxygen species.

The mechanism of increasing the solubility of oxygen in plasma is interesting as this could also be achieved with O2-carrying therapeutics such as modified acellular hemoglobin or perfluorocarbon. These solutions would further enhance the apoptosis and rarification of the vessels leading to retarded tumor growth.

Table 2 seems to be missing data regarding the treatment group with 5-FU? What is studied in this "third" group?

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

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

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Discretionary Revisions (which the author can choose to ignore)

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What next?: Accept after discretionary 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 interest.