Reviewer's report

Title: Involvement of extracellular ATP on the glioblastoma growth in a rat glioma model.

Version: 1 Date: 27 June 2006

Reviewer: Pier Andrea Borea

Reviewer's report:

General
The manuscript by Fernanda B Morrone, Diogo L Oliveira, Patricia W Gammermann, Joseli Stella, Susana T Wofchuk, Marcia R Wink, Luise Meurer, Maria I A Edelweiss, Guido Lenz and Ana M O Battastini indicates that the participation of extracellular ATP and the ecto-nucleotidases may be associated with the development of the glioblastoma growth. In particular, this is a potentially interesting study that proposes the involvement of extracellular ATP on the glioblastoma growth in a rat glioma model.

The experiments appear to have been well performed and the data are well presented. It is a very nice study. I have no major criticisms of the MS.

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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)

Two minor essential points should be addressed:

1- Work in the literature already ties the purinergic system to cancer. Moreover, one report in Biochem Pharmacol shows adenosine as a key element in glioblastoma development (Merighi S., et al., Biochem Pharmacol. 2006;72:19-31.).

2- The authors show that the presence of an ATP-depleting enzyme at the moment of glioma implantation causes a significant decrease in the growth, angiogenesis and proliferation index. The exact mechanisms to explain these observations remain under evaluation, however, the participation of ATP and the ecto-nucleotidases may be associated with the development of this type of brain tumor in an in vivo glioma model.

A small scheme could be added as a last figure in order to indicate what the main take home conclusions of the work are.

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Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests.