Reviewer’s report

Title: Efficacy of Topical Cobalt Chelate CTC-96 Against Adenovirus Keratoconjunctivitis in a Rabbit Model.

Version: 1 Date: 19 September 2005

Reviewer: H J Field

Reviewer’s report:

General

This is a fairly straight-forward antiviral efficacy study and it discloses interesting preliminary results.

The activity of the compound in cell culture and its lack of toxicity for cells at inhibitory concentrations (Paper 1, same authors) could be included as a single table of results (ED50; ED90 and toxicity values) in one or more cell types.

I am slightly concerned that the frequency of sampling (9 times during the day 7.30pm -7.30pm) was followed by a 12h gap. If the compound has a very short half-life in the eye, it would appear that the 12h gap may have an important influence. Preliminary experiments could be carried out with equal intervals between doses over 24h? A wider dose-response range at fixed intervals between doses may be more informative.

The figure legends should be more explicit so the treatment regimens are readily apparent and symbols such as "C", "C+" etc defined. "Ocular plaque assay viral titres" could be simply "infectious virus titres".

I do not see the need for including the data shown in Figures 2 and 3 since the pathogenesis of infection appears to be significantly different from that obtained in the antiviral experiment . e.g. In the developmental experiment, the virus excretion resolved from day 12-17 compared with day 31 in the second aeries (Figure 5) that was actually used for the antiviral experiment.

In summary, In my opinion the second paper contains an interesting results showing a significant antiviral effect was obtained using topical therapy with CTC which is also shown to have in vitro activity against adenovirus. The second paper can itself be greatly shortened by leaving out the "developmental" aspects. The data which demonstrate a reduction in clinical signs and virus excretion from the eye are the quintessential points. The data from paper 1 could then be included as a single table showing the cell culture antiviral and toxicity data.

-------------------------------------------------------------------------------

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

 *********************************************************************************

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)