Reviewer's report

Title: Effects of oral adenosine 5'-triphosphate and adenosine in enteric-coated capsules on indomethacin-induced permeability changes in the human small intestine: a randomized cross-over study

Version: 1 Date: 4 April 2007

Reviewer: Martin Gotteland

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Discretionary Revisions (which the author can choose to ignore)

The present study was carried out to evaluate the effect of the oral administration of encapsulated adenosine or ATP on indomethacin-induced alterations of the intestinal barrier function. It was based on the previous observation by the authors that topical application of ATP through naso-intestinal tube normalized intestinal permeability to lactulose/rhamnose.

The objective is well defined, the methods are appropriate and the data are well controlled and support adequately the discussion and conclusions.

The relevance of the study, however, is limited due to the negative results obtained: no protective effects of ATP or adenosine were observed when these compounds were administered as enteric-coated capsules. As explained by the authors, this is probably due to the fact that indomethacin acts on the upper segments of the small intestine while the opening of the Eudragit capsules occurs at a more distal site. This means that the authors have to use another model of gut barrier alteration affecting the intestine more distally, or to use another type of coating allowing the release of the drug in the upper intestine.

What next?: Reject because too small an advance to publish

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests