Reviewer’s report

Title: Interstitial Cystitis Anti-Proliferative Factor (APF) as a Cell-Cycle Modulator

Version: Date: 29 December 2003

Reviewer: Jørgen Nordling

Reviewer’s report:

General

Discretionary Revisions (which the author can choose to ignore)

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

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

The role of APF in Interstitial Cystitis is highly interesting and is presently the only objective parameter discriminating between IC patients and others. The present paper looks into the influence of APF on the cell cycle. The authors have used supernatant (APF) from in vitro grown epithelial cells from a patient with IC and from (someone else?) (mock). This is the smallest possible material, which is very badly described. Sex? Age, except above 18? and the origin of the epithelial cells for producing the mock preparation is too bad.

Cultured cells from a normal person was then treated with either APF or mock in 3 different doses. The normal person is described just as badly as the IC patient. Ther must have been a reason to do cystoscopy and bladder biopsy in general anaesthesia. Was the study accepted by the local ethical committee? In the paper it is just stated, that the participants were enrolled in accordance with the guidelines of the Institutional Review board of the University of Maryland School of Medicine. Cultured cells were then harvested and DNA Cytometry performed. PFA treated cultures showed higher proportion of tetraploid cells than mock treated. This is clear from the table, but not from figure 1, where the legends state, that the top panel is APF treated, while the proportion of tetraploid cells is clearly higher in the lower panel. The figure is somewhat confused by different scales of the Y-axis in the 2 panels. In figure 2 the legend refers to dotted and solid lines, while the figure presents red and blue lines.

The paper do only superficially discuss the significance of the findings. It is concluded, that APF has a profound impact on cell cycle distribution. But also the mock preparation showed such an impact with increasing concentration, which is not discussed at all. Did the mock preparation contain lower concentrations of APF? And what does this change in distribution frequency mean. In the discussion it is stated, that this is possibly due to a G2/M block. As no absolute figures are given, it might also be a more profound effect of APF on diploid cell proliferation, than on tetraploid or octaploid cells. The material is too small to draw meaningful conclusions.

Jørgen Nordling
What next?: Reject because too small an advance to publish in any journal

Level of interest: Too insignificant to warrant publication in any journal

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests: None