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Letter to the Editor

Volume Regulation by Necturus Gallbladder

Our article, Volume Regulation by Necturus Gallbladder, which appeared in The Journal of Membrane Biology (81:219-232, 1984) contains an error in Fig. 5 (p. 228). The lines representing the relationship between $\Delta \tilde{\mu}_{C}/F$ and $\Delta \tilde{\mu}_{K}/F$ were drawn incorrectly in the original figure; a corrected version of the figure is shown here. We interpreted the original figure to indicate that the stoichiometric relationship between the movement of potassium and chloride across the basolateral cell membrane was in the ratio 3K/2Cl. The revised plot shows that our results are consistent with a range of stoichiometries from 1:1 to 3:1 rather than with a fixed ratio. The additional analysis of the data presented in Fig. 6 and Table 8 are unchanged, but the evidence for a 3:2 ratio of K to Cl movement during volume regulation is significantly weakened. Our present interpretation of the results is that KCl exit during volume regulation by gallbladder epithelium is the consequence of the activation of both KCl cotransport and K conductance of the basolateral membrane of these cells. The relative magnitude of KCl loss by these two processes cannot be determined from our results.

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Fig. 5. The electrochemical gradient for Cl across the basolateral cell membrane $(\Delta \bar{\mu}_{Cl}/F)$ is plotted against the electrochemical gradient for K across that membrane $(\Delta \bar{\mu}_{K}/F)$. All activity measurements were made prior to the osmotic challenge. The electrochemical gradients were calculated from the membrane potential and activity measurements. Each average is shown with its standard error.