J. Membrane Biol. 186, 185 (2002) DOI: 10.1007/s00232-001-0158-2

Membrane Biology

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Errata

1) H. Chabot, M.F. Vives, A. Dagenais, Cz. Grygorczyk, Y. Berthiaume, R. Grygorczyk. *The Journal of Membrane Biol.* **169**:175–188 (1999).

A recent paper by Nagel et al., EMBO Reports, 2:249–254, 2001, suggested that the inhibition of ENaC by CFTR, which we (Chabot et al., 1999, J. Membrane Biol. 169:175-188) and others have reported, may be artifactual—the result of uncompensated series resistance. When recording large currents in *Xenopus* oocytes, a significant portion of the applied voltage would drop across the series resistance (the combined resistances of the reference electrode, agar bridge and the bath fluid), and not only across the oocyte's membrane. Prompted by Nagel et al., we have verified our experimental setup and found that, due to the design of our experimental chamber, the bath fluid resistance was \sim 4.5 k Ω . Thus, although using a low-resistance reference electrode and agar bridge (0.5–2 k Ω), we have been voltage-clamping oocytes via 5 to 7 k Ω of total series resistance. The data in our original Figures 3 and 5 are significantly affected by this technical problem. We have now performed additional experiments using a virtual-ground bath head-stage to fully compensate series resistance. Our present findings confirm those of Nagel et al., 2001, namely, that CFTR does not downregulate ENaC in Xenopus oocytes when the series resistance is fully compensated and, thus, the membrane potential correctly clamped. No inhibition of ENaC was observed with CFTR-mediated membrane conductance (G_{CFTR}) of up to ~125 µS, corresponding to a CFTR-mediated current of 5 μ A at -60 mV, and with $G_{\rm CFTR}/G_{\rm ENaC}$ conductance ratios of up to 8. However, the conclusions drawn from the data presented on the remaining figures in Chabot et al., 1999 (Figs. 1, 2, 4, 6), remain qualitatively valid, since the other experiments were either unaffected, or affected to a lesser degree, by the uncompensated series resistance.

2) D. Gradmann. *The Journal of Membrane Biology* **184:**61–69 (2001) (DOI: 10.1007/s00232-001-0074-5) Equation 7 should read:

$$I_{Sy}(V) = Vg_{Sy} \frac{(c_{H,c})^2 c_{Cl,c} - (c_{H,l})^2 c_{Cl,l} e^{-u}}{1 - e^{-u}}$$
(7)