Models for gramicidin channels

To the Editor:

In several recent papers, NMR results for gramicidin A have been compared with predictions based on various models for a right-handed channel. In particular, ^{2}H quadrupolar splittings (Hing et al., 1990*a*,*b*; Prosser et al., 1991) or ^{15}N chemical shifts (Chiu et al., 1991) from solid-state NMR spectra of labeled gramicidin A in oriented phospholipid multilayers have been compared to the values that would be predicted for a right-handed model derived from model-building considerations (Koeppe and Kimura, 1984) and to values predicted by a preliminary model based on 2-dimensional ^{1}H NMR data for gramicidin in SDS (Arseniev et al., 1985). These latter authors have, however, published an updated model that was derived from their NMR data for gramicidin in SDS (Arseniev et al., 1986). This updated model was based upon additional experimental results and corrected many of the inconsistencies in the original Arseniev model. It would therefore be appropriate to use the 1986 Arseniev model in preference to the 1985 model for comparisons with experimental data. Stereo pictures of the updated Arseniev model for the right-handed gramicidin A channel and its mirror image have recently been published (Koeppe et al., 1992).

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