Response to Letter to the Editor: Reversal by Ranolazine of Doxorubicin-Induced Prolongation in the Inactivation of Late Sodium Current in Rat Dorsal Root Ganglion Neurons

Dear Editor,

We were pleased to learn about the observations of Wu et al. [1] related to the effect of ranolazine on doxorubicin-induced changes in the late sodium current that occur in dorsal root ganglia. The results of their in vitro experiments using single unit recording techniques provide important evidence to support earlier observations that ranolazine’s modulation of the late sodium current plays an important role in membrane stabilization and that through this mechanism not only contributes to its cardioprotective effect [2–5] but to the alleviation of allodynia induced by doxorubicin. These observations correlate nicely with our in vivo observations of ranolazine’s attenuation of mechanical allodynia and slowed nerve conduction produced by intraneural injection of doxorubicin [6] and add additional support for the mechanisms that we postulated may contribute to our findings. Together, this collection of studies provides a strong example of how a multidimensional approach to the evaluation of a problem contributes to the validation of an idea and to the evolution of the understanding of biological processes.

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References


