

We thank the authors for providing various interesting insights in the Journal Club article. We would like to add the following comments in response to this article.

In the second page, third column, the authors write that the models of subunit assembly proposed in Farina et al. 2011 and Rossmann et al. 2011 are distinct. However, we think there is actually a striking underlying similarity that may lead to a general principle. In Rossmann et al. 2011, using rectification index as a measure of degree of heterodimerization, it was shown that a mutation in the NTD of GluA1 subunit (GluA1 (N54Y, T78A)) which destabilize homodimerization and at the same time enhance heterodimerization with the NTD of GluA2 subunit resulted in a decreased assembly of GluA1/GluA2 heterotetramers (see Figure 4 in Rossmann et al. 2011), indicating that homodimerization is a critical process. This suggests that non-NMDA-Rs may also undergo an assembly process similar to what was proposed in Farina et al. 2011, namely initial homodimerization and subsequent heterodimerization. The two studies also highlights the importance of polar residues in the L1 lobe of the NTD's of iGluRs, as the GluA1 (T78A) mutant in Rossmann et al. may be an analogous mutation as the GluN1 (T110A) mutant in Farina et al. 2011.