

On BC1 RNA and the fragile X mental retardation protein

To the editor: Iacoangeli *et al.* (1) set out to reexamine our model that FMRP and the noncoding RNA BC1 act together to bind to mRNAs (2). Basing conclusions entirely on an inability to find this specific interaction, the authors suggest that FMRP and BC1 operate independently. Repeated statements suggesting experimental procedures are “replicating” those in ref. 2 imply the authors tried to rigorously reproduce our experiments. This is patently untrue. Numerous important experimental differences easily explain the negative results: different FMRP protein sources, different antibodies, and different experimental procedures.

Strikingly, many experiments in Iacoangeli *et al.* (1) lack adequate controls. For example, immunoprecipitations followed by RT-PCR lack controls for precipitation efficiency and/or mock precipitations for background. Conversely, our model has been substantiated by several outside laboratories: Henning Urlaub’s laboratory reproduced the interaction between FMRP and BC1 by UV cross-linking (incorporated into ref. 3). Jean-Luc Darlix’s laboratory reported very strong binding between BC1 to FMRP (K_d , 25 nM; ref. 4). Finally, Jennifer Gordon’s laboratory demonstrated that MAP2, FMRP, dendritic mRNA, and BC1 coexist *in vivo* in the same complex (5), the starkest possible contradiction to the conclu-

sion drawn by Iacoangeli *et al.* Finally, in collaboration with electrophysiologists, we’ve shown that a genetic interaction exists between BC1 and Fmr1 (6). All of these papers are either miscited or ignored in Iacoangeli *et al.* My laboratory is open to any kind of scientifically based discussion. However, because of the numerous technical flaws and incorrect and/or missing citations, Iacoangeli *et al.* does not provide compelling evidence against our published model.

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