The answer lies in the fact that the molecule has two pos- itively charged nitrogen atoms (one tertiary, which is pro- tonated, and one quaternary).Such an interaction is extremely strong and would more than make up for the lack of the ester binding interaction.Originally, it was believed that the distance between the two centres (1.15 nm) might be equivalent to the distance between two separate cholin- ergic receptors and that the tubocurarine molecule could bridge the two binding sites, and act as a steric shield for both.It has now been proposed that one of the positively charged nitrogens on tubocurarine binds to the anionic binding region of an acetylcholine binding site, while the other binds to a nearby cysteine residue 0.9–1.2 nm away (Fig.Another possibility is that the tubocurarine molecule bridges two .(acetylcholine binding sites within the one protein complex.22.33 and section 22.11). 22.33