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**Cover picture:** Portion of a neuromuscular synapse in the sternomastoid muscle of a living 6-week-old mouse. A vital, nontoxic fluorescent mitochondrial dye, 4-Di-2-ASP, was used to visualize presynaptic motor nerve terminals (yellow, green) and rhodamine  $\alpha$ -bungarotoxin was used to visualize postsynaptic ACh receptors (red). The motor axon (right, bottom) bifurcates to give rise to the terminal branches of this junction. The muscle fiber (blue) is oriented vertically, and muscle fiber nuclei can be seen as dark ovals around and within the junction. The way in which junctions grow was studied by repeatedly visualizing over many weeks the same neuromuscular junctions. Postsynaptic receptor regions were observed to enlarge but otherwise remain unchanged. As the nerve terminal grew it remained aligned with the receptor areas. The maintained alignment between motor nerve terminals and postsynaptic receptor regions suggests that the growth of nerve terminals may be a consequence of their adhesion to expanding postsynaptic specializations (see pp. 894-908). Photograph contributed by the authors, R.J. Balice-Gordon and J.W. Lichtman.

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