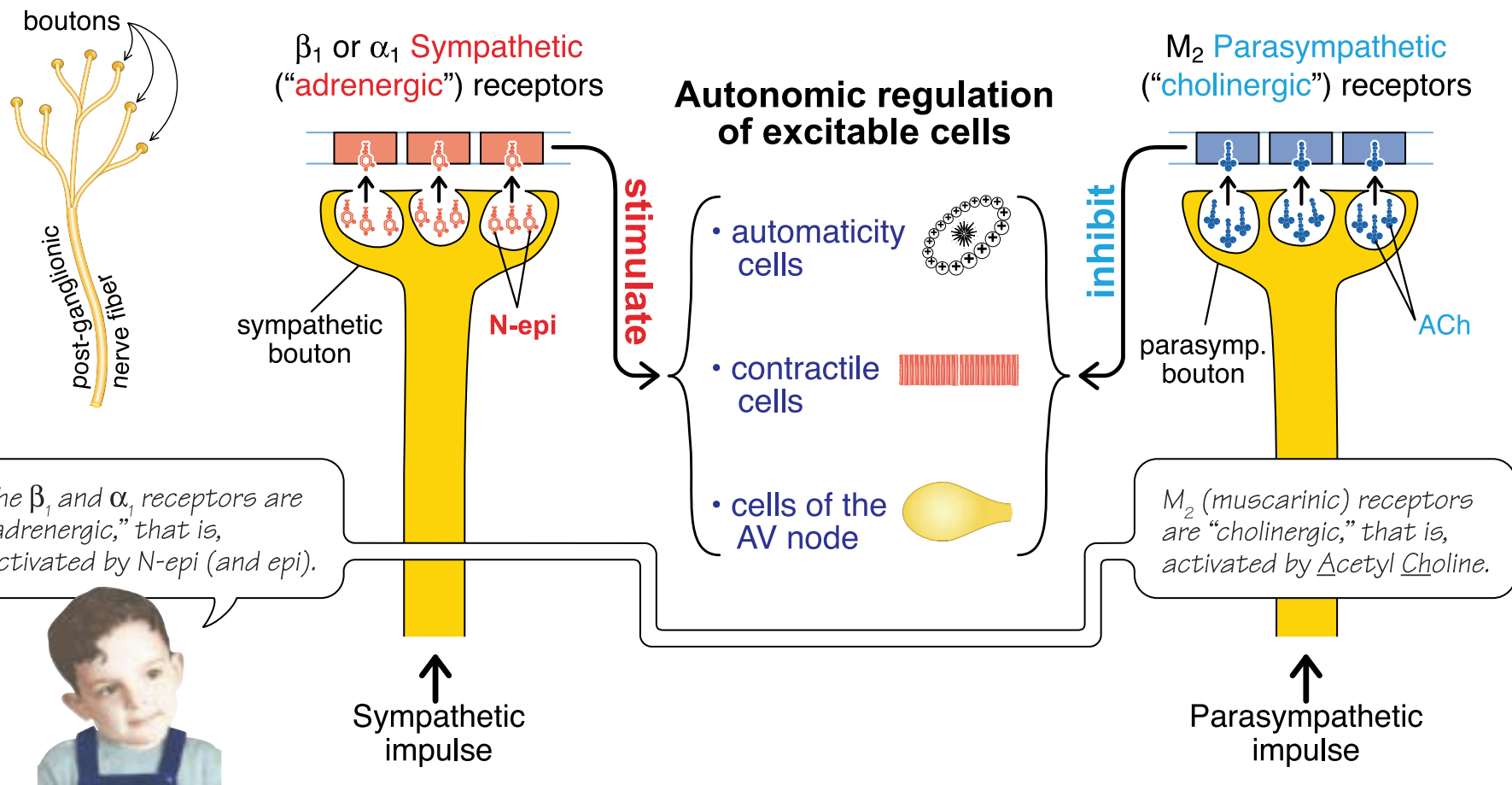


# Specific neurotransmitters activate cell membrane receptors of excitable cells



Excitable cells of the heart have special cell membrane *receptors*<sup>56</sup> that are activated by certain *neurotransmitters*. Careful!... cell membrane receptors are not the same as transducer sensor-receptors. Every postganglionic fiber terminates as many *boutons* (bouton is French for button) that synthesize, store, and when activated, release a neurotransmitter that is attracted and binds to its specific cell receptor like a key sucked into its recipient keyhole. The boutons of postganglionic sympathetic fibers contain *nor-epinephrine* (N-epi),<sup>16</sup> which, when released, binds to associated sympathetic receptors of excitable cardiac cells (automaticity cells, contractile cells, and cells of the AV node). Similarly, the activated boutons of parasympathetic fibers release *acetyl-choline* (ACh),<sup>16</sup> which binds to its associated cell membrane receptors of excitable cardiac cells (of the same three types). Cell membrane receptors are macro-molecules and are not illustrated to scale with the boutons (which can be seen with a microscope).