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Sommario/riassunto	<p>The term polarity in a biological context is used to describe an asymmetry in morphology and distribution of molecules. In neurons, their complex shape with typically one axon and several dendrites reflects this asymmetry. Although neurons assume many different shapes and sizes they always maintain these two domains, which are essential for neuronal function. In the most simple view, neurons use their axon to transmit signals over long distances due to its capacity to extend to enormous lengths. Dendrites, on the other hand, are shorter and receive and integrate signals from different locations. The selection of the site where the axon and dendrites initially emerge during embryonic development is a tightly regulated event, eventually important for the correct formation of neuronal circuits, and disturbances of these processes can have pathological consequences due to circuit malformation. An important question is which mechanisms neurons utilize to specify the sites where axonal and dendrite outgrowth occurs and how their identities are maintained during and after development. The formation of these functionally diverse domains is the result of polarized differences of membrane and protein delivery, mitochondria transport, actin dynamics and microtubule stability. However how and in which temporal order all those events which coordinate the selection and maintenance of axons and dendrites is still under investigation. This selection of articles shall highlight new findings, which help to unravel all molecular and cellular</p>

events important for neuronal polarity establishment and maintenance.
