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Sommario/riassunto	One fundamental requisite for a comprehensive view on brain function and cognition is the understanding of the neuronal network activity of the brain. Neurons are organized into complex networks, interconnected through synapses. The main sites for excitatory synapses in the brain are thin protrusions called dendritic spines that emerge from dendrites. Dendritic spines have a distinct morphology with a specific molecular organization. They are considered as subcellular compartments that constrain diffusion and influence signal processing by the neuron and, hence, spines are functional integrative units for which morphology and function are tightly coupled. The density of spines along the dendrite reflects the levels of connectivity within the neuronal network. Furthermore, the relevance of studying dendritic spines is emphasized by the observation that their morphology changes with synaptic plasticity and is altered in many psychiatric disorders. The present Research Topic deals with some of the most recent findings concerning dendritic spine structure and function, showing that, in order to understand how brain neuronal activity operates, these two factors should be regarded as being

intrinsically linked.