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Nota di contenuto	Editorial: Brain cholinergic mechanisms -- Illuminating the role of cholinergic signaling in circuits of attention and emotionally salient behaviors -- Paying attention to smell: cholinergic signaling in the olfactory bulb -- Hippocampal "cholinergic interneurons" visualized with the choline acetyltransferase promoter: anatomical distribution, intrinsic membrane properties, neurochemical characteristics, and capacity for cholinergic modulation -- Distribution and effects of the muscarinic receptor subtypes in the primary visual cortex -- Muscarinic cholinergic receptors modulate inhibitory synaptic rhythms in hippocampus and neocortex -- Acetylcholine release and inhibitory interneuron activity in hippocampal CA1 -- Striatal cholinergic interneuron regulation and circuit effects -- Cocaine inhibition of nicotinic acetylcholine receptors influences dopamine release -- Oxotremorine treatment reduces repetitive behaviors in BTBR T+ tf/J mice
Sommario/riassunto	The brain cholinergic system plays a role in a number of neurodegenerative and psychiatric illnesses. While the role of

acetylcholine (ACh), as a modulator of attention, memory, and learning has been recognized for many years, the mechanics of cholinergic signaling in the brain are yet to be completely understood. How endogenous and exogenous modulators of cholinergic signaling affect network output and synaptic plasticity is, as yet, unclear. Recent studies have begun to address roles for this system in synaptic plasticity and input-output functions of local circuits. Technological developments, like optogenetic models, are beginning to advance our understanding of this transmitter system in greater detail. The aim is to bring together, the current state of knowledge in the field, and provide insights into how our understanding of cholinergic signaling mechanisms informs behavioral and cognitive functions of the system. The issue will include original articles, reviews, and perspectives, that address nicotinic-, and muscarinic- receptor signaling at a cellular and systems level. This includes cellular electrophysiology, signal transduction, and circuit level analyses. In addition, studies that address, and advance, our understanding of endogenous transmission by acetylcholine will be included.
