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Sommario/riassunto	Besides the population of pyramidal neurons using glutamate as a neurotransmitter, GABAergic cortical interneurons form a second, quite heterogeneous group of neurons in the mammalian cerebral cortex. It is actually well appreciated that the interneurons play various important roles in cortical neuronal networks both in normal and pathological states. Based on connectivity pattern, developmental, morphological and electrophysiological properties, distinct subgroups of GABAergic interneurons can be differentiated in the neocortex as well as in the hippocampal formation. In this Research Topic, we concentrate on the inhibitory interneurons expressing calcium-binding protein calretinin (CR). In our opinion, there are many reasons why these cells deserve our special attention. CR expressing (CR+) interneurons differ from other interneuronal populations in their site of origin, in their significantly higher counts in cerebral cortex of primates in comparison to rodents, as well as in their connectivity pattern with high proportion of synapses formed with other interneuronal subtypes. Interestingly, they innervate dendritic inhibitory cells and therefore may play a role in the regulation of the dendritic inputs of pyramidal cells both in the neocortex and hippocampus. CR+ interneurons in the prefrontal cortex

were suggested to be instrumental for formation of species-specific neocortical circuits important for cognitive functions of primates. A “gating cell” function of CR+ interneurons – switching the flow of information between two pathways – was suggested in the visual and in the perirhinal cortex. A subpopulation of CR+ interneurons is very probably involved in regulation of blood flow dynamics and energy metabolism in the cortex. Diverse populations of cortical inhibitory interneurons are differently affected in various neurologic and psychiatric disorders. Interestingly, in comparison with other interneuronal types, CR+ interneurons seem to be less compromised in schizophrenia, major depression, Alzheimer disease and multiple sclerosis. The situation was found to be more complex in various epileptic conditions. In this Research Topic we wish to discuss and summarize what is known about calretinin expressing interneurons in mammalian cerebral cortex. Papers dealing with functions of CR+ interneurons in both normal and pathological states are especially welcomed. Differences between CR+ populations in rodent and in primate cortex should also be discussed. All article types (original research, reviews, methodological considerations, opinions) are welcomed. The aim of the research topic is to consolidate the knowledge about this, in our eyes, special interneuronal population and to inspire further research on the function of these neurons, which – functionally – seem to stand at the top of the pyramid of cortical interneuronal types.