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THE PYRAMIDAL NEURON OF THE CEREBRAL CORTEX: MORPHOLOGICAL AND CHEMICAL CHARACTERISTICS OF THE SYNAPTIC INPUTS

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1. INTRODUCTION

1.1. INTRODUCTORY REMARKS

Information in the cerebral cortex flows through synapses in a finely organized network, formed between the extrinsic cortical afferent fibers on the one hand, and the cell bodies, dendrites and axons of a variety of morphological types of cortical neurons, on the other. Processed information leaves the cortex through the axons of the so-called pyramidal cells to reach other cortical areas or subcortical nuclei. Current understanding of the synaptic organization of the cerebral cortex and of how this information flow occurs depends to a large extent on knowledge of the synaptic inputs to the pyramidal cells. Although many morphological, chemical and functional characteristics are common to the pyramidal cells of the three major divisions of the cerebral cortex (palaeocortex, archicortex and neocortex), in this review we shall deal only with the pyramidal neurons of the neocortex. The term "cerebral cortex" will thus be used as a synonym of "neocortex".