



BioMed Research International

Special Issue on
Building a Cerebral Cortex

CALL FOR PAPERS

The cerebral cortex is one of the largest and the most complex structures of the brain of mammals, reaching its maximum development in humans and other primates. The extraordinary growth in the size of the cerebral cortex observed in primates is thought to underlie the concomitant growth in intellectual capacity. The most developed area of the cortex, the neocortex, comprises a network of pyramidal neurons and interneurons supported by glial cells and blood vessels. The neocortex is organized in a very particular pattern in columns, layers, and areas. In the radial dimension of the neocortex, pyramidal neurons are arranged in columns, which work modularly as functional microunits, with neurons in a given column stereotypically interconnected. The neocortex is also organized in layers, in which each layer contains neurons that possess morphological and functional characteristics different from the rest and in areas with unique anatomical and functional characteristics that allow us to process both sensory and motor information.

In this special issue, we intend to combine the latest advances in the study of the development of the cerebral cortex, which is a fundamental event of embryonic development. Small variations during this process can lead to dramatic effects in brain organization and the behavior of the individual.

Potential topics include, but are not limited to:

- ▶ Neurogenesis and gliogenesis (proliferation, cell lineage, and cell fate)
- ▶ Neuron migration
- ▶ Neuronal differentiation
- ▶ Brain patterning
- ▶ Brain wiring (axon guidance and synaptogenesis)

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/bmri/anatomy/bcc/>.

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