Editorial

Magnetic resonance imaging (MRI), ultrasound and angiography are all important imaging techniques that medical science has begun to employ extensively in the human in the last few decades. Their uses in studies of the developing nervous system, however, still have some limitations despite the continually improving design of the technology. In this volume, we present reviews as well as new findings on the usage of these techniques in the fetal and neonatal human and in animal models. Papers in this volume review aspects of normal development [Xu et al.; Yang et al.; Ying et al.] as well as abnormal changes [Tao and Yew; Ying et al.]. The basics of MRI are elucidated in a short review by Shi et al., including examples of functional MRI (fMRI) studies in animals. The review by Wilke and Holland presents the issues and opportunities of MRI. Another review by Antonio et al. outlines various types of MRI techniques and demonstrates that MRI can be used to decipher the complexities of neuronal pathways, thus solving the greatest difficulties for anatomists in the past: serial sections and reconstruction. Two papers review nervous system malformations [Salman; Tao and Yew], which will likely be further explored extensively by imaging in the days to come. Functional MRI on both human and animal nervous systems is reviewed by other papers in this volume, with particular focus on the developmental stages.

It is hoped that this volume will prove useful to further the interest of scientists and physicians actively engaged in the field, and arouse the curiosity of those embarking on the research and clinical applications which are now made possible by MRI, ultrasound and angiography.

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