Many years ago, a role for calcium was postulated as a final messenger in vascular smooth muscle and in certain neurons [1-3]. More recently, the importance of different types of calcium channels within the neurons to control various aspects of their activity has been highlighted [4]. An exaggerated rise of intracellular calcium ions in cerebral vascular smooth muscle cells or neuronal cells of the brain may lead to brain damage and its pathological consequences [5, 6].

The concept that calcium antagonists may exert a significant action on these brain-threatening processes opens a new and exciting avenue for their clinical application in neurology as supported by recent clinical reports [7]. This supplement contains the proceedings of a round table discussing the Basis for the Application of Calcium Antagonists in Neurology, organized during the 4th International Symposium on Calcium Antagonists: Pharmacology and Clinical Research, Florence (Italy), May 25-27, 1989. This session provided a forum in which the leading experts in the field (pharmacologists and clinicians) debated various characteristics of calcium antagonists and their relevance in the treatment of neurological diseases. They discussed the multiple roles of calcium in the brain under both normal and pathological conditions, the action of calcium and calcium antagonists (e.g. flunarizine) in neurological pathologies related to brain ischemia and neurological diseases (e.g. migraine, vertigo, acute stroke and subarachnoid hemorrhage).

We hope that these proceedings will stimulate the initiation of further experimental and clinical studies which may be of benefit to those suffering from these neurological diseases in general, and to the aging population in particular.

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J.M. Van Nueten

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