
Preface

Polyamines are ubiquitous cellular components that perform multiple functions and are essential for normal growth and development. Polyamine biosynthesis and the regulation of polyamine levels, which are closely linked to cell growth, have been the subject of many studies over the past 40 years. A volume of this series (Vol. 79, *Polyamine Protocols*) was published in 1998 and described some methods for assays of biosynthetic and catabolic enzymes, measurement of polyamine levels, and transport measurements. In the last decade, there have been important new findings in the polyamine field and a variety of new experimental systems have become available. These include studies with animal models and human patients, which indicate that polyamines play a critical role in normal development and in the development of neoplasia. Therapeutic roles for polyamine inhibitors and analogs have been established and more are under investigation. Polyamine metabolism is now recognized as a significant source of oxidative damage. Polyamines are now established as regulators of critical ion channels. Polyamine transport systems have been characterized much more fully. The polyamine family has been expanded to include compounds present in plants, thermophilic microorganisms, and protozoal parasites that play essential roles in their physiology. Methods for identifying polyamine-responsive genes are now available. The proposed volume will cover methodologies for studies in these areas.

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