
Authors' Contribution Information

Preface

Polyamines are known to play an essential role in living organisms, where they act as metabolic regulators, in cell proliferation and differentiation, and as stabilizing agents of nucleic acid structure and conformation. Polyamines are also known to protect DNA from damage caused by external agents, such as reactive oxygen species or radiation. The essential role of polyamines for maintaining cell growth has been widely documented. Polyamines can stabilize double- and triplex-stranded DNAs. Furthermore, polyamines and their derivatives can be used as condensing agents to package genes of interest for efficient transfection into living cells.

Special attention in this review is paid to three aspects concerning polyamines and nucleic acid fragments: 1) the synthesis of covalent polyamine-oligonucleotide conjugates, 2) the preparation of DNA arrays using polyamines, and 3) the use of polyamines as vehicles to deliver nucleic acids into cells.