Peptide Nucleic Acids

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Methods and Protocols

Edited by

Peter E. Nielsen

*Center for Biomolecular Recognition
The Panum Institute, University of Copenhagen
Copenhagen, Denmark*

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Preface

Peptide nucleic acids (PNAs) have now existed for slightly more than ten years, with the interest in and applications of this pseudopeptide DNA mimic steadily increasing during the entire period. PNAs have rapidly attracted the attention of scientists from a diversity of fields ranging from (bio)organic and biophysical chemistry to prebiotic evolution, and from molecular biology to genetic diagnostics and drug development. Many of the applications take advantage of the unique properties of PNA—an uncharged pseudopeptide—that distinguish this DNA mimic from more traditional DNA analogs. Rather than trying to create a comprehensive collection of all published methods and protocols involving PNA—many of which have not yet been validated—I have decided to concentrate on select protocols that are either very well established by several groups around the world, such as PCR-clamping and *in situ* hybridization, or on new methods that may have broader future impact. Basic methods for PNA oligomer synthesis and analyses have also been included.

I am very grateful to those friends and colleagues who have enthusiastically contributed their work, discussions, and writing, and thereby made this book possible.

Peter E. Nielsen

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