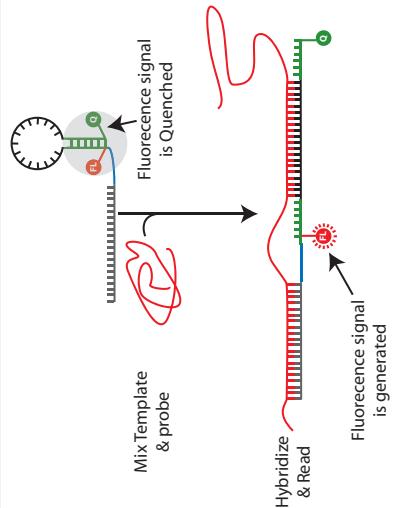




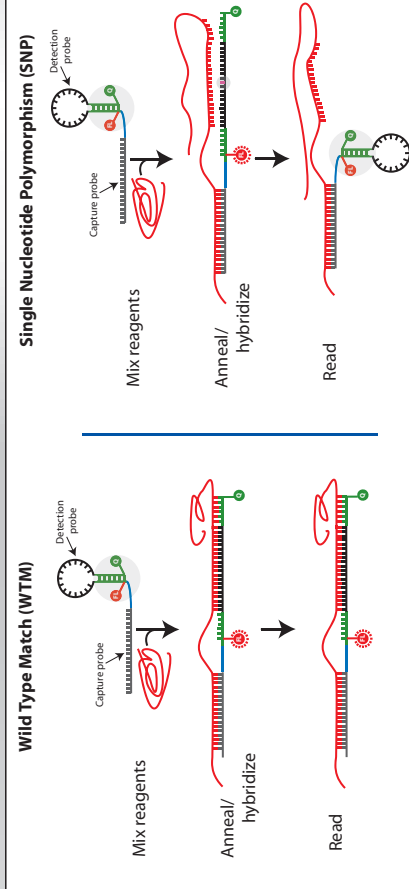
# Tentacle probes: High Affinity Reagents for Rapid Discrimination of Single Nucleotide Polymorphisms

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## Tentacle Probe Design and function



## Differentiation between wild-type & Single Nucleotide Polymorphism

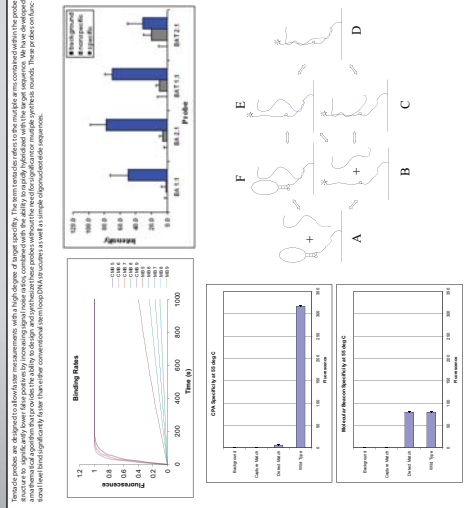


### Materials & Methods

**Optimization of probes:** The probes were designed to be 15-20 nucleotides long, with a GC content of 40-60%. The probes were tested for their ability to discriminate between wild-type and SNP targets. The probes were tested for their ability to discriminate between wild-type and SNP targets. The probes were tested for their ability to discriminate between wild-type and SNP targets.

**Single Nucleotide Polymorphism (SNP):** The SNP was introduced into the target DNA sequence. The probes were tested for their ability to discriminate between wild-type and SNP targets. The probes were tested for their ability to discriminate between wild-type and SNP targets.

## Theory of Cooperativity - tentacles



### Abstract

The majority of efforts to increase specificity or sensitivity in biosensors result in tradeoffs with little to no gain in overall accuracy. This is because the majority of efforts to increase specificity or sensitivity are based on the use of reagents which manipulate thermodynamic principles through use of fluorophores in a stem loop structure, but are modified by the addition of a fluorophore to the stem loop structure. This modification results in a stem loop structure that is more rigid and therefore has a higher melting curve and an increase in the separation between specific and non-specific binding. This modification results in a stem loop structure that is more rigid and therefore has a higher melting curve and an increase in the separation between specific and non-specific binding.

### Introduction

Molecular beacons (MBs) are one class of fluorescently labeled oligonucleotides used for the detection of single nucleotide polymorphisms (SNPs). MBs are one class of fluorescently labeled oligonucleotides used for the detection of single nucleotide polymorphisms (SNPs). MBs are one class of fluorescently labeled oligonucleotides used for the detection of single nucleotide polymorphisms (SNPs).

### Summary

Highly sensitive and specific detection of single nucleotide polymorphisms (SNPs) is a critical requirement for many applications in molecular biology and medicine. This paper describes the development of a new class of reagents, tentacle probes, which are designed to provide high specificity and sensitivity for SNP detection. The tentacle probes are designed to provide high specificity and sensitivity for SNP detection.

### Acknowledgements

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## PCR application and performance of Tentacle probes

