



Department of Biomedical Engineering

Faculty of Engineering

Mahidol University

Wisdom of the Land



EGBE 693 Research Seminar for Biomedical Engineering II **EGBE 691 Biomedical Engineering Seminar II**

Date: April 22, 2014

Time: 10AM-11AM

Department of Biomedical Engineering

Mahidol University (Room 6373)



Dr. Thanit Praneenararat

Department of Chemistry, Faculty of Science,
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“PyrrolidinyI Peptide Nucleic Acids Immobilized on Cellulose Paper as a DNA Sensor ”

Peptide nucleic acids (PNA) are nucleic acid analogs that can form hybrids with DNA by Watson-Crick base pairing with high fidelity and affinity, thus rendering them attractive for applications like DNA sensors. Our laboratory has been extensively investigating a class of peptide nucleic acids called pyrrolidinyI peptide nucleic acid, which shows certain desirable properties for use as DNA sensors including the higher stability, sequence specificity and lower dependence of the DNA-PNA stability on the sequence than the commercially available PNA. Therefore, pyrrolidinyI PNA is expected to have potential in DNA sensor applications, and some of our studies have underscored this possibility. In this seminar, our progress in pyrrolidinyI PNA immobilization, and the preliminary evaluation of different DNA detection methods will be discussed.