

# GSTP

## Seminar Series

University of Wisconsin–Madison  
Genomic Sciences Training Program

*Fostering new paradigms for the  
biological sciences*

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**Thursday, March 31<sup>st</sup>, 2005**

5:00 p.m.

Room 1408, Genetics/Biotechnology Center, 425 Henry Mall

## ***Single Nucleotide Polymorphism Detection using the Surface Invasive Cleavage Reaction***

### **Abstract:**

Single nucleotide polymorphisms (SNPs) are the most common form of DNA mutation. They are indicated in a variety of genetic disorders, from cystic fibrosis to diabetes. Studying SNPs is not an easy task - an average person's genome contains approximately 3 million. Common methods of SNP analysis use large-scale parallel arrays and genomic DNA which is first pre-amplified with the polymerase chain reaction (PCR). PCR amplification is time consuming and may lead to the amplification of contaminants which may contribute to false positive signals. Hence, it is preferable to use unamplified genomic DNA for SNP analysis. One method to do this is to use the invasive cleavage reaction. The invasive cleavage reaction uses an indirect enzymatic amplification to detect SNPs without pre-amplifying genomic DNA. The invasive cleavage reaction can be used in solution or on a surface based platform for parallel detection of multiple SNPs from unamplified genomic DNA.

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