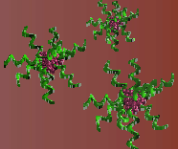


Smart Polymer Nanoparticles for Diagnostics



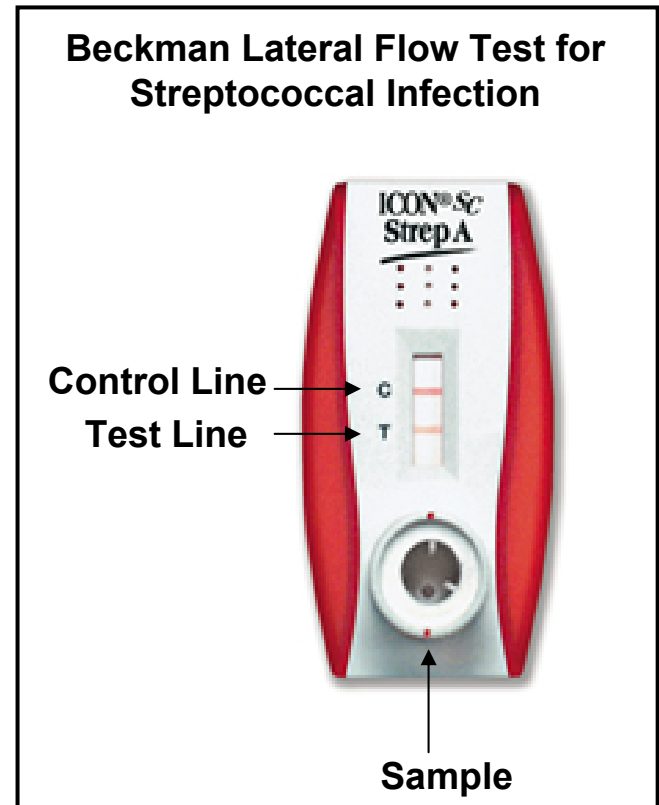
Samarth Kulkarni

Dual Degree, UIF 2003-2004

Bioengineering

March 07, 2006

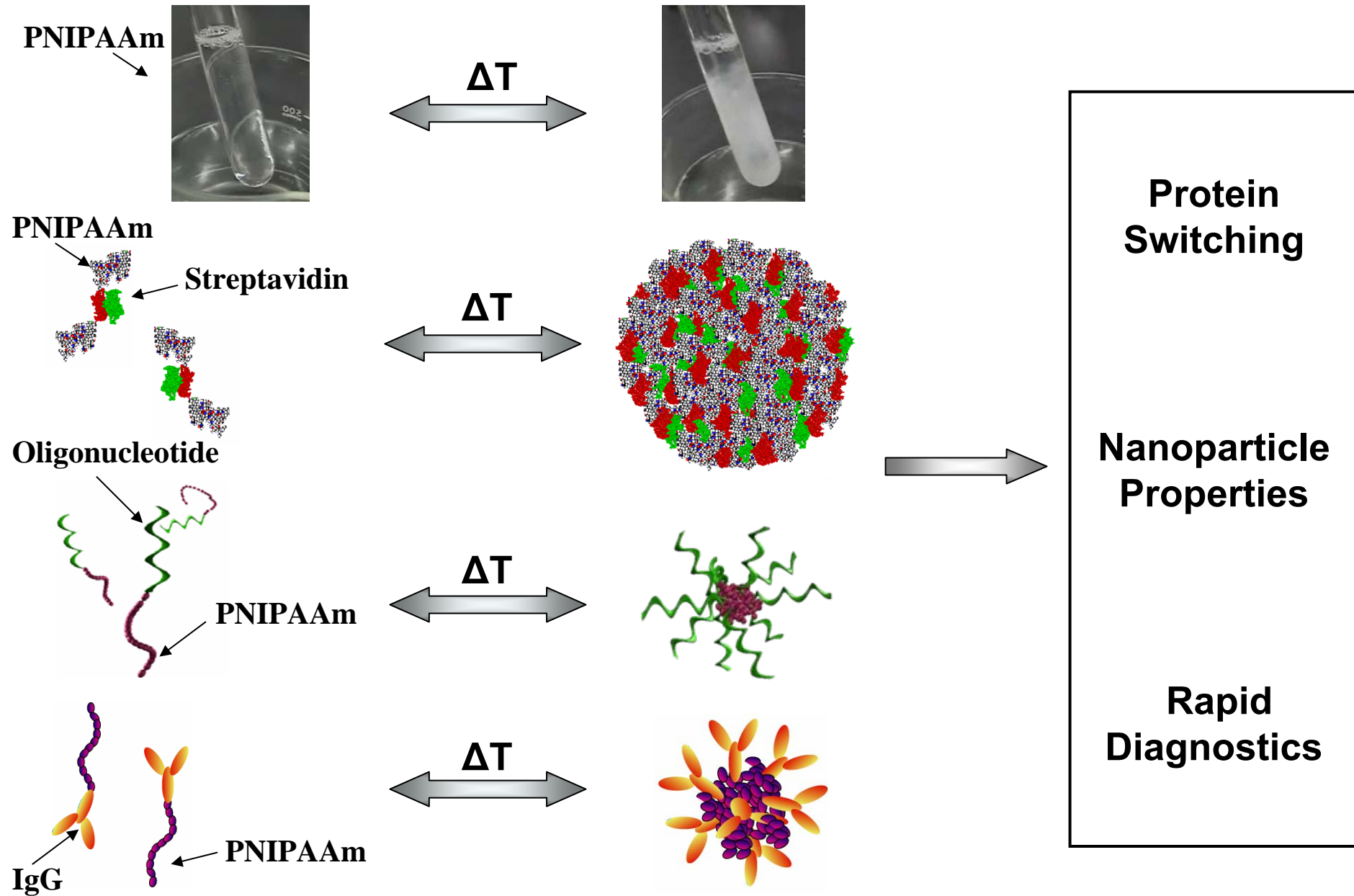
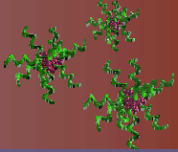
- Goal: Capture & detect rare proteins and DNA from non-invasive samples such as saliva or urine to increase accuracy of diagnostic tests
- Approach: Utilize “smart polymer” nanoparticles to enhance capture



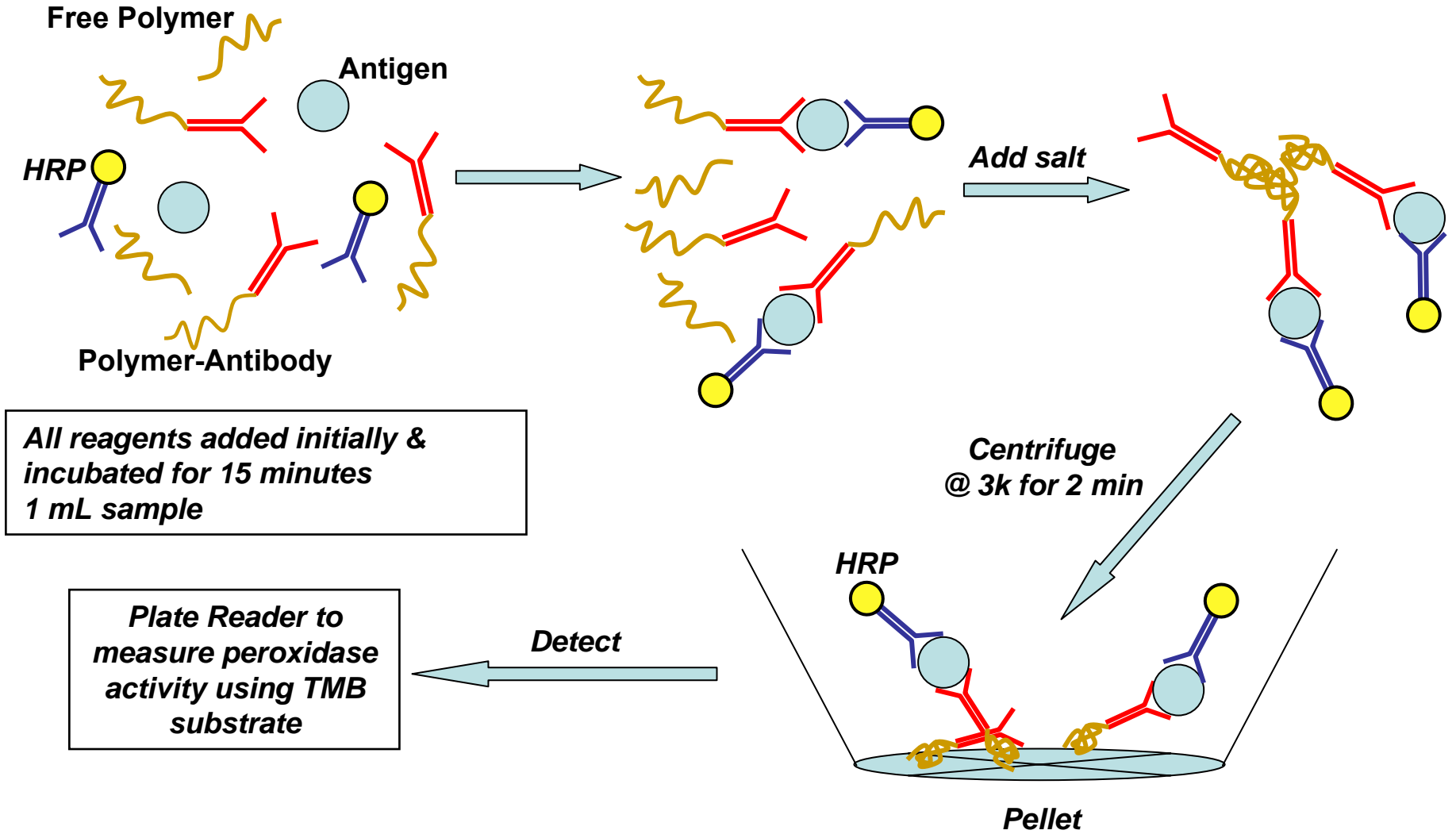
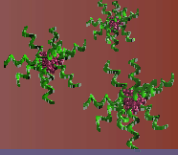
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“Smart” Nanoparticles at high temperatures



Capture and Detection



- Demonstrated antigen capture with increased accuracy for a pilot pregnancy test, and for Chlamydia