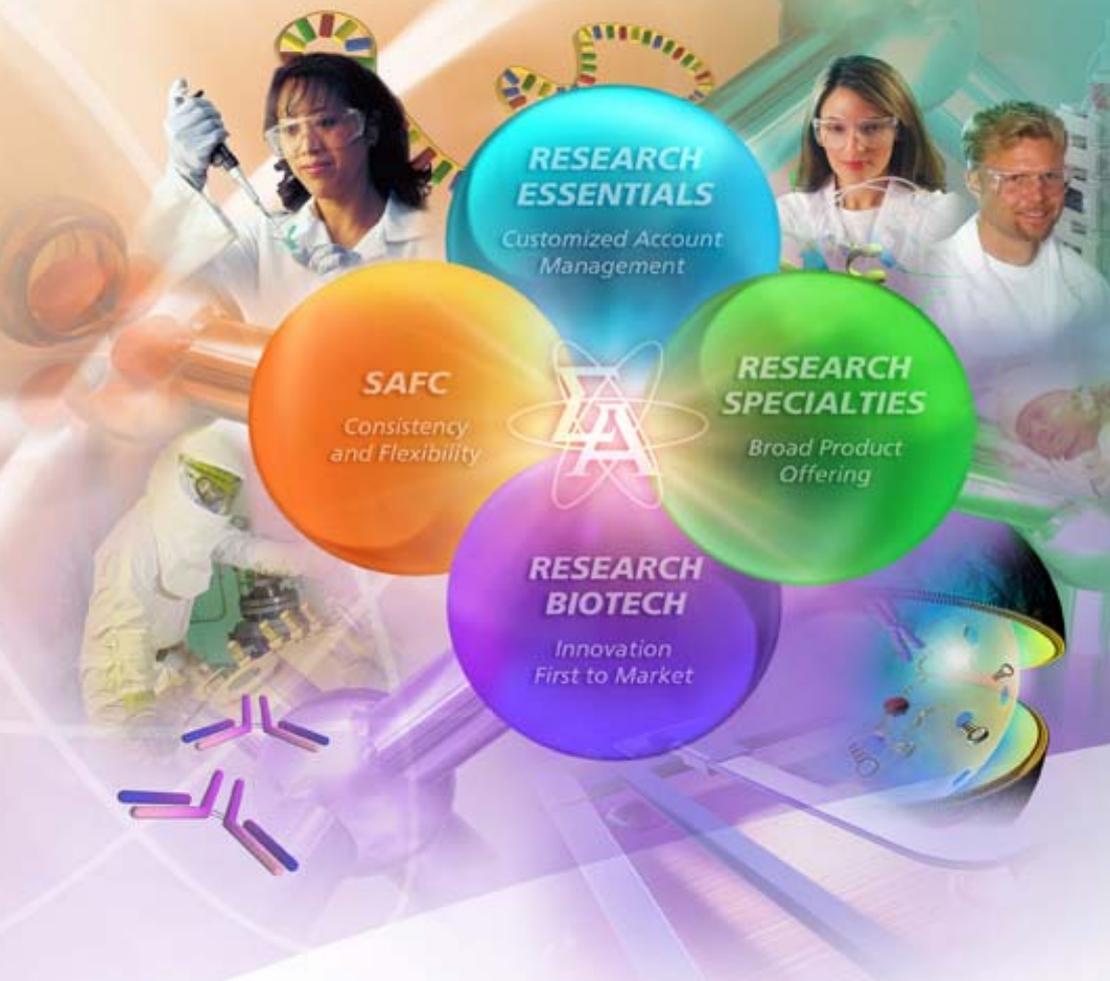


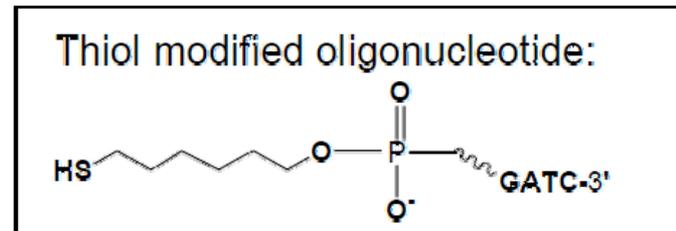
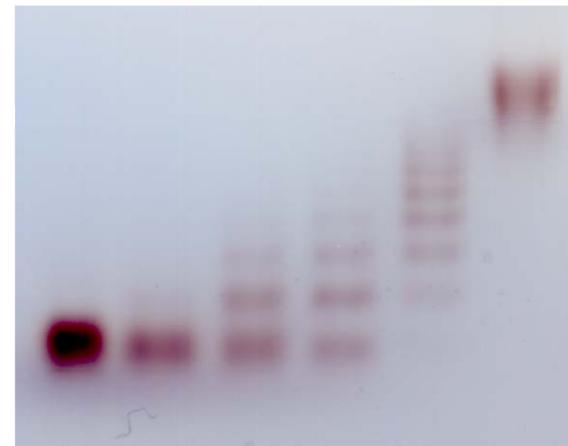
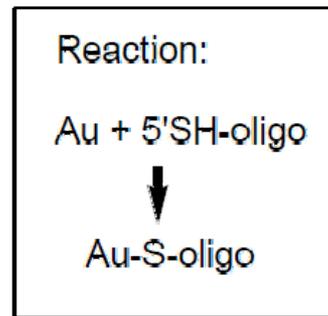
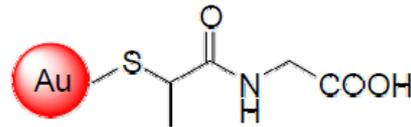
Discovery[®] BIO GFC: Separation of ssDNA Attached Au Nanoparticles



Ligand Replacement Reaction to Synthesize ssDNA Attached Au Nanoparticles

- Gel electrophoresis (4% agarose gel) of gold nanoparticles reacted with increasing amount of ssDNA molecules

Control Ligand Number



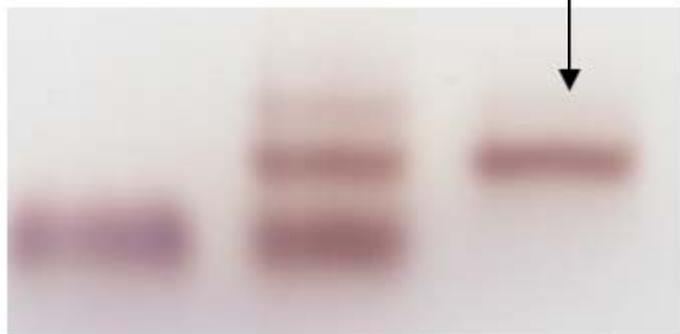
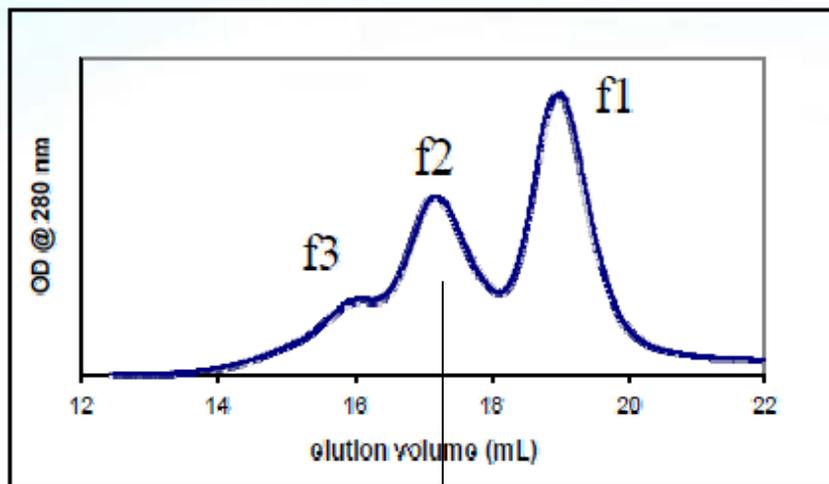
[Oligo]

Separation of ssDNA Attached Au Nanoparticles

- Conditions for chromatogram on next slide:
- Size exclusion separation and subsequent gel electrophoresis of gold nanoparticles labeled with different number of ssDNA molecules.
- Column: Discovery BIO GFC 150 column (30 cm x 7.8 mm I.D., 5 μ m particles, Supelco Part No. 567300-U)
- Mobile phase: 0.05 NaCl/0.15 M NaHPO₄ (pH 7)
- Flow rate: 0.5 mL/min.
- Peaks 1, 2 and 3 correspond to nanoparticles labeled with 0, 1 and 2 ssDNA.
- The gel image compares Au-Tp (lane1), Au-Tp/ssDNA reaction mix (lane 2), and the column fraction corresponding to peak 2 (lane 3).

SEC separation and subsequent gel electrophoresis of gold nanoparticles labeled with different number of ssDNA molecules.

- Separation on Discovery BIO GFC 150 (conditions previous slide)



Free Au-Tp

Au-Tp + ssDNA

Purified Au-(DNA)₁

