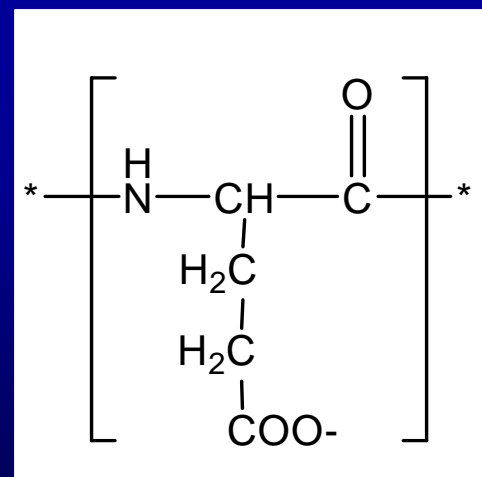
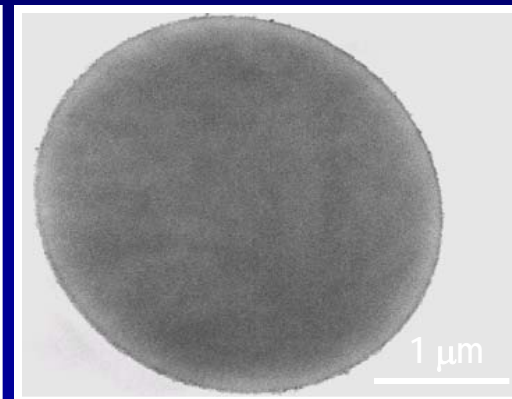
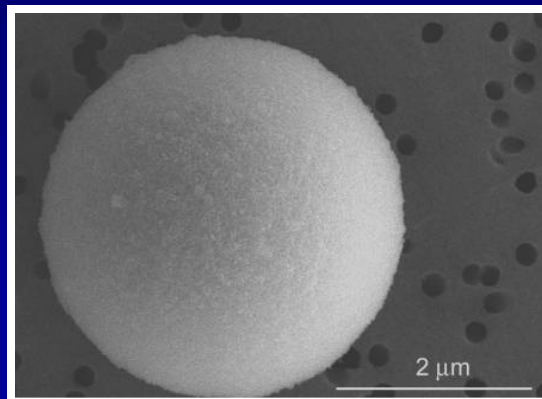


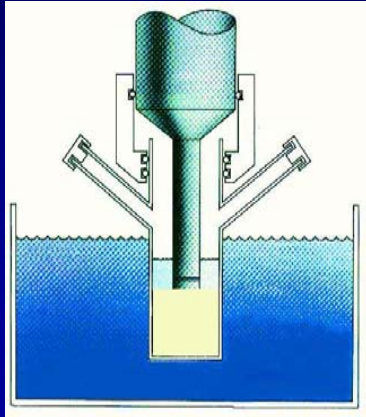
# Core-Shell Polyglutamate Microspheres for Use in Drug Delivery

Elizabeth M. Dibbern  
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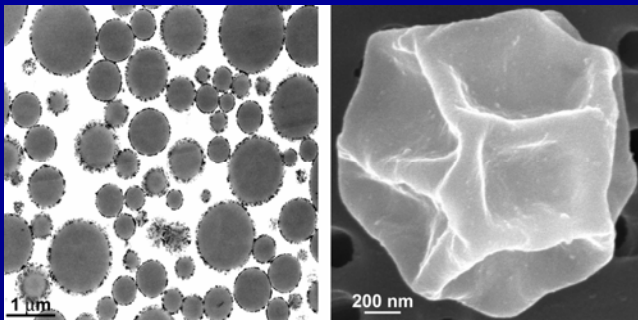
June 22, 2006



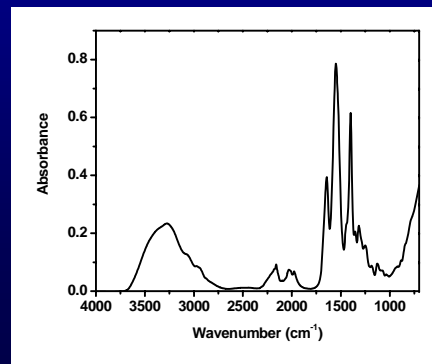
# This presentation focuses on the formation and characterization of polyglutamate microspheres



Formation of spheres using sonication



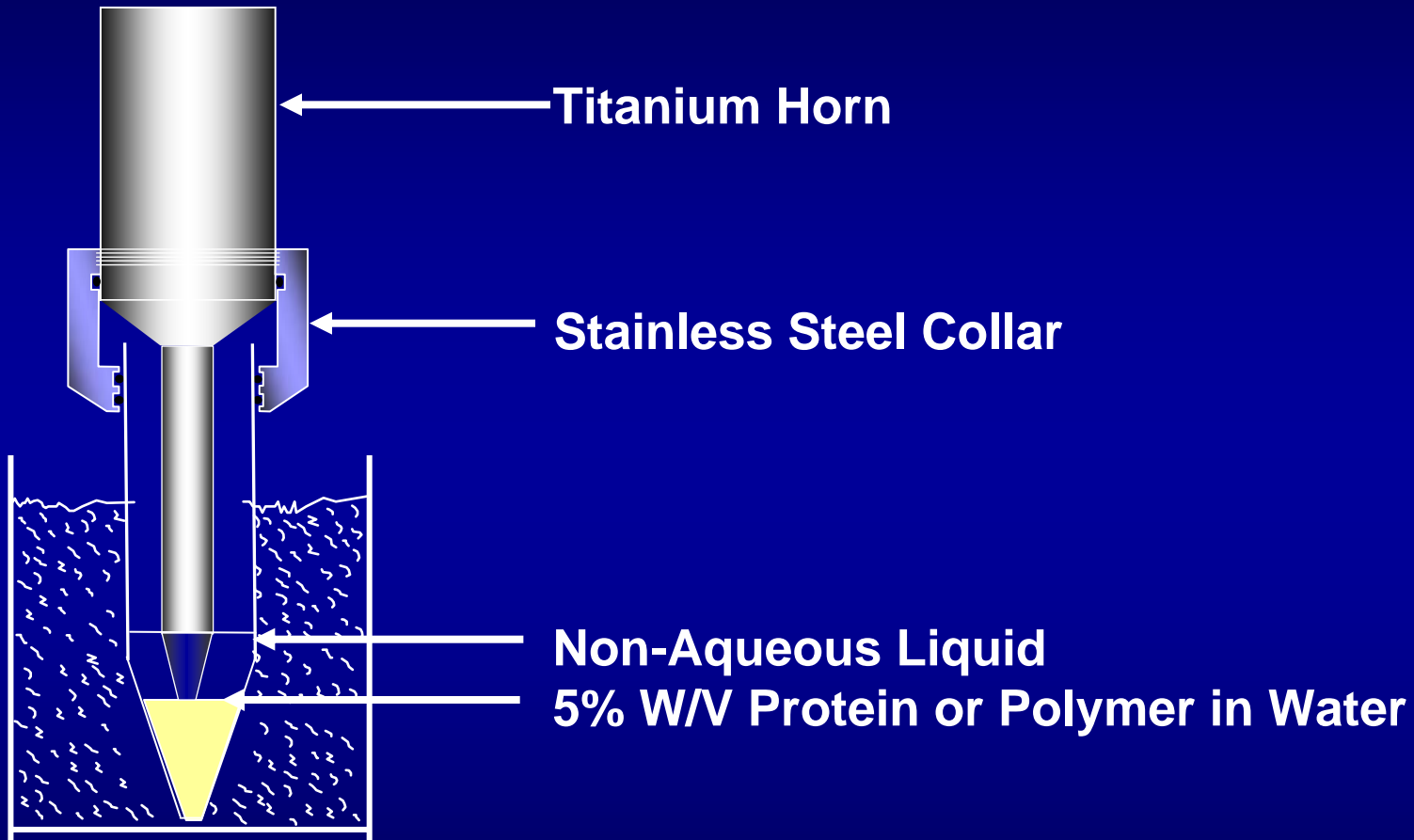
Evaluation of physical properties



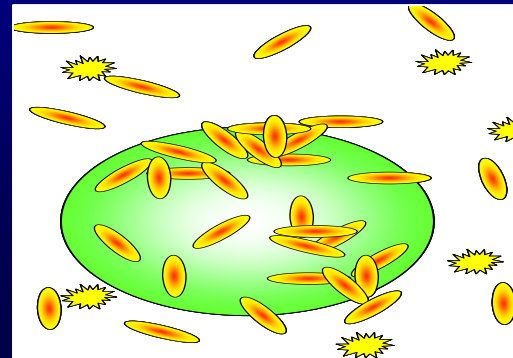
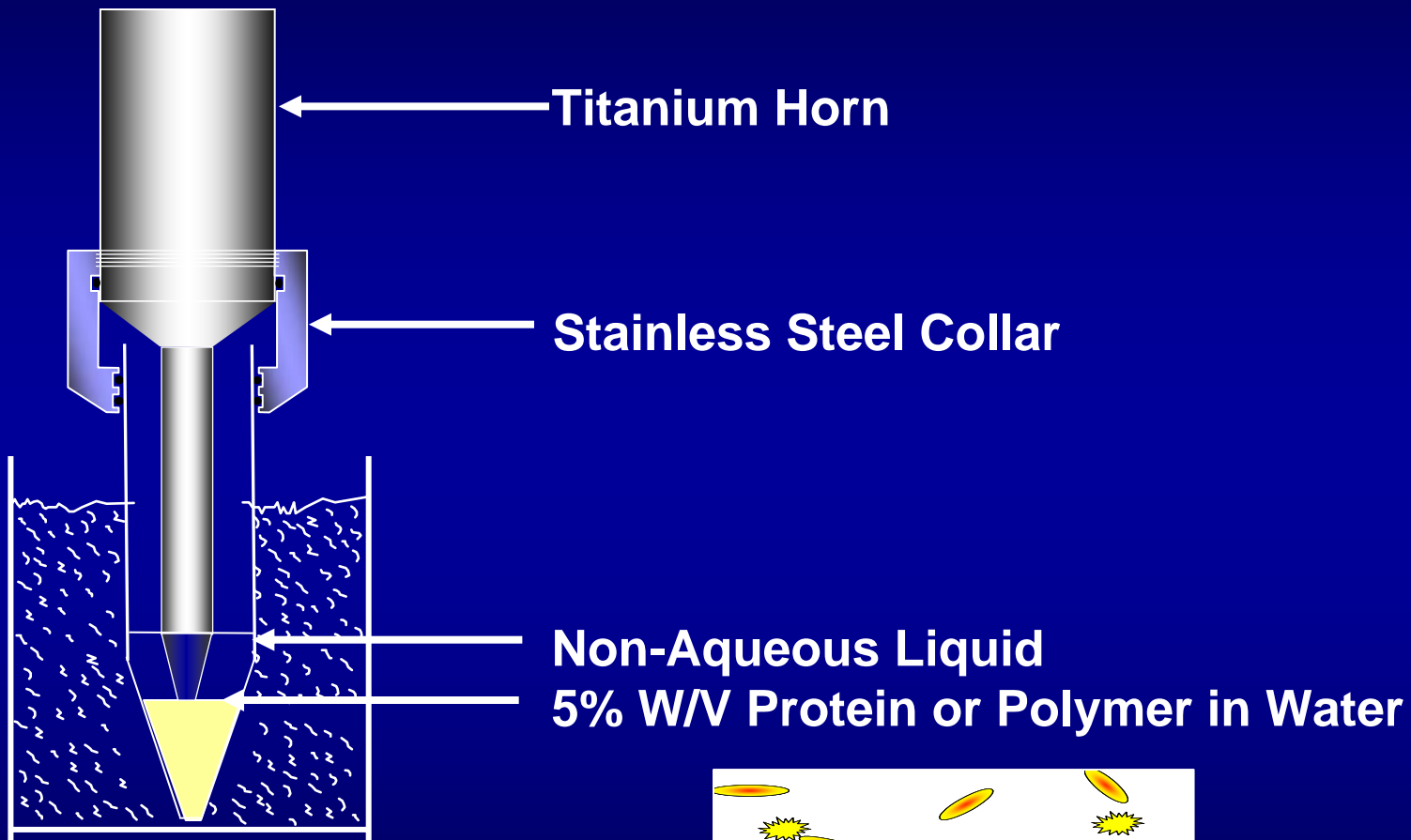
Evaluation of chemical properties



# Spheres are formed by creating an emulsion via sonication



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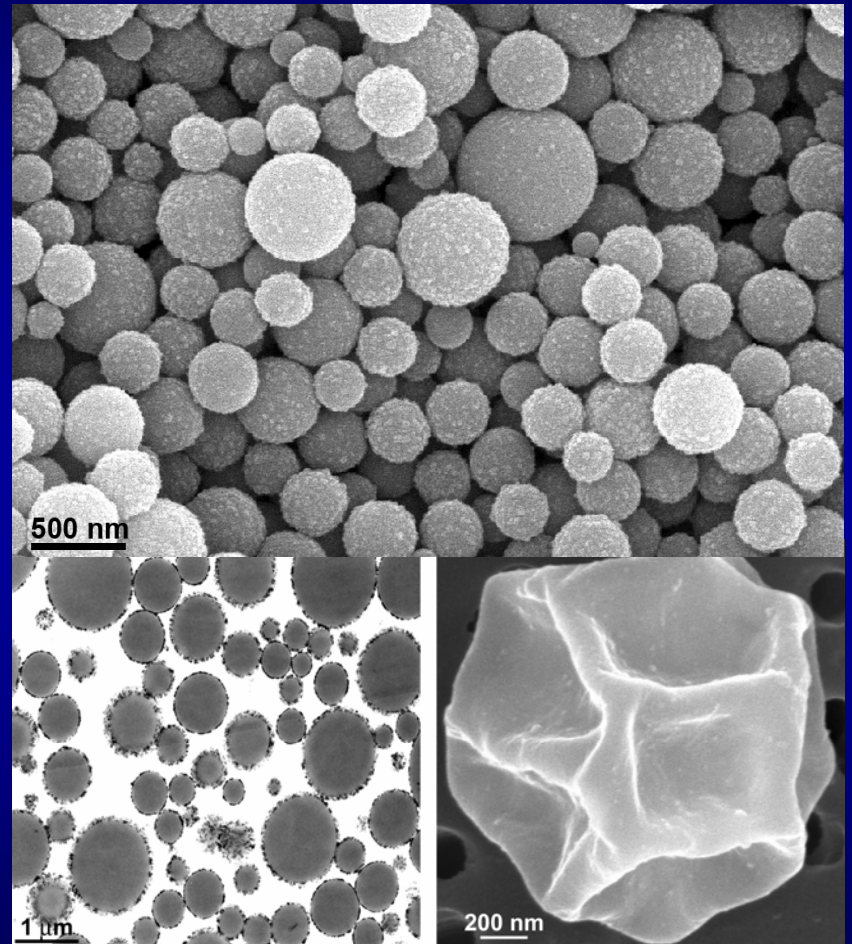


# Polyglutamate microspheres are core-shell and stable under conditions found in the body

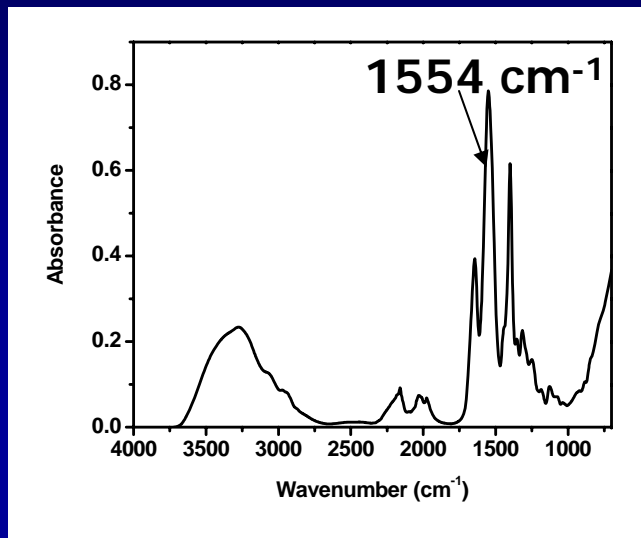
Spheres average 500 nm in diameter

TEM and SEM show core-shell properties

Spheres stable under pH and salt conditions *in vivo*

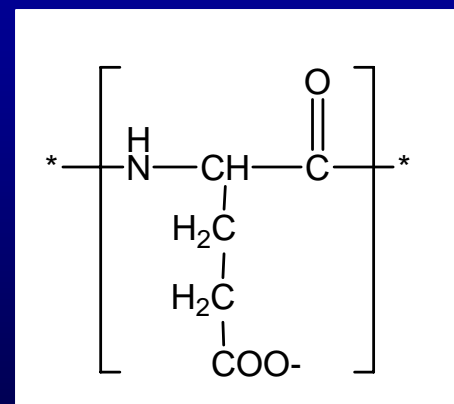
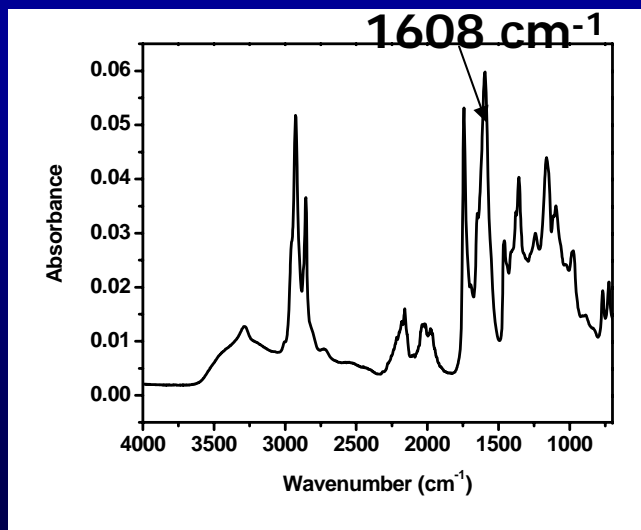


# Spheres are held together via noncovalent hydrogen bonding and ionic pair bridges



No dimers seen in mass spectrometry measurements

Infrared spectra indicate change in carboxylate environment

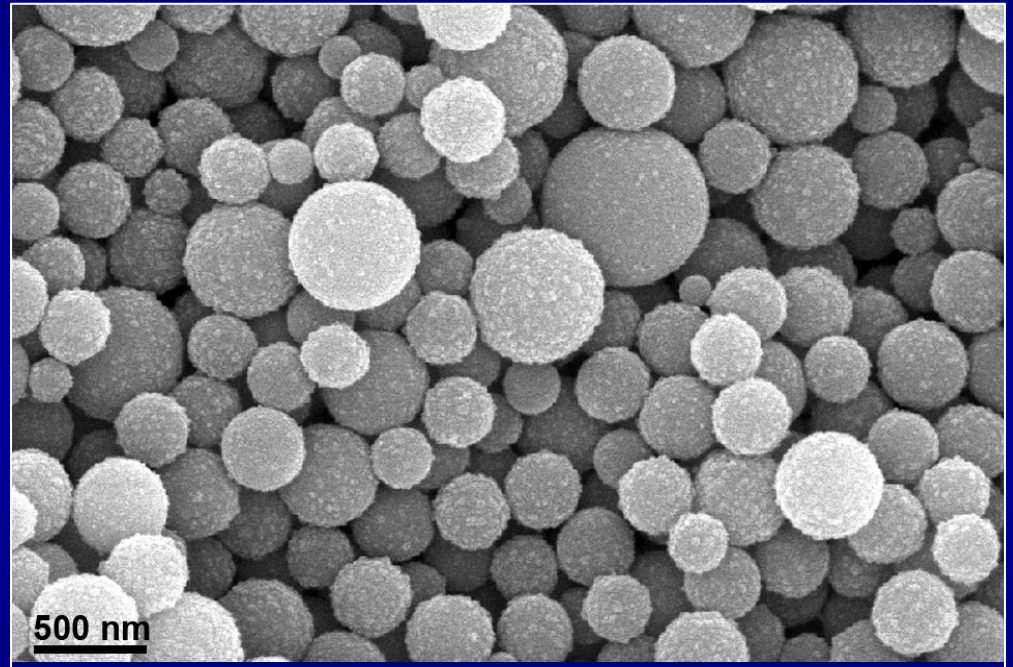


**In summary, these polyglutamate microspheres are ideal candidates for drug delivery applications**

**Smaller in size than previous spheres**

**Core-shell for easy encapsulation**

**Stable under conditions found in the body**



**Questions?**

