



## TECHNOLOGY AVAILABLE FOR LICENSING

### Biocompatible Articles and Method for Making Same

US Patent #5,885,609

### Drug Delivery Using pH-Sensitive Semi-Interpenetrating Network Hydrogels

US Patent #5,904,927

Inventors: Mansoor Amiji

#### Details About the Invention:

A modified polymer, such as chitosan, makes an excellent material for semi-permeable membranes and for targeted drug delivery systems. Modification to form a charged polymer decreases plasma protein adsorption and platelet adhesion to decrease clotting. Charged semi-permeable polymers have many uses such as post-surgical adhesion prevention barriers, hemo-dialysis membranes, wound dressings, skin substitutes, blood oxygenation films, and filters/barriers for noxious microorganisms. The modified polymers can form unique nano-spheres or micro-spheres (hydrogels) and are useful for targeted delivery of entrapped biological agents such as antibiotics, therapeutic peptides, anticoagulants, anticancer drugs, gene products and pesticides or herbicides.

#### Benefits of the Invention:

Modified positively charged polymers, such as chitosan, provide novel materials for:

#### Advantages:

Biodegradable      Biocompatible  
Semi-permeable      Targetable

#### Uses:

Films                      Filters                      Drug delivery  
Coatings                Microspheres      Wound dressings

#### The Bottom Line:

Modified positively charged polymers, such as chitosan, provide a unique hydrogel system for, among others, an innovative semi-permeable membrane for adhesion prevention barrier, hemo-dialysis, skin substitute, wound dressing material, blood oxygenation etc. and/or targeted drug delivery of biological agents.

#### For More Information:

#### Please contact:

**Susan Riley Keyes, Ph.D., J.D.**  
Division of Technology Transfer  
Northeastern University  
360 Huntington Ave, 960 RP  
Boston, MA 02115-5000  
**Phone:** 617-373-8810  
**Fax:** 617-373-8866  
**Email:** s.keyes@neu.edu

or

**Mansoor M. Amiji, R.Ph., Ph.D.**  
Department of Pharmaceutical Sciences  
Northeastern University  
360 Huntington Avenue, 110 MU  
Boston, MA 02115-5000  
**Phone:** 617-373-3137  
**Fax:** 617-373-8886  
**Email:** m.amiji@neu.edu