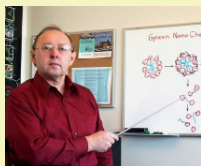




Polymer Network



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UNeMed currently offers a variety of licensing options and collaborative development opportunities with the University of Nebraska Medical Center

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Nanogel Networks Containing Biological Agents for Site-Specific Release

Technology Fields: Therapeutics

Technology ID: 65

Patent Status: Issued [\[6,696,089 B2\]](#)

Summary

The invention of new drugs is costly and time consuming, and once a drug has been matched with its molecular target there are still multiple issues involving drug delivery that must be assessed. To decrease the time needed for designing specific delivery mechanisms for each new drug, drug carriers can be used. Researchers at the University of Nebraska have developed a novel nanogel polymer network of cross-linked polymer fragments. The Polymer networks can support both low molecular mass and polymer biological agents including small molecules, oligo- and polysaccharides, polypeptides, proteins, as well as polynucleotides such as RNA or DNA. The technology creates a cross-linked polymer network that allows the biological agent to remain soluble, bioavailable, resistant to metabolic enzymes, and non-toxic. The polymer networks are also site specific, including the ability to cross the blood brain barrier, providing an ideal delivery system.

Market Value

The use of nanogels could be widely used with many drugs where better, more specific delivery systems are needed. The nanogels have the potential to greatly reduce the time needed to fully develop a new drugs.

Features and Benefits

- Improved Therapeutic Index
- Increased Stability and Solubility; Increased Bioavailability
- Wide Range of Deliverable Biological Agents
- Permeable to Membranes and Biological Barriers

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