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## BIODEGRADABLE POLYPHOSPHATES FOR CONTROLLED RELEASE OF BIOACTIVE SUBSTANCES

### Abstract:

- 5 The present invention is directed to a biodegradable system for the controlled release of bioactive substances. This system comprises novel biodegradable and biocompatible polyphosphoesters that carry positive charges. Process for making these polyphosphoesters, compositions containing these polyphosphoesters and biologically active substances, articles and methods for delivery of drugs and genes using this system
- 10 are described. A controlled gene delivery system based on these polyphosphoesters is prepared by complex coacervation of nucleic acid (DNA or RNA) with polymers. The release rates can be manipulated by adjusting the charge ratios of polyphosphoesters to nucleic acids. This gene delivery system yields a higher gene expression in muscle when injected intramuscularly.

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Figure 1 is to be published

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