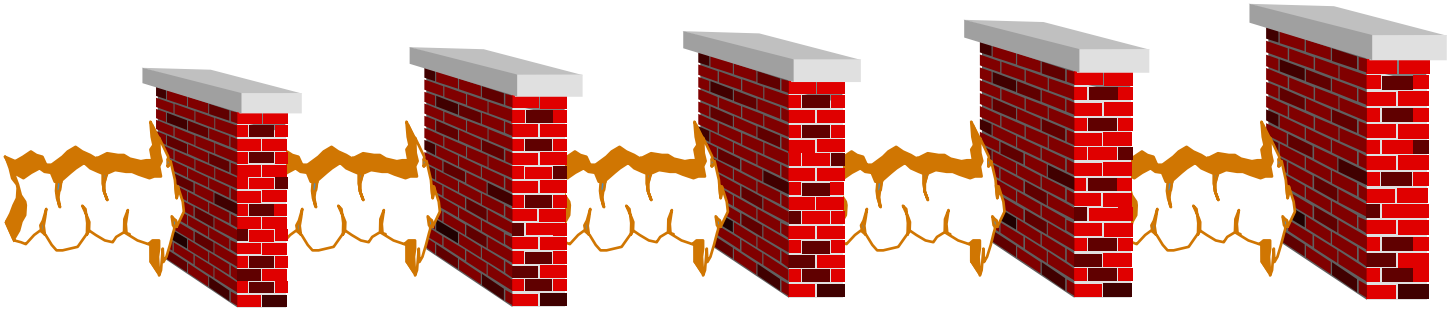
Dominant Patent Estate in Early and Advanced Polymer Conjugate Technology and Therapeutics

Technology IP	Chemistry & Delivery IP	Manufacturing IP	Therapeutic Modalities and Molecules
Membrane exclusion	Linker Chemistry	Manufacturing	Small Molecules
Increasing potency through *e.g.*, PEGylation	Branched/ Multi-arm architecture	Process development	Proteins/Peptides/ Antibody Fragments
Metabolism and bioavailability control	Attachment chemistries	Scale-up	Nucleic Acids
Pro-drug/releasable conjugation	Synthetic approaches	Commercially validated manufacturing	
Next Generation PEG and other polymer conjugates		Reagents	
Reducing immunogenicity		Conjugates	

Dominant Patent Estate in Early and Advanced Polymer Conjugate Technology and Therapeutics

Small Molecules	Proteins/Peptides/ Antibody Fragments	Nucleic Acids
Dominant IP position in polymer conjugation of small molecules	Dominant IP position for polymer conjugation of large molecules	Polymer conjugate-based delivery of nucleic acids
Hundreds of small molecules covered includes: • Oncolytics • Pain management and analgesics • Anti-depressants • Protease inhibitors • Anti-histamines • Anti-hypertensives	Hundreds of proteins, peptides, and other large molecules covered: • Cerezyme • Biphalin • Lysostaphin • GLP-1 • GLP-2 • GM-CSF	Coverage includes: • siRNAs • dsRNA • microRNAs • shRNAs

Nektar IP Covers Every Aspect of Polymer Conjugate-Based Drug Discovery and Development



Polymer Structures

Conjugate Composition of Matter

Formulation

Synthesis Methods of Manufacturing

Therapeutic Modalities and Targets

60 Issued U.S. patents and 500 applications pending