The pulmonary system is now recognized as an excellent route of drug delivery for drugs with local or systemic action. This is evidenced by the recent FDA approval of Exubera™, the first non-injectable form of insulin. Our research is aimed at the translation of materials science and pharmaceutical engineering to target therapeutic molecules to a biological site of action with a particular emphasis on drug delivery to the lung.

In recent studies, we have developed novel particle technologies that elude efficient lung clearance mechanisms and allow enhanced and controlled drug delivery.