CARNEGIE MELLON UNIVERSITY
BME 2021 FALL SEMINAR SERIES

Ionic Liquids for Therapeutic Applications

PRESENTED BY

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SCHEDULE

Friday,
October 1, 2021
(10:15AM-11:15AM)

Ionic liquids, the liquid salts comprising organic anions and cations, offer exciting opportunities for several therapeutic applications. Their tunable properties offer control over their design and function. Starting with biocompatible ions, we synthesized a library of ionic liquids and explored them for various drug delivery applications. Ionic liquids provided unique advantages including overcoming the biological transport barriers of skin, buccal mucosa and the intestinal epithelium. At the same time, they also stabilized proteins and nucleic acids and enabled the delivery of biologics across these barriers. Ionic liquids also provided unique biological functions including adjuvancy towards vaccines and antimicrobial function. I will present an overview of the design features of ionic liquids and novel biomedical applications enabled by these unique materials.

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