

Séminaire de l'axe Formulation et analyse du médicament

Stimuli-responsive disassembly platform for enhanced/controlled drug delivery



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à l'invitation du professeur Davide Brambilla

Lien: <https://umontreal.zoom.us/j/83577627455?pwd=ODBLRWJRMXdOMW9tTGx4UkFIY2paZz09>
Meeting ID: 835 7762 7455 Passcode: 007919

The development of smart nanoassemblies self-assembled from well-controlled block copolymers undergoing chemical transition through stimuli-responsive degradation (SRD) has been extensively explored as an effective platform for tumor-targeting intracellular drug delivery. Recently, we have focused on an effective SRD strategy that centers on the design of new intracellular nanocarriers exhibiting dual stimuli responses at dual locations (micellar cores and core/corona interfaces). with focuses on cellular endosomal/lysosomal pH = 4.5-5.5 and tripeptide glutathione, our strategy called dual location dual acid/glutathione-responsive degradation offers the versatility in that dual responses to each stimulus can independently regulate the release of encapsulated molecules, and can facilitate synergistic/accelerated release at dual locations.

Biography. Dr. John Oh is currently appointed as a full professor in the Department of Chemistry and Biochemistry at Concordia University and has tenured as Tier II Canada Research Chair (2011-2021). He earned his PhD degree from the University of Toronto in the area of polymer chemistry and materials science. He then completed his NSERC-funded postdoctoral research at Carnegie Mellon University. He also experienced industrial R&D at Korea Chemical Company in Korea and Dow Chemical Company in Michigan over 10 years before Concordia. He has authored and coauthored >130 peer-reviewed publications and invited book chapters and holds 16 international patents. His research interests involve the design and processing of macromolecular nanoscale materials for drug delivery and cellular imaging as well as self-healable materials.