

## 第195回 IBBセミナー

文部科学省機能強化経費「生体医歯工学共同研究拠点」

### Nanogels for Vaccine and Protein Delivery

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場所：22号館1階 第2会議室

#### Abstract

Many biomolecules, such as proteins and genes, are presently used as therapeutics. However, their delivery to target sites inside cells is challenging because of their large molecular size, difficulties to pass cellular membranes and their susceptibility for enzymatic and chemical degradation. Nanogels, three-dimensional networks of hydrophilic polymers, are attractive carrier systems for these biotherapeutics because they protect the biologicals against degradation and, importantly, facilitate cell internalization. Furthermore, the development of responsive nanogel delivery systems has resulted in particles that release their payloads due to a certain physiological trigger inside cells, such as in the cytosol or endocytic compartments. This paper reviews and discusses the use of nanogels, with special emphasis on biologically responsive systems, for intracellular delivery of biotherapeutics

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