

133rd IBB Seminar

Antibacterial and Anticancer Properties of Self-Assembled Peptides

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15:00~16:00

会場 : 東京医科歯科大学 生体材料工学研究所
第 1 会議室 (3 階)

Abstract:

Hydrogel materials are finding use for the encapsulation and delivery of small molecules, proteins and cells. We have designed a class of peptide-based hydrogels that enable the direct three-dimensional encapsulation of therapeutic. Loaded gels exhibit shear-thinning/self-healing properties enabling their delivery via syringe. In addition to their use for delivery, we have found that some of these gels display antibacterial activity. Although the gels are cytocompatible towards mammalian cells, they can kill a broad spectrum of bacteria. Based on our understanding of the mechanism of action and the fact that bacteria and cancer cells share similar traits with respect to their cellular membranes, we have gone on to design non-assembling peptides that show anticancer activity.

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