第23回 応用化学セミナー

日時： 7 月 15 日（木）16：00 ～ 17：00

場所： B5 棟 2 階 2C65 室

講演： “Star polymers for localized cancer therapy”

講師： Dr. Marcus Laird Forrest

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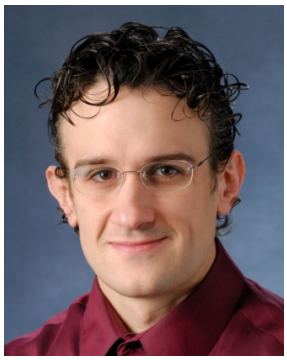

概要：

The lymph system plays a crucial role in early cancer growth and metastasis, and for many patients with localized cancers (Stage I-II), residual treatment-resistant metastases in the lymph system provide the seed for later recurrence. Lymphatic delivery of chemotherapeutics could greatly improve survival, but lymphatic delivery presents unique challenges compared to intravascular drug delivery, including small injection volumes, high sensitivity to vesicants, and size/charge dependent clearance. We have developed novel star-polymers based on RAFT and AIBN polymerization of sugars and carbonates with very high water solubility and low toxicity for drug delivery to the lymph system. These polymers have low polydispersity (ca. 1.1-1.2) over a wide molecular weight range of 20 -150 kDa, which is optimum for lymphatic uptake. The polymers are highly functionalized for conjugation with chemotherapeutic drugs, such as cisplatin, and for modification of the particle surface charge to optimize uptake. In rodent models, these nanomaterials are retained in the lymph nodes and tumors after injection into the local lymph basin. These star-polymer nanoparticles are the first materials specifically designed for localized chemotherapy in regionally advanced cancers.

☆ 参加自由です（ただし、座席数には限りがあります）。ご興味のある方は、教員でも学生でもご参加ください。

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