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NEWS AND EVENTS

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Self-assembling Nano-fiber Gel Delivers High Concentrations of Clinically Approved Drugs

Research teams led by Jeff Karp from the HST Center for Biomedical Engineering at the Brigham and Women's Hospital and George John at the City College of New York (City University of New York, CUNY) have developed a new self-assembling hydrogel drug delivery system that is biocompatible, efficient at drug release, and easy to tailor.

Importantly, these structures can deliver clinically approved drugs in high concentrations without requiring carriers for the drug or generating toxic components, a problem with hydrogel systems until now.

This strategy could serve as the platform technology for developing drug-based delivery gels that can release drugs such as anti-inflammatory agents on demand in response to inflammation, for example.

Converting known, clinically-practicing drugs into amphiphilic molecules which can undergo self-assembly may eliminate the need for an external carrier for delivering drugs.

The findings, which are available on [Science Direct](#), will be published in the Nov. 25 issue of *Biomaterials*. The authors are Praveen Kumar Vemula, Gregory A. Cruikshank, Jeffrey M. Karp, and George John.

More Coverage

[Innovations Report, Germany, October 23, 2008](#)

[United Press International, October 23, 2008](#)

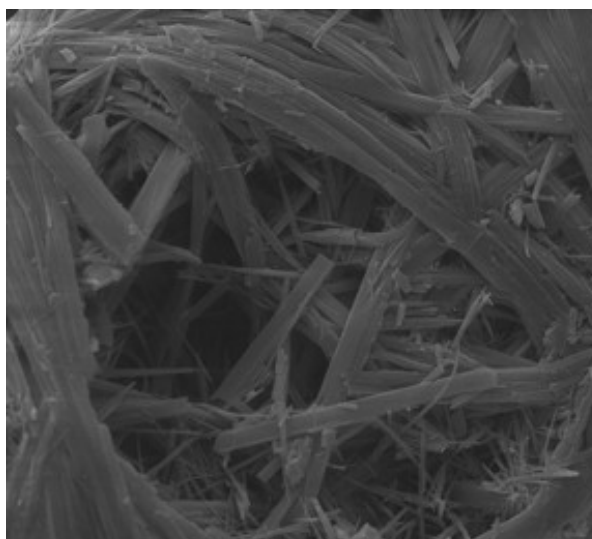


Figure: Scanning electron micrograph of the nano-fibrous drug-based hydrogel.

Fast Fact:

HST faculty member and pioneering biomedical engineer Robert Langer has been awarded the National Medal of Science.