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THE DISTILLERY

This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug delivery			
Inhalable micelles expressing a lung-targeting peptide for delivery of therapies to treat pulmonary arterial hypertension (PAH)	*In vitro* and mouse studies suggest lung-targeted peptide-micelle conjugates could help deliver therapies to treat lung diseases such as PAH. In rat pulmonary arterial smooth muscle cells, micelles conjugated with a cell-penetrating, lung-targeting cyclic peptide and loaded with the experimental PAH therapeutic Eril fasudil showed greater cellular uptake than nontargeted micelles. In a rat model of PAH, inhalation of fasudil-loaded peptide-micelle conjugates caused slower and more sustained drug accumulation in the lungs compared with free fasudil. In the PAH model, the fasudil-loaded peptide-micelle conjugates decreased mean pulmonary arterial pressure with higher lung specificity than nontargeted micelles. Next steps could include evaluating the peptide-micelle conjugates for pulmonary delivery of other therapeutics. Asahi Kasei Pharma Corp. and Eisai Co. Ltd. market the rho kinase inhibitor Eril fasudil to treat aneurysms. The drug is in Phase II testing to treat hypertension.	Patent and licensing status unavailable	Gupta, N. *et al. J. Pharm. Sci.*; published online Sept. 29, 2014; doi:10.1002/jps.24193 **Contact:** Fakhrul Ahsan, Texas Tech University Health Sciences Center, Amarillo, Texas e-mail: fakhrul.ahsan@ttuhsc.edu

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