Faster, scalable method for producing AAV-based gene transfer vectors

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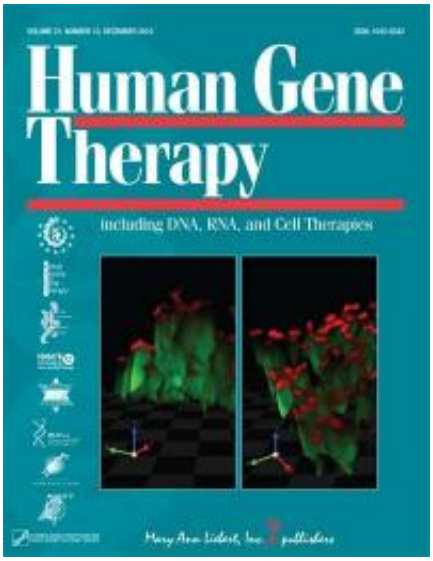

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A new, simplified method for producing large amounts of viral vector cassettes capable of shuttling genes into host cells will help advance the promising field of gene therapy as applications move into large animal studies and human clinical trials. The novel adeno-associated virus (AAV) production method is described in an article published Instant Online ahead of publication in *Human Gene Therapy*, a peer-reviewed journal published by Mary Ann Liebert, Inc.

This new method for creating stable AAV2 producer cell lines overcomes the major drawbacks of the previous method: it requires only a one-step cloning process (instead of multiple cloning steps), and a single (instead of two-stage) transfection and selection step to produce cell lines containing the circular, AAV vector-containing plasmid DNA needed to transport a gene of interest into host cells.

Zhenhua Yuan, Chunping Qiao, Peiqi Hu, Juan Li, and Xiao Xiao, researchers at the Eshelman School of Pharmacy, University of North Carolina at Chapel Hill, state that in addition to being faster and easier, their simplified method offers other important advantages, including the potential to produce high yields of multiple AAV serotypes upon co-infection with a helper adenovirus, as well as efficient packaging of single- or double-stranded AAV vectors and of large AAV cassettes. The authors describe their method in the article entitled, "A Versatile AAV Producer Cell Line Method for Scalable Vector Production of Different Serotypes."

"AAV gene therapy is showing promise in the clinic. Important challenges exist for it to become a commercial product such as scalable manufacturing processes. The study by Yuan et al. is an important step toward the development of a method of production that is capable of supporting a commercial product," says James M. Wilson, MD, PhD, Editor-in-Chief, and Director of the Gene Therapy Program, Department of Pathology and Laboratory Medicine, University of Pennsylvania School of Medicine, Philadelphia.

More information: The article is available free online at www.liebertpub.com/hum

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