

Next-Generation Transfection Reagent for Large Scale AAV Manufacturing

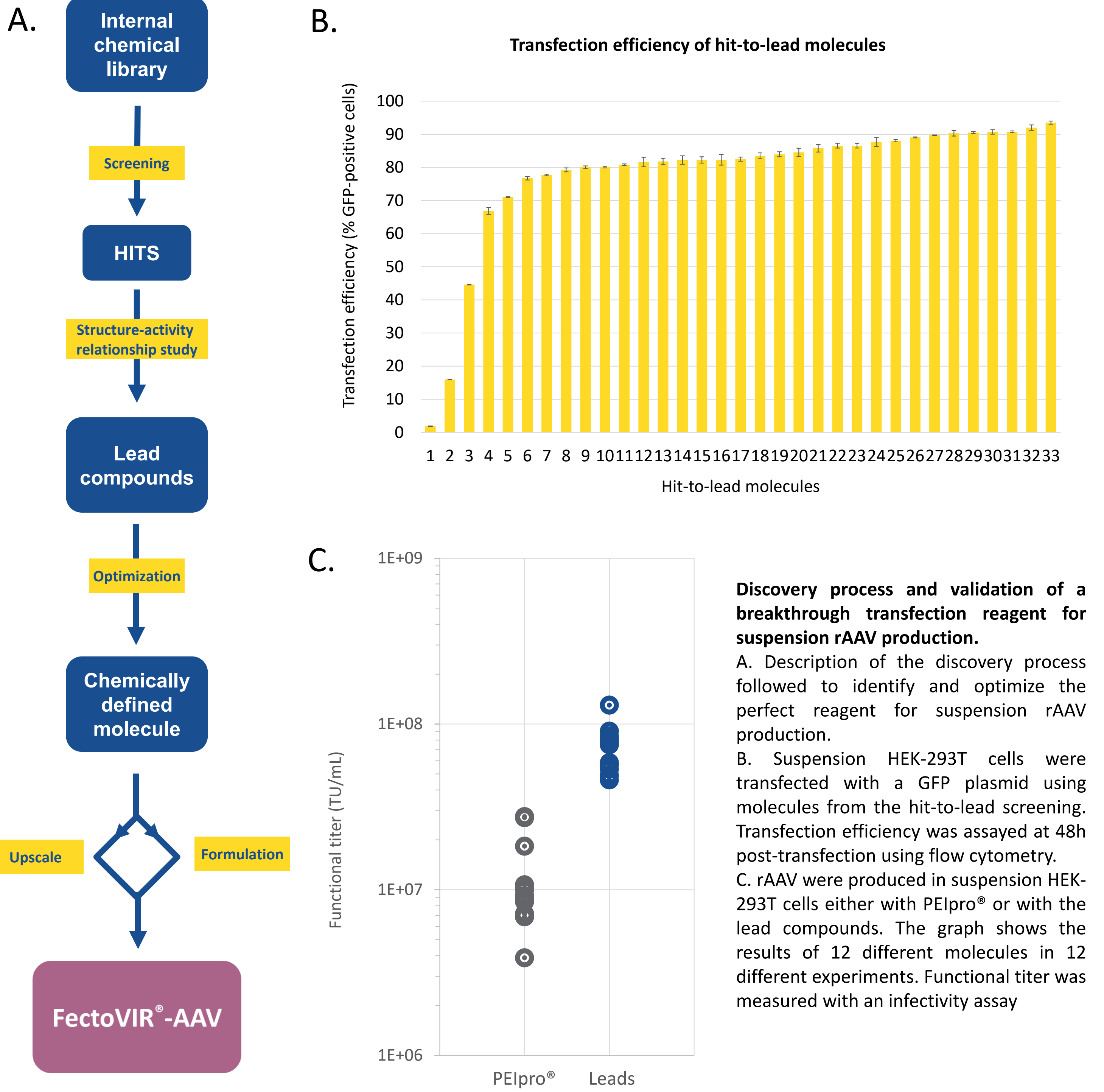
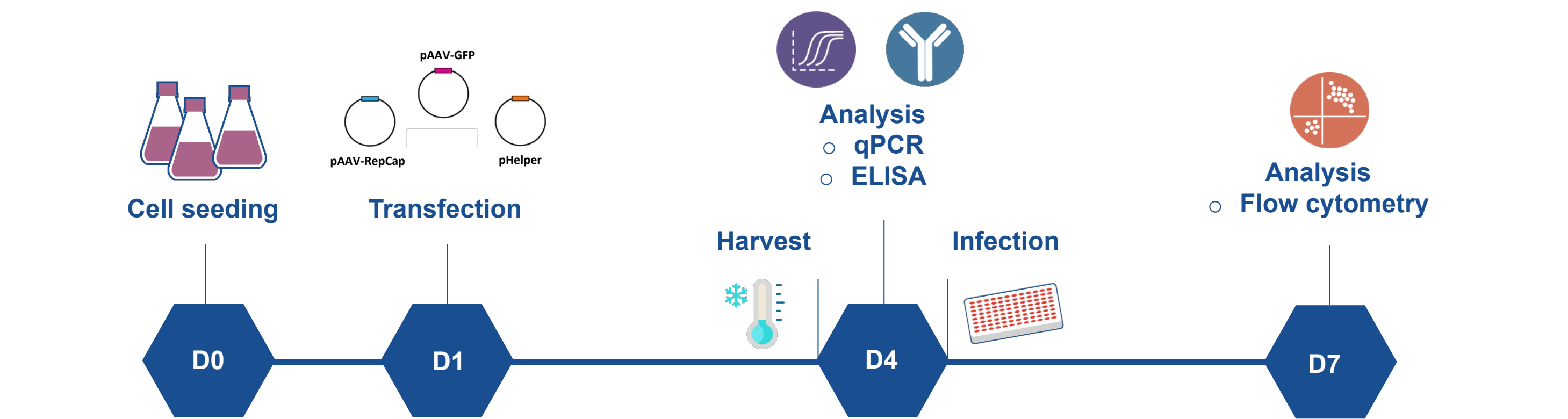


Mathieu Porte, Mégane Denu, Marine Ricordel, Jonathan Havard, Coralie Stritt, Yann Philipson, Malik Hellal, Patrick Erbacher
Polyplus-transfection, Bioparc, 850 Boulevard S. Brant, 67400 Illkirch, France

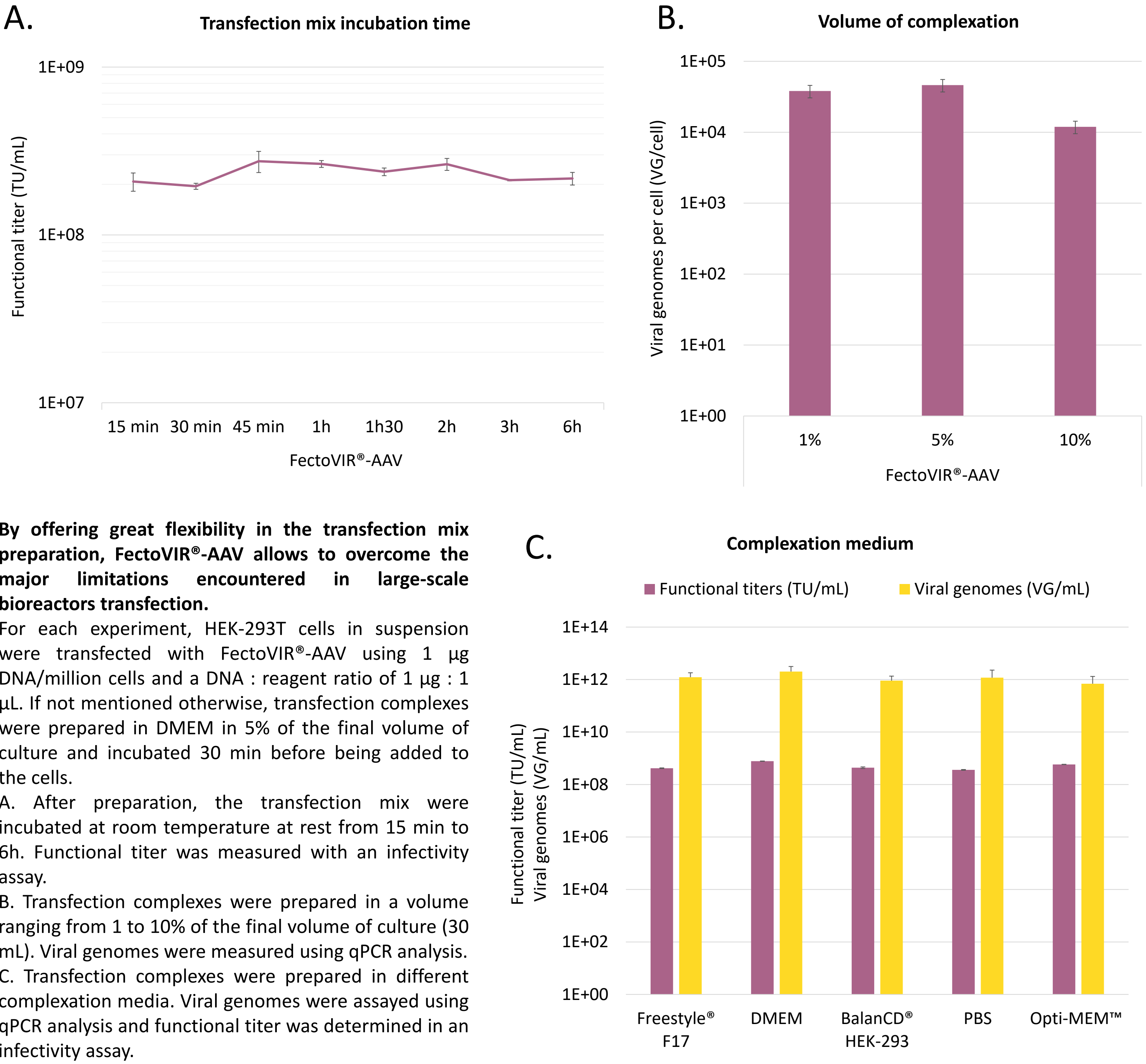
Abstract

The number of ATMP therapeutic-based medicines for inherited genetic disorders is in constant growth, with a global 32% increase in new clinical trials in the last 4 years. ATMPs have demonstrated their success with already more than ten approved for commercialization. The success of AAV as the most promising viral vector for gene therapy is due to low immunogenicity, broad tropism and non-integrating properties. One major challenge for translation of promising research to clinical development is the manufacture of sufficient quantities of AAV. Transient transfection of suspension cells is the most commonly used production platform, as it offers significant flexibility for cell and gene therapy development. However, this method presents some limitations in large scale bioreactors: inadequate transfection protocol, reduced transfection efficiency and lower productivity. To address this concern, we present data on a novel transfection reagent showing: *i*) increased AAV titers, *ii*) improved transfection protocol for large scale bioreactors and *iii*) reproducibility of viral titers at different production scale. The aforementioned optimized parameters make this novel transfection reagent ideal for cell and gene therapy developers by combining the flexibility of transient transfection with scalability and speed to market.

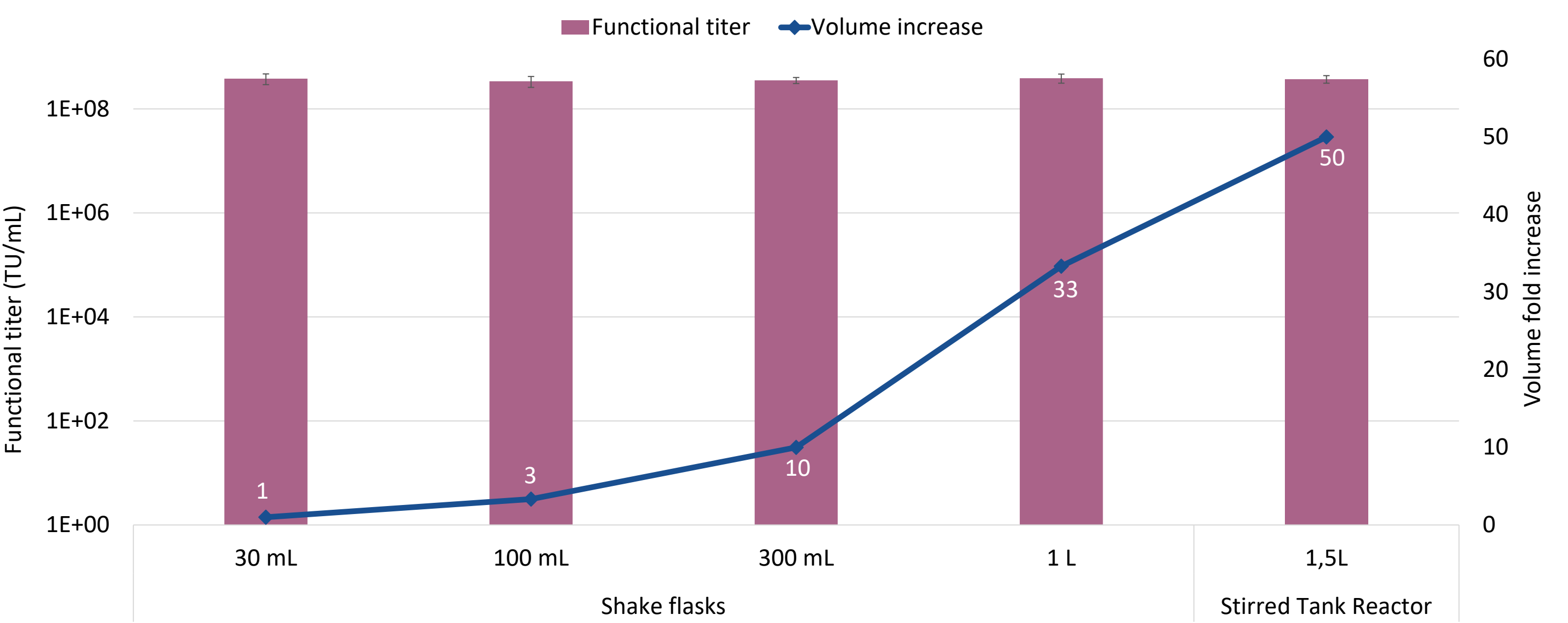
Materials & Methods



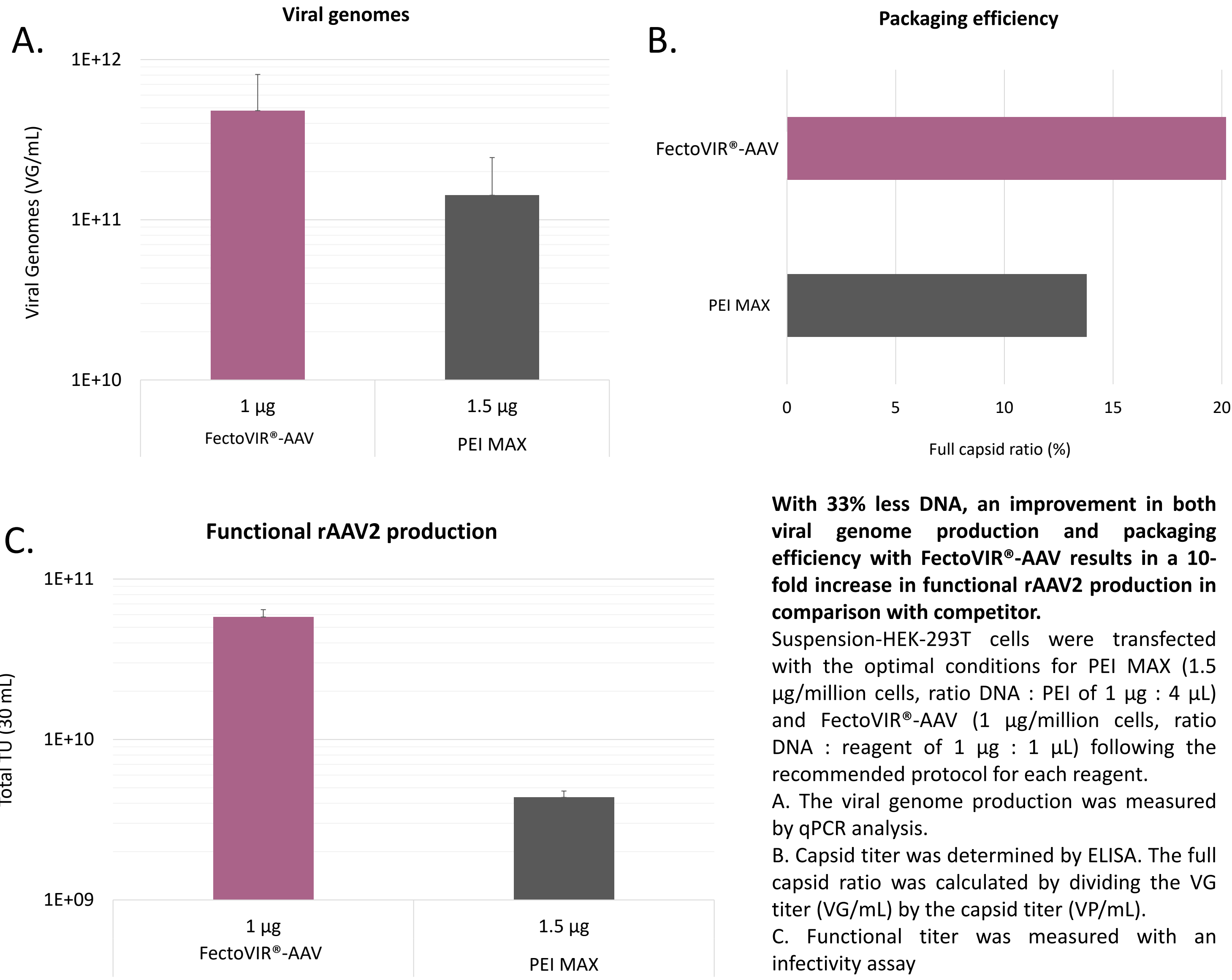
Improved transfection protocol for large scale suspension bioreactors



Scalability and reproducibility



Increased AAV titers using less DNA



Conclusion



- High performance : superior yields for rAAV production in suspension
- Ease of use : reduces complexation volume, stable transfection mix
- Cost-saver : reduces DNA amount
- Scalable : from small to large scale industrial production
- Flexible : compatible with different culture medium
- GMP compliance : GMP grade coming soon

OZYME
Des femmes et des hommes
au service de vos recherches

Nous contacter

Service client - commande : commande@ozyme.fr

Service technique :
Réactifs : 01 34 60 60 24 - tech@ozyme.fr
Instrumentation : 01 30 85 92 88 - instrum@ozyme.fr