

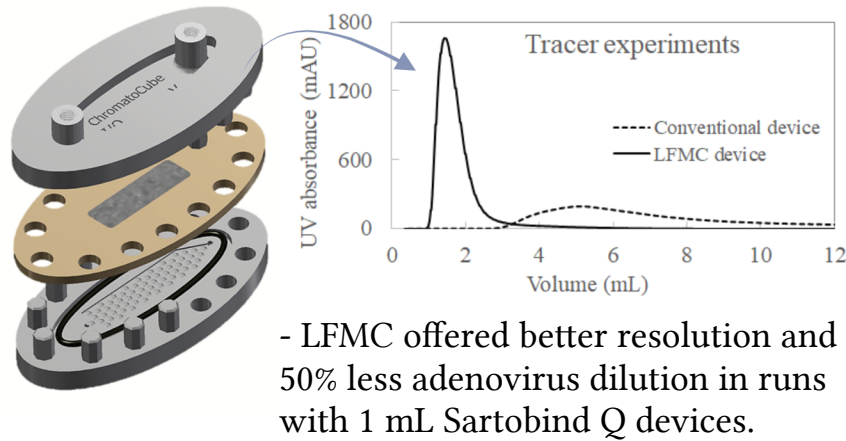
Advancing Downstream Processes for the Purification of Therapeutic Viruses



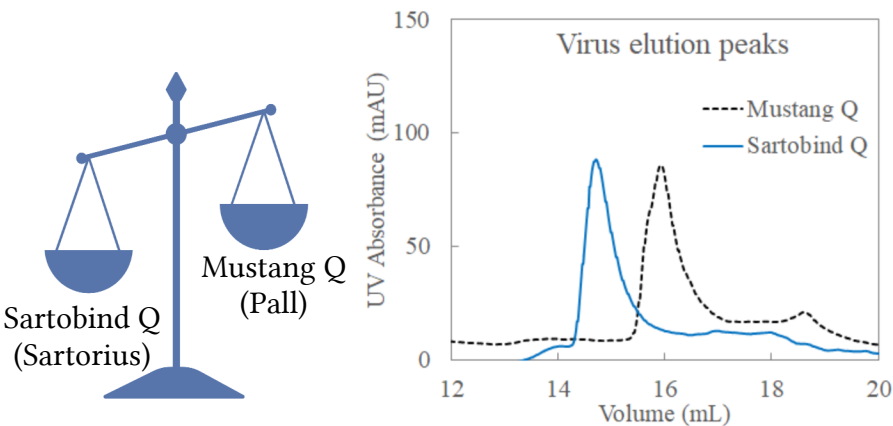
Karina Kawka (kawkak2@mcmaster.ca), Raja Ghosh, David R. Latulippe
Department of Chemical Engineering, McMaster University

You are invited to see my talk at the 'Next Generation Biomolecules and Bioprocesses' Session!
Wed, Nov 10, at 12:48 pm

► Application of laterally-fed membrane chromatography (LFMC) as an improved MC device format¹



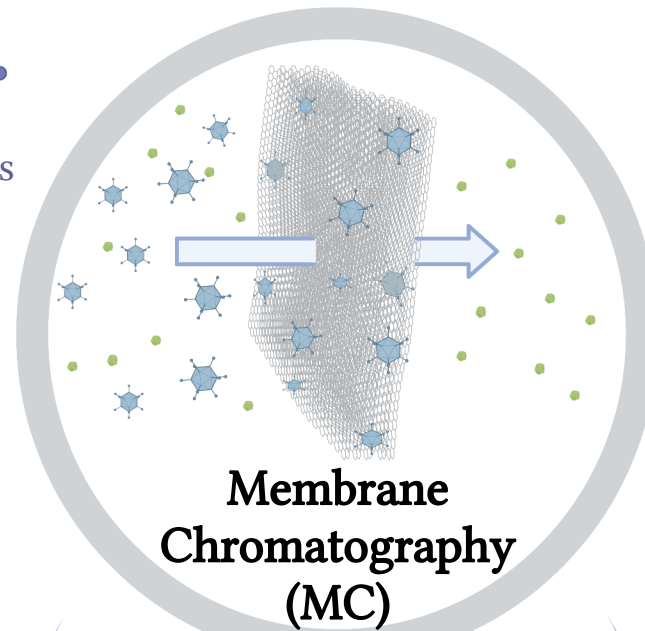
► Direct comparison of membranes of similar chemistry popularly used for virus purification



- This was the first direct comparison of Mustang Q and Sartobind Q, the most popularly used AEX membranes.
- Under exact same conditions, Sartobind Q had better performance, with 48% greater removal of host-cell DNA.

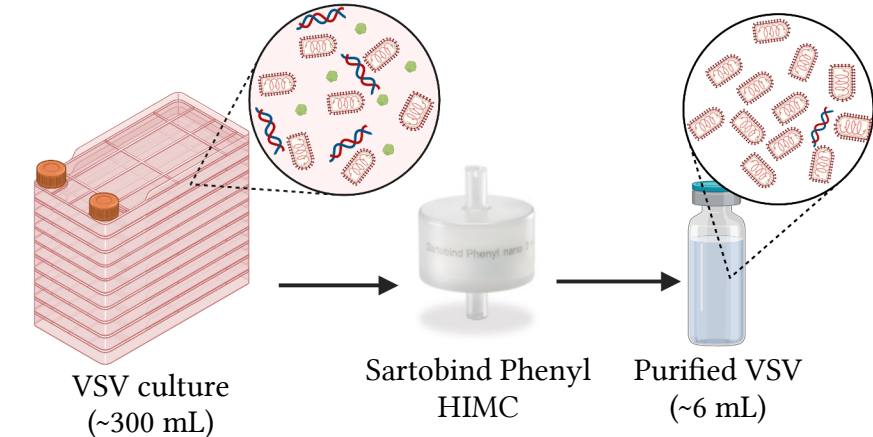


Adenovirus



Rhabdovirus

► Development of hydrophobic interaction MC to concentrate and purify rhabdoviruses

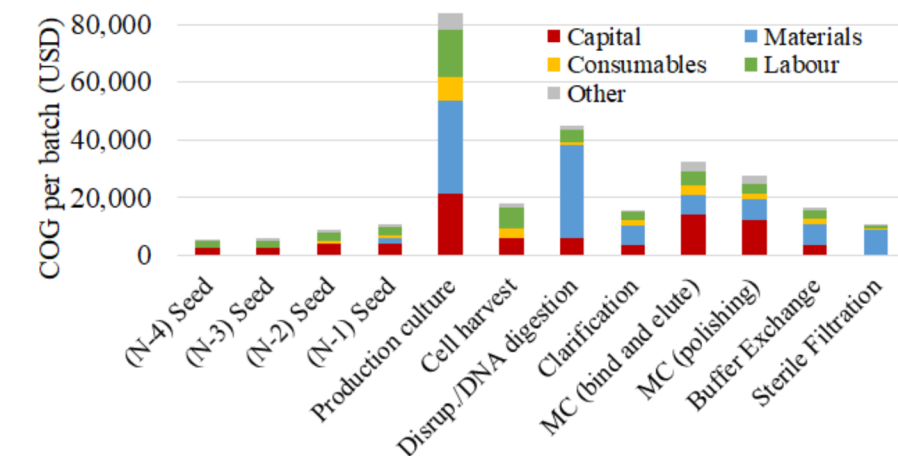


► Economic modelling for optimizing adenovirus manufacturing processes

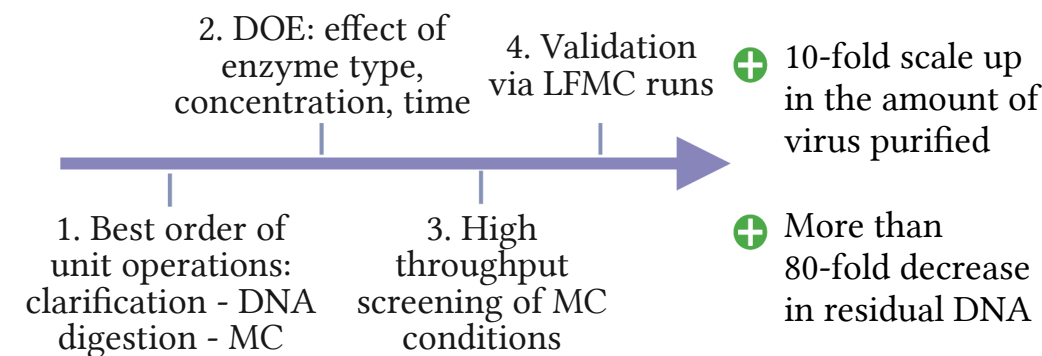
- Modeling of a complete adenovirus production process using BioSolve

- Simulation of scenarios estimated 20% cost savings when using MC instead of conventional resins

- Cost of goods (COG) breakdown for a scenario targeting the production of 2000 doses/year:



► Integrated optimization of DNA digestion and membrane chromatography processes for adenovirus purification²



Acknowledgements

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References

1. Kawka, K., et al. "Purification of therapeutic adenoviruses using laterally-fed membrane chromatography." *Journal of Membrane Science* 579 (2019): 351-358.
2. Kawka, K., et al. "Integrated development of enzymatic DNA digestion and membrane chromatography processes for the purification of therapeutic adenoviruses." *Separation and Purification Technology* 254 (2021): 117503.
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