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How continuous-like processes improve affordability for viral vaccines - Example of LAIV

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Designing a continuous process for a live viral vaccine could be seen useless, and challenging, as the virus infection will kill the cell substrate after 2-5 days of infection. From the technical perspective, chaining the operations of cell culture under perfusion and viral production, clarification and capture/concentration is an efficient option to setup a small scale continuous automated process to manufacture massive amounts of viral vaccines. We will show how beneficial it can be in terms of process development, manufacturing simplicity, capital expenditure and cost of production. Also, we will show how this approach can help producers of viral vaccines to produce at very low cost even for segmented markets for which small amounts of multiple vaccines are needed.