

# Séminaire



CONFÉRENCIER  
INVITÉ

Vendredi 13 Mai 2022 à 11h

Salle des  
séminaires IBS

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## Cell-Free Protein Expression Systems for Decentralized Biomanufacturing

*E. coli* cell-free expression (CFE) systems have been widely adopted in recent years for prototyping and biomanufacturing due to their ease-of-use and control over reaction conditions. By supplementing resources for transcription and translation to a soluble cell extract, cell-free systems can be used to produce proteins directly *in vitro* from DNA templates. Cell-free expression systems provide a modular, flexible, and scalable biomanufacturing platform without the viability constraints imposed by living cells. Additionally, CFE reactions can be easily lyophilized and reconstituted, making them a versatile platform for production of diagnostics and therapeutics at the point of care. However, increased robustness such as low reaction cost and high thermostability are necessary for further technology adoption and implementation as a decentralized biomanufacturing strategy. In this talk, I will highlight our recently developed platform for cell-free glycoconjugate vaccine production. Specifically, I will describe my efforts in the Jewett Lab at Northwestern University to improve glycoprotein yields, lower cost, and increase thermostability of the cell-free vaccine synthesis platform. Overall, this work contributes to the development of accessible biomanufacturing strategies.

*Hôte : R. Vivès (IBS/Groupe Structure et Activité des Glycosaminoglycanes)*