

Susana Alonso Villela

Research Engineer

Bioprocess engineer with extensive expertise in bioreactor process design, fermentation technologies, and protein production. Skilled in scaling up bioprocesses, experimental design, and process optimization.

Project: BioIndustry 4.0

Supervisor: César Aceves (INSA Toulouse)

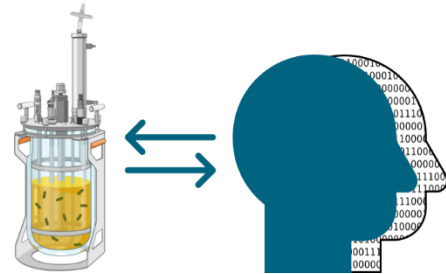
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Background

BioIndustry 4.0 revolutionizes biotechnology by integrating advanced technologies like artificial intelligence (AI) to enhance research, production, and efficiency in research and production.

High-quality datasets are crucial for training robust machine learning (ML) models, ensuring accurate predictions and reliable outcomes in biotech applications.



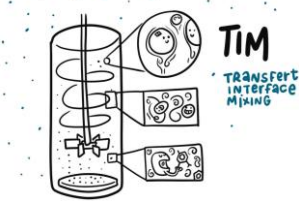
Currently working on

- ✓ Design of batch and fed-batch experiments for production optimization of *E. coli* recombinant nanobodies
- ✓ Scale-down strategy from 5 L bioreactor to high throughput platforms of 24x50mL and 32x1.5mL bioreactors
- ✓ Provide bioprocess expertise for hybrid model development in biomass and protein optimization

Scientific communications

Acosta-Pavas, J. C.; Corrales, D. C.; Martínez-Menéndez, I.; **Alonso Villela, S. M.**; Bouhaouala-Zahar, B.; Georgakilas, G. K.; Mexis, K.; Xenios, S.; Dalamagas, T.; Kokosis, A.; O'donohue, M.; Fillaudeau, L.; Aceves-Lara, C. A. A Soft Sensing Approach for Efficient Monitoring of Nanobody-Based Scorpion Antivenom Production. *Distributed Computing and Artificial Intelligence, 21st International Conference, 2025*; Vol. 1259, pp 271–281. https://doi.org/10.1007/978-3-031-82073-1_27.

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