

# Schönherr-Hellec Sophia

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Section CNU 64/65

## Education, work experience and current position

Lecturer and researcher at Université de Bretagne Sud (UBS-LBCM) since 2022.

**2017:** Ph. D. at Université Paris Descartes. “Clostridia and necrotizing enterocolitis in preterm neonates: a comparative study of *Clostridium butyricum* and *Clostridium neonatale* isolates”.

**2018-2021:** Postdoctoral position at Necker-Enfants Malades Institute. “Pathophysiology of invasive meningococcal infections”.

## Summary of research activities and skills

My research focuses on studying bacteria involved in the development of human pathologies using molecular, cellular, and *in vivo* approaches. My investigations have centered on the involvement of Clostridia in the etiology of necrotizing enterocolitis in preterm neonates, as well as infections caused by meningococci. At the LBCM I investigate host/pathogen interactions with a focus on *Pseudomonas aeruginosa* virulence in human alveolar cell model. We also use this model to evaluate potential anti-virulence activity of molecules from marine environment.

## Summary of teaching activities

Teaching at bachelor’s level in microbiology, molecular and cellular biology, immunology, genetics and biotechnology.

## Pedagogic and administrative duties

9 articles in international journals, 5 examples:

**Schönherr-Hellec S.**, Chatzopoulou E., Barnier JP., Atlas Y., Dupichaud S., Guilbert T., Dupraz Y., Meyer J., Chaussain C., Gorin C., Nassif X., Germain S., Muller L., Coureuil M. (2023) **Implantation of engineered human microvasculature to study human infectious diseases in mouse models.** *iScience* 26:106286.

Barnier JP., Euphrasie D., Join-Lambert O., Audry M., **Schönherr-Hellec S.**, Schmitt T., Bourdoulous S., Coureuil M., Nassif X., El Behi M. (2021) **Type IV pilus retraction enables sustained bacteremia and plays a key role in the outcome of meningococcal sepsis in a humanized mouse model.** *PLOS Pathog* 17.

**Schönherr-Hellec S.**, and Aires J. (2019). **Clostridia and necrotizing enterocolitis in preterm neonates.** *Anaerobe* 58, 6–12.

**Schönherr-Hellec S.**, Klein G., Delannoy J., Ferraris L., Rozé J.C., Butel M.J. and Aires J. (2018). **Clostridial strain-specific characteristics associated with necrotizing enterocolitis,** *Appl. Environ. Microbiol.* 84.

**Schönherr-Hellec S.**, Klein G., Delannoy J., Ferraris L., Friedel I., Rozé J.C., Butel M.J. and Aires J. (2017). **Comparative phenotypic analysis of “Clostridium neonatale” and Clostridium butyricum isolates from neonates.** *Anaerobe* 48, 76–82.