

# **BACTERIAL PEPTIDOGLYCANS AS NOVEL SIGNALING MOLECULES FROM MICROBIOTA TO BRAIN**

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**R**ecent animal studies have revealed that the gut microbiota has much wider effects on host physiology and development than originally believed, including the early-life programming of brain circuits involved in the control of emotions, motor activity, and social behavior. The current challenge is to understand the precise molecular mechanisms mediating the communication between the microbiota and the brain. In this presentation, I will cover new evidence from my laboratory suggesting that the central activation of pattern recognition receptors by bacterial peptidoglycan fragments could be one of the signaling pathways mediating the communication between microbiota and the developing brain.

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