SPEECH INFORMATION (For Conference Program Book)	
Topic	Microbial Tug-of-War: *Ruminococcoides intestinale* Counters *Ruminococcus gnavus*–Driven Allergy via Serotonin Reprogramming
Abstract	Host–microbe communication is traditionally viewed through immune or metabolic pathways, yet neurotransmitters may also act as bidirectional signals. Here we uncover a serotonin-centered mechanism that links microbial competition with mucosal immunity. A decade-long twin cohort revealed that *Ruminococcus gnavus* expands in allergic individuals, whereas *Ruminococcoides intestinale* associates with tolerance. Through Allergome mining, we identified the *R. gnavus* chaperone DnaK as an allergen that activates pro-inflammatory IL-33 alarmin signaling. Virtual screening of 1,247 approved drugs with AlphaFold modeling identified domperidone as an inhibitor of these effects. Also, *R. gnavus* amplifies its own serotonin (5-HT) biosynthesis, forming a feed-forward loop that promotes bacterial proliferation and host Th2 inflammation. In contrast, *R. intestinale* strain Ri-HJH consumes 5-HT, suppresses its synthesis, and redirects tryptophan metabolism toward anti-inflammatory indoles, restoring immune balance and protecting against airway allergy. These findings reveal 5-HT as a shared metabolite in host–microbe interactions and identify *R. intestinale* Ri-HJH as a next-generation probiotic capable of re-establishing 5-HT homeostasis and mucosal immune equilibrium.