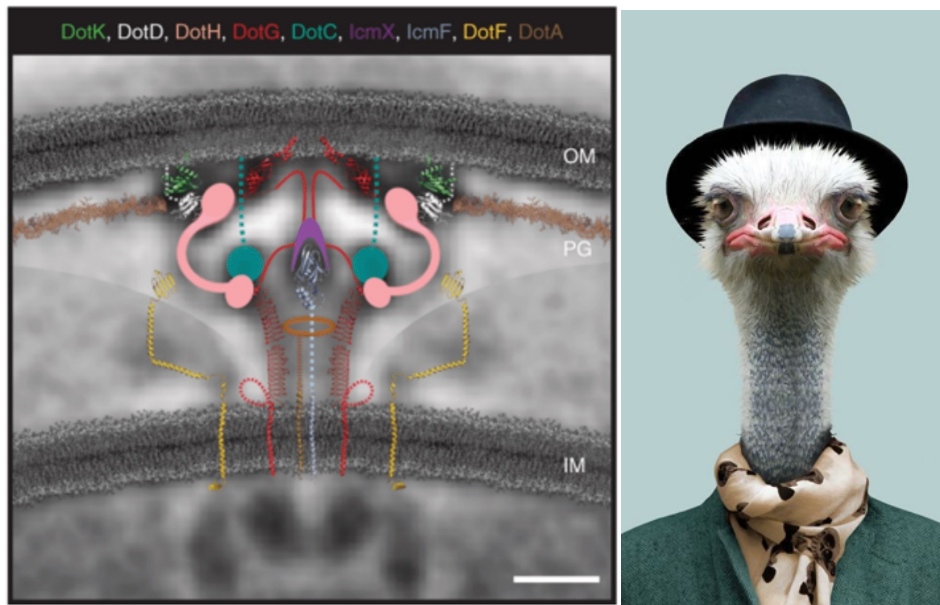


# SPECIAL GUEST SEMINAR

The *Legionella* Dot/Icm Type IV secretion system:  
polarity guided cryo-EM analysis.

*It took a decades-long career and a multimillion-dollar machine to figure out that it looks like an ostrich in a hat.*



**Joseph Vogel, Ph.D.**

Associate Professor, Washington University  
Department of Molecular Microbiology

**Wednesday, January 8, 2020 @ 4 pm**  
**MaRS West Tower, Room 1522**

(Host: Alex Ensminger)



Biochemistry  
UNIVERSITY OF TORONTO