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*Evolving Clinical Resistance to Novel Agents in  
Pseudomonas aeruginosa*

Ryan Shields is an Associate Professor in the Departments of Medicine and Clinical and Translation Research at the University of Pittsburgh. He serves as the Director of UPMC Presbyterian Hospital Antibiotic Management Program and Co-Director of the Center for Innovative Antimicrobial Therapeutics. He is actively engaged in the diagnosis and management of patients infected by multi-drug resistant bacteria, including CRE and XDR *Pseudomonas*. His laboratory focuses on the characterization and suppression of antimicrobial resistance by using molecular markers to predict patient responses and PK-PD pre-clinical models to study antibiotic combination approaches. Using these techniques, Dr. Shields's clinical and research roles have focused on clinical utilization and emergence of resistance of new antimicrobial agents and innovative stewardship approaches to implement new diagnostic tests.