

AMR Foundations Course, Tuesday and Thursdays at Noon-1:30 PM

***NEW for Fall 2020:** This course will be available via Zoom to registered attendees.

Please contact Dr. Kevin Garey, (kgarey@Central.uh.edu), course director, for more information.

Wk	Topic (faculty)	Objectives	Proposed date
1	AMR: a global public health threat (Arias)	Provide an overview of main AMR problems and their impact on clinical practice	Tuesday, September 1, 2020
	Genomics and AMR (Hanson, Rosato)	Provide overview of current genomic tools used to study dissemination and spread of AMR organisms	Thursday September 3, 2020
2	Mechanisms of AMR I: macrolides, lincosamides, tetracyclines, oxazolidinones, aminoglycosides, quinolones (Shamoo, Zechiedrich)	Antibiotic mechanism of action and resistance; implications for research and therapy	Tuesday September 8, 2020
	Mechanisms of AMR II: β -lactams, fosfomycin, glycopeptides and derivatives, daptomycin and polymyxins (Palzkill, Miller)	Antibiotic mechanism of action and resistance; implications for research and therapy	Thursday September 10, 2020
3	Pharmacokinetics / pharmacodynamics (Tam, Tran)	Review relevant concepts of PK/PD and their influence on development and prevention of resistance	Tuesday, September 15, 2020
	Microbiome and AMR (Shelburne, Jenq, Galloway-Peña)	Discuss the important interactions of antibiotics with the microbiome and the evolution of AMR organisms	Thursday, September 17, 2020
4	Antibiotic stewardship, infection control (Trautner, Septimus)	Review most effective approaches for infection control and antibiotic stewardship in the context of emergent resistance in hospital pathogens.	Tuesday September 22, 2020
	New diagnostic approaches in clinical microbiology for diagnosis of resistance (Bhatti, Wanger)	Discuss new emerging technologies for identification and diagnosis of multidrug-resistant organisms	Thursday, September 24, 2020
5	AMR and the environment (Chopra, Kirienko)	Summarize the main influence of AMR in the environment (including hospital) in relation to dissemination of AMR determinants and their effect on human health.	Tuesday, September 29, 2020
	Drug discovery, non-traditional antibiotics (Garsin, Hurdle)	Discuss non-traditional antibiotic approaches to combat antibiotic-resistant bacteria.	Thursday, October 1, 2020
6	Antifungal resistance (Lorenz, Aitken)	Review major mechanisms of fungal resistance and their clinical impact	Tuesday October 6, 2020
	<i>C. difficile</i> : pathogenesis and treatment strategies (Darkoh, Garey)	Examine current concepts related to pathogenesis of <i>C. difficile</i> infections and therapeutic approaches.	Thursday, October 8, 2020