

Academic Year: 2022/2023 Semester: 1

MDG5226:Antimicrobial Resistance and Drug Discovery (4 MC)

Week	Day	Date	Start Time	End Time	Description	Format	Lecturer
20	Monday	15/8/2022	1800	2000	Course introduction Antimicrobial Resistance (AMR) Overview. What is the correlation of antibiotic use and AMR? Where does resistance come from? How does it spread?	Lecture	A/Prof Pablo BIFANI
21	Wednesday	17/8/2022	1800	2000	Antimicrobial mechanisms of action and resistance How do drugs work and how do mechanisms of resistance emerge? How can understanding the mechanisms of resistance and drug target aid in drug discovery	Lecture	A/Prof Pablo BIFANI
21	Wednesday	17/8/2022	1800	2000	Phage and combination phage-antibiotic therapy	Lecture	A/Prof Pablo BIFANI
21	Monday	22/8/2022	1800	2000	Nosocomial infections Impact of hospital acquired infections, drug resistance and patient management with special emphasis on Singapore	Lecture	Dr Timothy BARKHAM
22	Wednesday	24/8/2022	1800	2000	Drug resistance and sexually transmitted infections	Lecture	A/Prof Pablo BIFANI
22	Monday	29/8/2022	1800	2000	Principles in Drug-Discovery I Concepts in drug discovery, how to identify a new drug, processes in drug discovery, high throughput screens, structure based drug design	Lecture	A/Prof Pablo BIFANI
23	Wednesday	31/8/2022	1800	2000	Early stages in drug discovery for anti-infectives	Lecture	Dr Christophe BODENREIDER
23	Monday	5/9/2022	1800	2000	Computer aided drug discovery	Lecture	Dr Chandra VERMA
24	Wednesday	7/9/2022	1800	2000	Tuberculosis drug discovery From the benchtop to the clinic	Lecture	A/Prof Pablo BIFANI
24	Monday	12/9/2022	1800	2000	COVID-19 biology, prevention and treatment	Lecture	TBA
25	Wednesday	14/9/2022	1800	2000	COVID-19 drug discovery	Lecture	A/Prof Pablo BIFANI
26	Monday	26/9/2022	1800	2000	Immunotherapy. Recent technological advances have propel immunotherapy in the forefront of human diseases. Can we apply immunotherapy to infection control?	Lecture	Prof Laurent RENIA
27	Wednesday	28/9/2022	1800	2000	Student seminars and discussions	Seminar	TBA

27	Monday	3/10/2022	1800	2000	Animal models in drug discovery. Validated and predictive animal model is critical to the outcome of drug development. This section addresses the use of animal models (from murine to non-human primates) in translational medicine	Lecture	TBA
28	Wednesday	5/10/2022	1800	2000	Student seminars and discussion	Seminar	TBA
28	Monday	10/10/2022	1800	2000	Molecular Imaging in Infectious Disease: driving drug discovery by monitoring therapy response	Lecture	Dr Ann-Marie CHACKO
29	Wednesday	12/10/2022	1800	2000	Student seminars and discussions	Seminar	
29	Monday	17/10/2022	1800	2000	Phage and combination phage-antibiotic therapy	Lecture	A/Prof Pablo BIFANI
30	Wednesday	19/10/2022	1800	2000	Student seminars and discussions	Seminar	
30	Monday	24/10/2022	1800	2000	Host-target and drug discovery Can infections be controlled by modulating the host immune response or a host target?	Lecture	Dr Amit SINGHAL
31	Wednesday	26/10/2022	1800	2000	Student seminars and discussions	Seminar	
31	Monday	31/10/2022	1800	2000	TBA	Lecture	
32	Wednesday	2/11/2022	1800	2000	Student seminars and discussions	Seminar	
32	Monday	7/11/2022	1800	2000	Student seminars and discussions	Seminar	
33	Wednesday	9/11/2022	1800	2000	Student seminars and discussions	Seminar	
35	Wednesday	23/11/2022	900	2300	Final report due	Exam	A/Prof Pablo BIFANI

Remark:

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