

MIC / PLP / ARL 452/552 Antibiotics - a biological perspective

2021 Fall, T/Th 18:00-19:15, 3 credits

- Major classes of antibiotic drugs
- Mechanisms of action
- Antibiotic resistant "superbugs"
- Antibiotics in agriculture
- Biosynthesis and microbiological role
- Discovery and industrial production
- Role in medicine and society
- A world without antibiotics

The course will concentrate on the microbiological, genetic, and molecular biological aspects of antibiotics and antibiotic resistance, with less emphasis on chemistry. The course is designed to increase the awareness and appreciation of the importance of antibiotics and anti-infective research in an age when:

- Cheap and failsafe antibiotic cures are considered a birthright in developed countries;
- These medications are still not universally accessible in the rest of the world;
- Antibiotic use and misuse is prevalent in medicine, veterinary practice, and agriculture;
- Antibiotic agents increasingly lose effectiveness due to emerging resistance; and
- Anti-infective research has been severely curtailed by pharmaceutical companies.

