



iGEM

Webinar Series

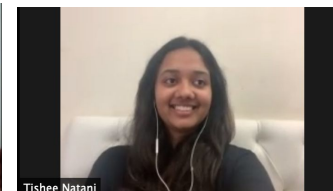
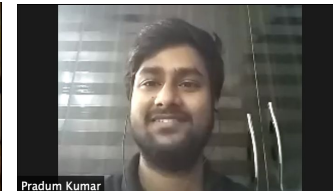
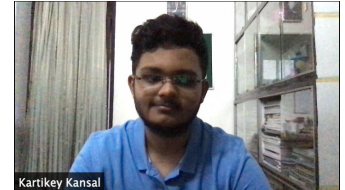
Classes 7 & 8



Who we are?

We are a bunch of undergraduate students from IIT Roorkee conjoining from various disciplines to participate in the **world's largest Synthetic Biology competition, iGEM** (International Genetically Engineered Machine), hosted by MIT, Boston, USA.

We aim to solve one of the major problems the healthcare industry faces today using the tools of Bioengineering and Machine Learning.



What is iGEM?



- World's Largest **Synthetic Biology Competition**
- Started in **Massachusetts Institute of Technology** in 2003
- Engineering + Biology → Solve local and global problems



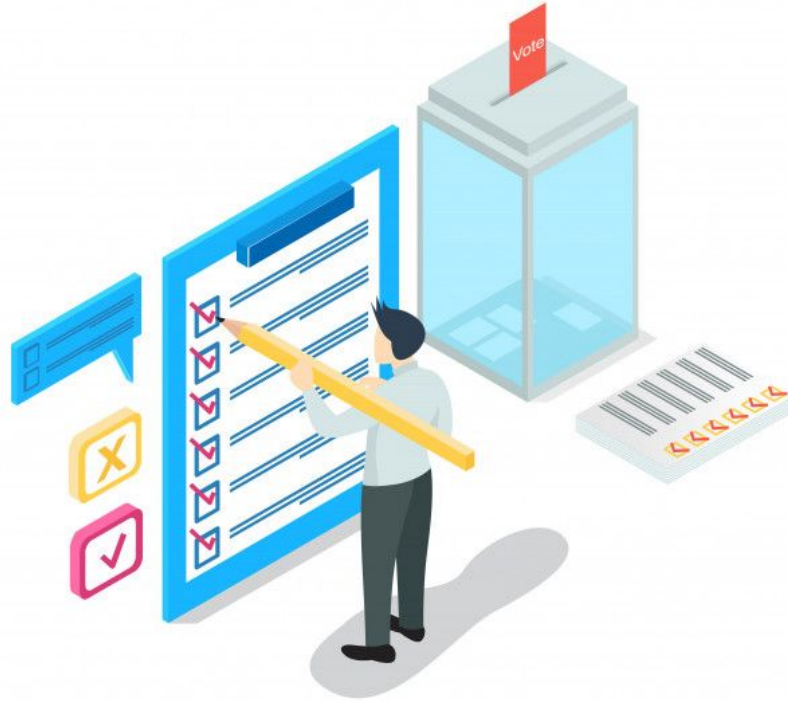
47+
Countries

350+
Teams

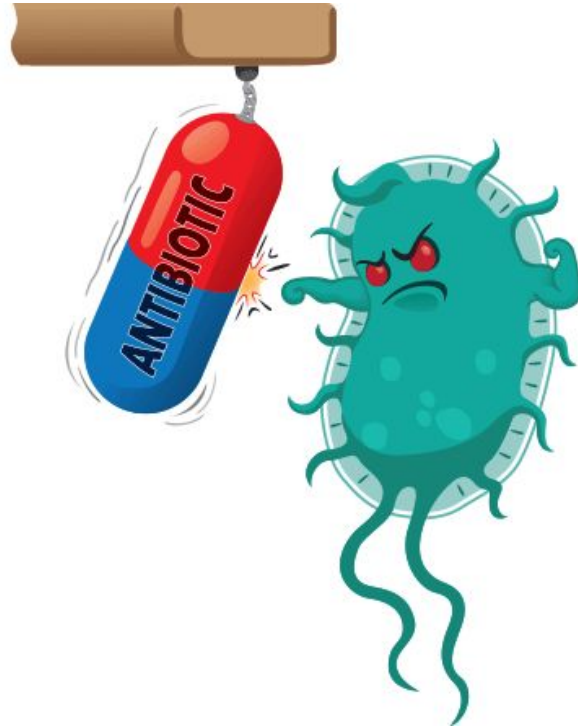
4000+
Participants



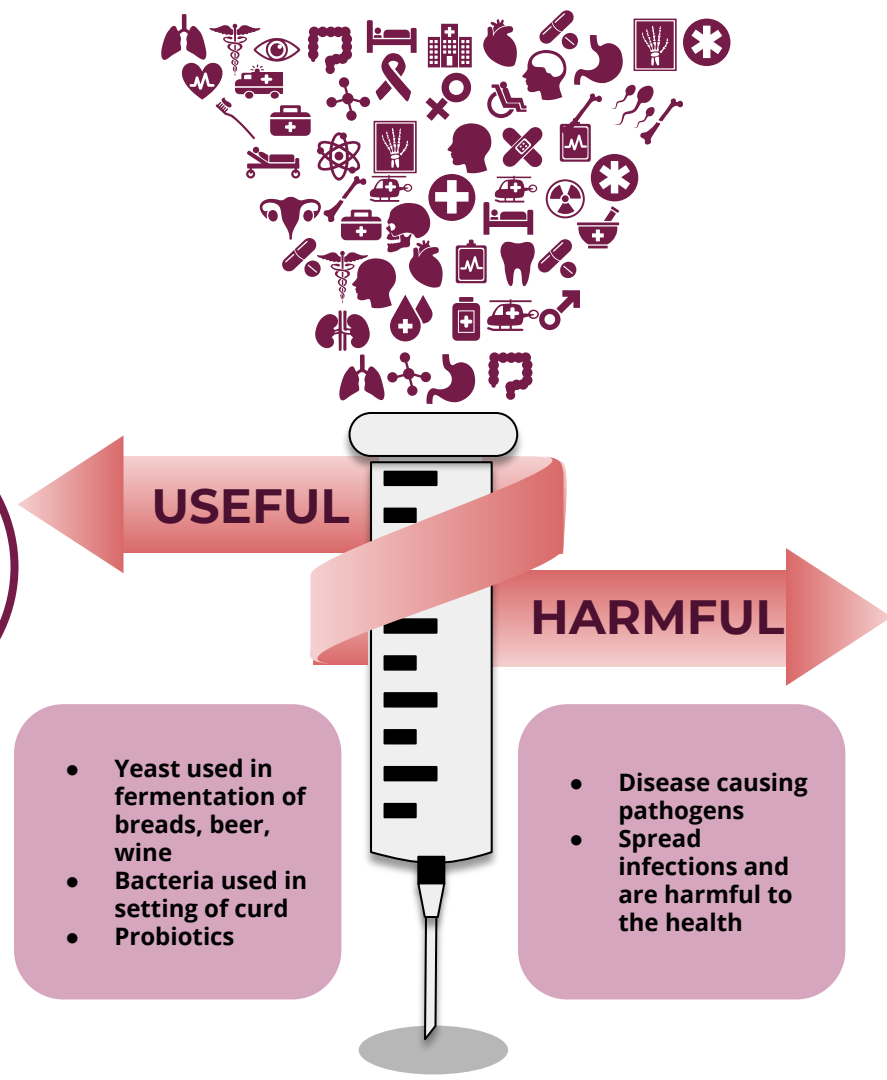
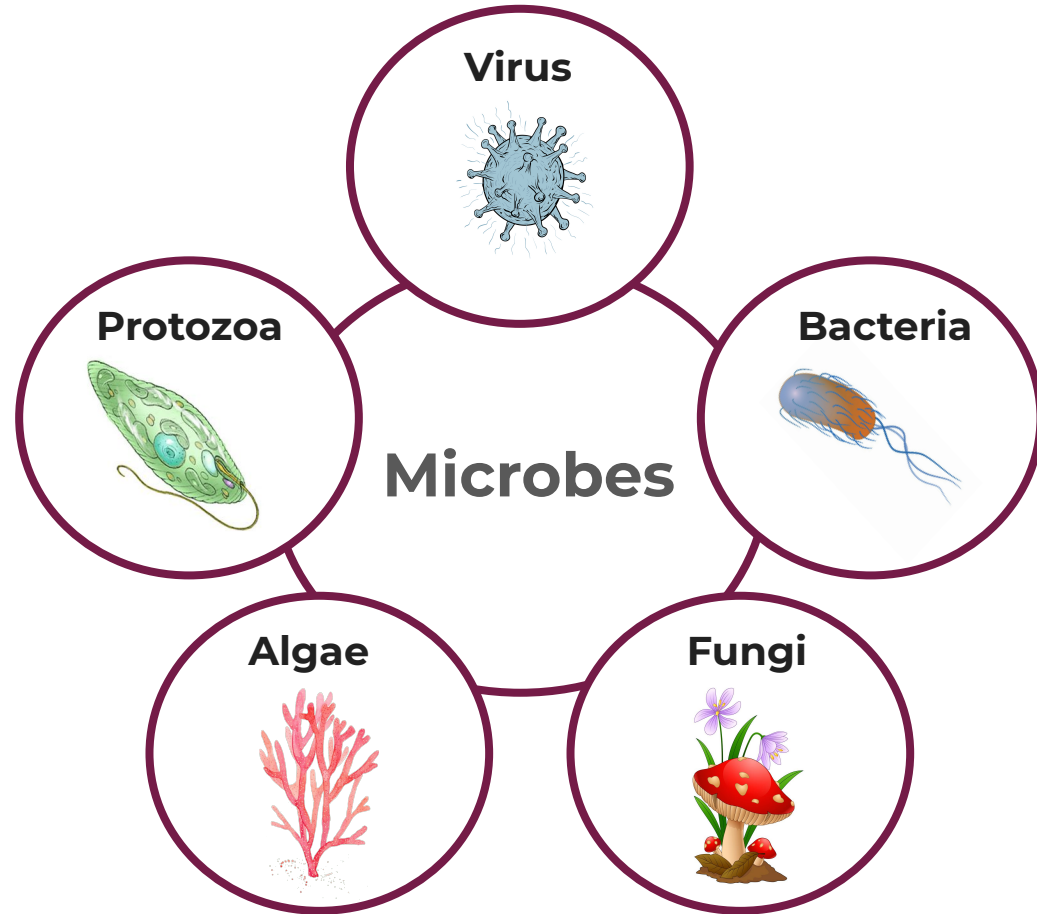
Pre - Webinar Survey



Antibiotic Resistance



Microbes and their types



What are antibiotics?

- A type of antimicrobial substance active against bacteria
- Most important type of antibacterial agent for fighting bacterial infections
- Antibiotic medications are widely used in the treatment and prevention of such infections. They may either kill or inhibit the growth of bacteria



Bacterial infections

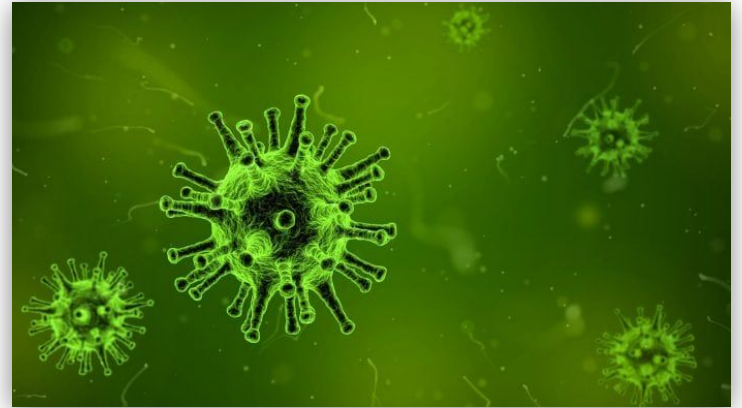
vs

Viral infections

- Strep throat
- Tuberculosis
- Urinary tract infections



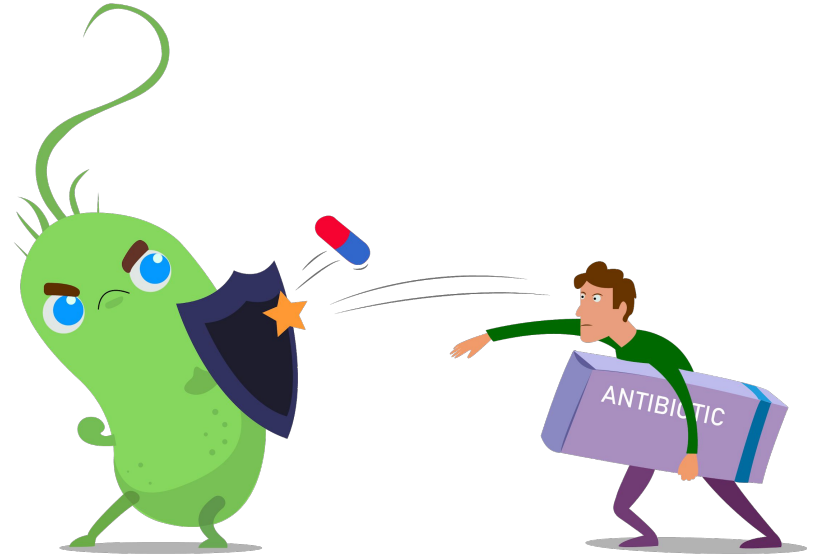
- Chickenpox
- AIDS
- Common colds



Antibiotics work only on Bacterial Infections

What is Antibiotic Resistance

- The bacteria grow strong in nature and can no longer be killed by the antibiotics.
- Such antibiotic-resistant bacteria are called **SUPERBUGS**.



Antibiotics STOP working on Bacterial Infections

What will happen when Antibiotics don't work?

Common infections
can't be treated and
can be fatal



No surgeries can
take place



Cancer
Chemotherapy can't
take place



Preterm births
cannot happen



Post - Antibiotic Era

A single cut by metal could be
fatal.



I got hit
by a metal
wire

What can we do?

Use Antibiotics Responsibly!

4 R's of correct antibiotic usage.

DO's

- ✓ Right Drug
- ✓ Right Time
- ✓ Right Duration
- ✓ Right Dose



DON'Ts

- ✗ Don't take antibiotics without a prescription
- ✗ Don't share your antibiotics
- ✗ Don't leave your antibiotic course incomplete
- ✗ Don't take antibiotics for cold and flu



Post - Webinar Survey



QnA Session

