Video on Biosafety Protocols
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Biosafety is essential to reduce the health-related risks associated with handling infectious agents, toxins, and other biological hazards in a laboratory setting. Knowing and following basic protocols while working in a laboratory can play an important role in protecting lab workers, the environment, and the public. Our survey anticipated that majority of participants of the survey have a positive outlook on GMOs and synthetic biology but are worried if Biosafety measures can be ensured appropriately or not. They are also interested to know more about it. We also thought that iGEM teams exhibiting the biosafety protocols to be followed in a laboratory setting could help squash scepticism regarding the biocontainment and use of GMOs and synthetic biology in society.

The video is also educational for the students in STEM as it helps people learn about the safety precautions they should take for their co-workers and their safety. When we perceived this idea, we shared it over Global Slack Channel, and Team-Athens, Team-Patras Medicine, Team-MIT_MAHE, and Team-Estonia TUIT showed interest in joining us to create it. It was a pleasant experience to collaborate with these teams, and everybody put up a great effort in explaining the importance of each protocol that should be taken while working in the laboratory.

iGEM MIT_MAHE's contribution

Personal protective equipment:
Laboratory coats and latex gloves are worn to prevent contamination of unprotected skin. Masks are worn to avoid inhalation of micro-contaminants.

Cleaning and disinfection of work surfaces:
The interior surfaces of the laminar Airflow hood are decontaminated before and after each use. The work surfaces and interior walls are wiped with a disinfectant (70% Ethanol) so as to kill any microorganisms that might be found inside the hood.

Waste disposal:
We have segregated waste bins for different types of waste materials, including a black-colored general waste bin, a red-colored waste bin for plastic and gloves, a yellow-colored bin for tissue paper, cotton, masks, and chemical wipes, and a blue-colored bin for glass syringes and needles.

Inoculation loop aseptic technique:
A wet inoculation loop with bacteria on it is heated in the inner part of the flame to avoid spattering and then heated until red hot in the outer part of the roaring blue Bunsen Burner flame. This is done to sterilise the inoculation loop, which in turn, ensures that contaminating bacterial spores are destroyed.