



STUDY GUIDE



Round 1

In this round, teams investigate a mysterious disease outbreak by acting as biomedical detectives. They analyze provided evidence to identify the cause of illness, relying on critical thinking, logical deduction, and evidence-based reasoning. The focus is on interpreting information and comparing possible explanations rather than recalling specific medical knowledge, rewarding teams that can thoughtfully synthesize clues and justify their conclusions.

Participants are expected to be familiar with :

- Basic concepts of infectious diseases, including how symptoms develop and spread.
- General understanding of vaccines, live attenuated viruses, and immune response.
- Interpreting patient case files, symptom progression, and medical histories.
- Analyzing environmental and zoonotic clues (e.g., animal contact, living conditions).
- Drawing conclusions from scans, observable clinical signs, and comparison of possible causative agents.

Reference links for studying :

- <https://my.clevelandclinic.org/health/diseases/17724-infectious-diseases>
- <https://my.clevelandclinic.org/health/diseases/24473-viral-infection>
- <https://ezra.com/blog/types-of-body-scans>

Round 2

Participants are expected to know animal classification and thus the following information regarding canidae:

- The species that belong to the family with their scientific name.
- Animal Morphology & Physical Traits of each specie that makes it distinct
- General knowledge of genetic and molecular biology including basic DNA concept and genetic comparison.
- In depth knowledge of Habitat and environmental adaptations of the species, their Activity patterns and ecological interactions

Below are the links of documents that can assist participants on their preparation for this round:

- <https://pmc.ncbi.nlm.nih.gov/articles/PMC7151911/>
- <https://www.preprints.org/manuscript/202412.2309/v1/download>
- <https://www.pnas.org/doi/10.1073/pnas.2205986119>
- <https://uen.pressbooks.pub/range25il/chapter/dunn/>
- <https://www.nature.com/articles/s41598-017-10232-1>
- https://en.wikipedia.org/wiki/DNA%E2%80%93DNA_hybridization
- <https://www.sciencedirect.com/science/article/abs/pii/S1055790305002502>