

Influenza

Questions

1. Name 5 areas flu symptoms affect.
2. What are the types and subtypes? Which infect humans?
3. What is it primarily a virus of?
4. What two reasons can facilitate the accidental infection of other species?
5. What two protein spikes are on its envelop? What else is on the surface?
6. What genome does this virus have?
7. What is the structure of the HA protein? (discuss precursor and metastable states)
8. How is entry facilitated?
9. How is fusion facilitated?
10. What two things can be targeted during this entry/ fusion process?
11. Upon entry to the nucleus what immediately occurs?
12. The incoming negative sense genome is in what form?
13. What are the components of the viral RNA polymerase? This RNA pol lacks activity until what occurs?
14. Describe this initial process and elongation.
15. What causes the switch to replication?
16. What acts as the template for progeny?
17. Is genome replication primer dependent or independent?
18. What does translation of viral mRNAs generated produce that is necessary for replication?
19. Describe replication.
20. How does viral exit, i.e. budding occur?
21. How can budding be inhibited?
22. Why the need for 8 segments?
23. What is very noticeable about the distribution of flu?
24. How many variations of H and N are there? How many infect humans?
25. What is antigenic drift and shift?
26. How can shift occur?
27. Why can pigs be infected with both avian and human flu but humans cant normally be infected with avian and vica versa?
28. What were the three serious flu pandemics in the 20th century? When did they occur?
29. During the first pandemic, what was the strain? What about the other two?
30. What made the 2009 swine flu outbreak?
31. What causes the difference in transmissibility of some flu?
32. What flu vaccines are there?
33. Efficacy in inactivated one?