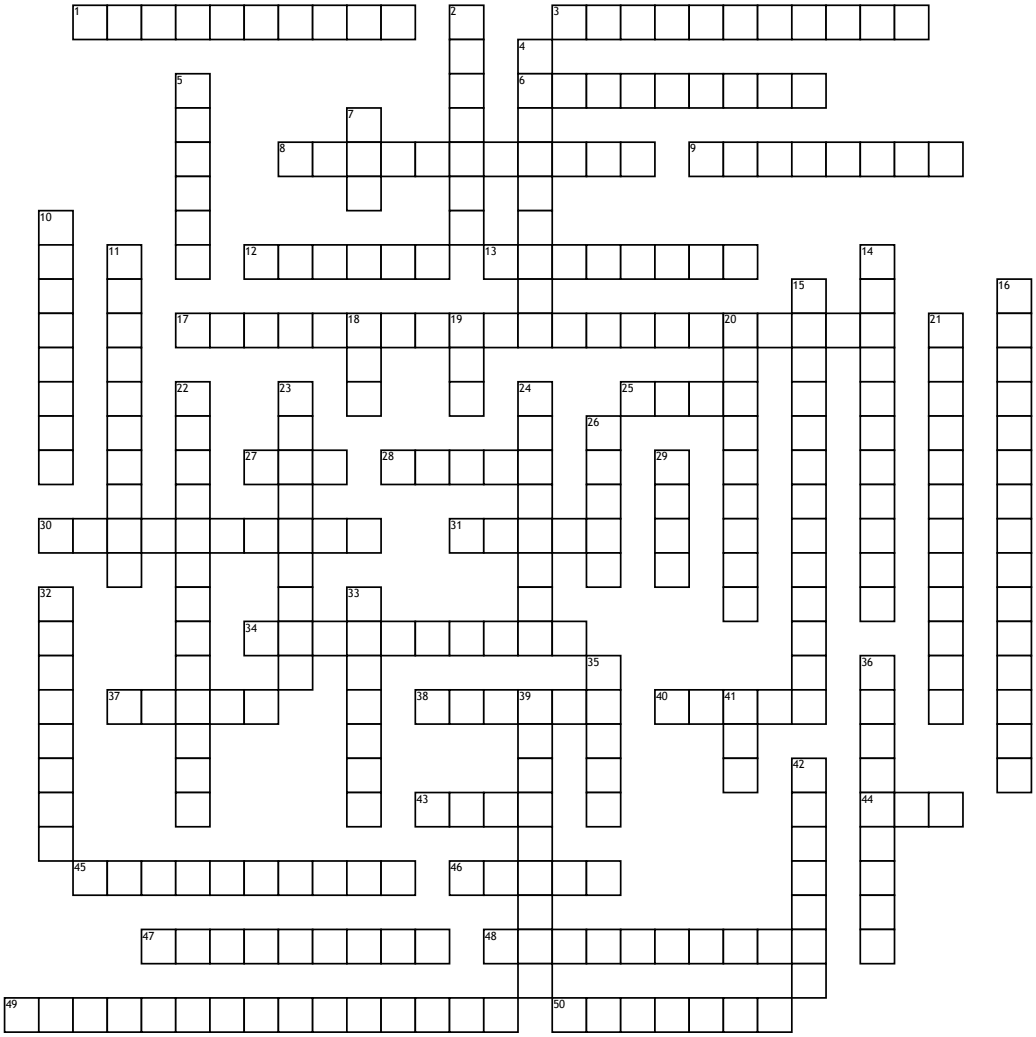
Name: _____ Date: _____

Clostridium difficile



Across

1. Reduces risk of C. difficile infection

3. Disrupts natural microflora in the gut

6. Highly resistant dormant form of vegetative bacteria

8. Antibiotic not widely accepted but is associated with lower recurrence rate in patients

9. Antibiotics that treat broad illness ___ induction rate compared to other antibiotics

12. Strains can be differentiated by different ___ techniques

13. Rod shaped characteristic for bacteria

17. C. difficile has been assigned to the ___ family in the latest taxonomic reviews

25. Inhibitory gene ___ increase toxin A and B production

27. Expression of LCT (large clostridial toxin family) is regulated by ___ locus

28. This regulator controls the transition from bacterium to spore form

30. Antibiotic to treat severe infection

31. Colonizes in the ___ intestines

34. Hospital acquired sickness

37. Spread of species is through ___-oral route by ingesting its spores

38. The ___ gender have higher tendency to contract illness from C. difficile

40. C. difficile makes ___ types of toxins

43. Substance in intestine that affect growth of C. difficile

44. People with low antitoxin A ___ were likely to die during the first 30 days of infection

45. ___ gene transfer of PaLoc can cause nontoxigenic strains to produce toxins

46. Toxins found in ___ help diagnose C. difficile infections

47. Only ___ strains cause illness in humans

48. Natural protective barrier found in the intestine

49. Toxins A and B causes ___ reactions in the body

50. Binary toxin ___ virulence

Down

2. First isolated from healthy ___ stool

4. Spores are ___ to heat, acid, and antibiotics

5. Most commonly infiltrated colon segment

7. Detection of ___ identifies C. difficile antigens

10. Gram ___ have a thick peptidoglycan layer

11. Uses the 16S-23S intergenic spacer region in rRNA gene complex to differentiated strains

14. Alcohol-based hand hygiene products are ____ when preventing spores

15. Antibiotic used to treat non-severe infection

16. False membrane that contains destroyed fibrin, neutrophils, and intestinal cells

18. Have at least ___ phylogenetic clades

19. Low cost and easy to use, but needs other tests

20. There are three ___ genes on the PaLoc to regulate and release toxin

21. Infected majority presents as ___

22. Genes for toxins A and B are encoded on the ___ Locus (PaLoc)

23. Toxic ___ is one form of clinical presentation

24. Most common symptom

26. Hospital cases tends to infect ___ people

29. Potent inflammatory toxin

32. PaLoc lacks any known ___ genes and repeats at its borders

33. Community cases tends to infect ___ people

35. ___ transplantation have the highest rate to prevent recurring infection

36. This algorithm improves diagnostic sensitivity and specificity

39. Grows in absence of oxygen

41. Toxins A and B inactivates ___ GTPases

42. Asymptomatic carriers show great ___ immune response against the toxins