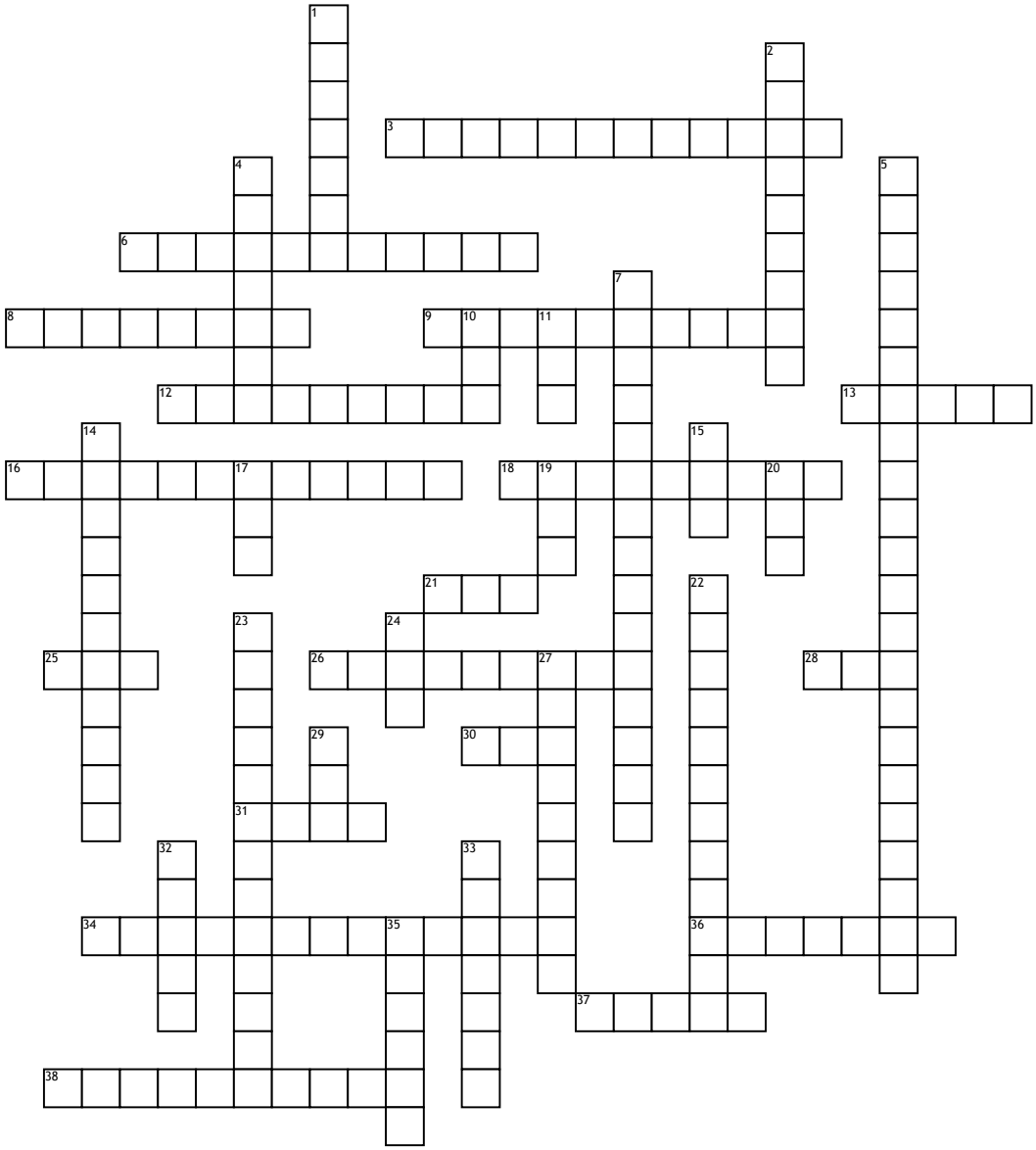
Metabolism



Across

3. accepts electrons from CoQ

6. accepts electrons from cytochrome c

8. formed in beta-oxidation when a single bond between two carbons is converted to a double bond

9. FADH2 is oxidised here in the ETC

12. involved in the transport of fatty acids into mitochondria

13. part of ATP synthase that spins

16. where the CAC, beta-oxidation and ETC occur in a cell

18. rotate when protons pass through them

21. ATP is converted to this when CoA is added to a fatty acid

25. energeticaly equivalent to GTP

26. product of the pyruvate dehydrogenase reaction

28. cleavage of succinylCoA releases energy to make this

30. number of FADH2 produced in the CAC

31. formed in beta-oxidation when an alcohol group is oxidised

34. gas released when pyruvate is metabolised by pyruvate dehydrogenase

36. involved in the transport of fatty acids in blood

37. added to a double bond during beta-oxidation

38. NADH is oxidised here in the ETC

Down

1. energetics of fatty acid movement in to a cell

2. product of beta-oxidation

4. number of protons required by ATP synthase to make one

5. translocates protons across the inner mitochondrial membrane

7. pyruvate loses a carbon by oxidative _____

10. number of NADH and FADH2 produced in each round of beta-oxidation

11. made by the electron transport chain

14. uses proton motive force to make ATP

15. number of electrons accepted by cytochrome c

17. number of NADH produced in the pyruvate dehydrogenase reaction

19. protons translocated across inner mitochondrial membrane for each FADH2

20. protons translocated across inner mitochondrial membrane for each NADH

22. this is added to acetylCoA to make citrate

23. produced in the decarboxylation steps of the CAC

24. rounds of beta-oxidation required for a 22,0 fatty acid

27. takes electrons from Complex I and Complex II

29. oxidised form of FADH2

32. number of NADH produced in the CAC

33. tissue in which TAGs are stored

35. gets reduced to water