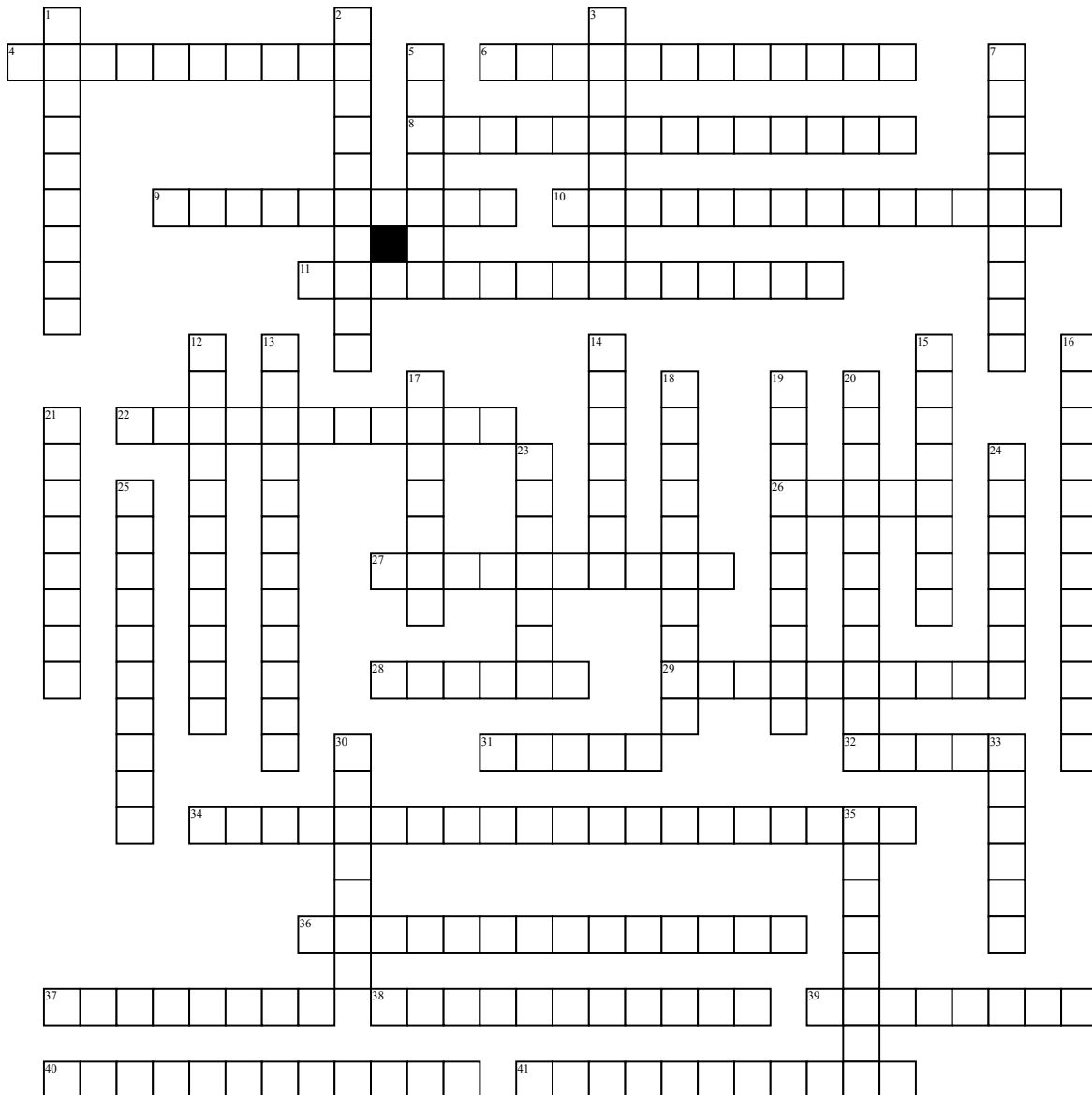


Assignment 2 - Statins Puzzle



Across

4. one of first statins to be isolated, not available to human treatment (Compactin)
 6. statins are observed to help preserve endothelial nitric oxide synthase which leads to:
 8. an adverse effect of statin use can result in an increase of this enzyme
 9. vital mitochondrial electron transporter molecule that can be potentially reduced with statins
 10. breakdown of damaged skeletal muscle – most severe adverse effect of statin use
 11. hypercholesterolemia is a main risk factor for this condition
 22. refers to the hydrophilic and lipophilic nature of statins
 26. statins are metabolized by this organ before entering circulation, decreasing bioavailability to 5-30%
 27. key compound in cholesterol production that is reduced by statins
 28. statins are typically substrates for this CYP enzyme
 29. major area of absorption of statins
 31. contains about 25% of body's cholesterol, which may be affected by statins
 32. common electron carrier serving as a cofactor for the reduction of HMG-CoA to mevalonate
 34. presence of high levels of cholesterol in the blood
 36. major family of enzymes that metabolize statins

37. patients on statin therapy may show lower erosion of this part of the chromosome
 38. more lipophilic and potent statin derived from lovastatin (Zocor)
 39. 1 of 2 isoprenoid intermediates decreased by statins – decrease inflammatory response
 40. statin with low rate of renal excretion allowing for use in patient with impaired renal function (Lipitor)
 41. major course of HMG-CoA reductase
Down
 1. blood in urine – rare side effect associated with statins
 2. statins first studies for this use, to reduce cholesterol synthesis in bacteria
 3. compound required for glycoprotein synthesis that can be reduced with statin use
 5. lovastatin and simvastatin are prodrugs containing this closed-ring functional group
 7. drug often paired with statins to increase antilipidemic effect
 12. any combination of fats/lipids with proteins in the blood plasma
 13. other class of lipids that can be reduced with statins
 14. statins are known to increase resistance to this hormone, which can lead to diabetes
 15. halide added in newer generation statins in increase substrate binding

16. about 100x more potent than lovastatin, withdrawn from market increased toxicity
 17. buildup of cholesterol in blood vessels which can result in heart disease
 18. second derivative of statin discovered (Altacor)
 19. source of first isolated cholesterol crystals extracted in 1784
 20. derivative of Compactin, not needing activation when absorbed (Pravachol)
 21. possible adverse tumor formation in very high doses of lovastatin
 23. common adverse effect of statin use
 24. inhibitors of HMG-CoA reductase
 25. lipoprotein associated with increased cholesterol, excess can lead to heart disease
 30. 1 of 2 isoprenoid intermediates decreased by statins – decrease inflammatory response (bound to pyrophosphate)
 33. precursor to mevalonate, substrate for HMG-CoA reductase
 35. Use of statins are shown to _____ levels of HMG-CoA reductase in the liver