



Molecular Terms Quiz – Answers

by Laura King, MA, ELS

Directions: Edit the following sentences based on your understanding of section 15.10 of the *AMA Manual of Style*. Refer to Table 13 on pages 715-720. Although the AMA recommends that terms described as terms be italicized, for the purpose of clarity in this quiz terms described as terms are not italicized.

1. On degradation to acetyl-CoA, odd-chain fatty acids end up with propionyl-CoA, which requires carboxylation to an even-chain fatty acid.

ANSWER:

On degradation to acetyl coenzyme A (CoA), odd-chain fatty acids end up with propionyl-CoA, which requires carboxylation to an even-chain fatty acid.

Editor's Note: *Acetyl-CoA is the acetyl derivative of coenzyme A. At first mention, use acetyl coenzyme A; thereafter, the abbreviation CoA can be used (§15.10.2, Molecular Terms: Considerations and Examples, pp 713-720 in print).*

2. In cystic fibrosis airway epithelial cells, azithromycin reduced DNA binding of the interleukin 8 transcriptional regulator NF-κB.

ANSWER:

In cystic fibrosis airway epithelial cells, azithromycin reduced DNA binding of the interleukin 8 transcriptional regulator nuclear factor-κB.

Editor's Note: *NF-κB stands for nuclear factor-κB and should be spelled out at first mention; thereafter, the abbreviation NF-κB can be used (§15.10.2, Molecular Terms: Considerations and Examples, pp 713-720 in print).*

3. This study evaluated the predictive value of glycosylated HbA_{1c} for retinopathy 10 years after the baseline examination.

ANSWER:

This study evaluated the predictive value of glycated hemoglobin A_{1c} for retinopathy 10 years after the baseline examination.

Editor's Note: *HbA_{1c} is a glycated (not glycosylated) hemoglobin fraction. The preferred term is glycated hemoglobin A_{1c} (§15.10.2, Molecular Terms: Considerations and Examples, pp 713-720 in print).*

4. Corneal hydration is mainly regulated by endothelial barrier function and ionic gradients set up by the Na,K-ATPase (sodium-potassium-adenosine triphosphatase) pump.

ANSWER:

Corneal hydration is mainly regulated by endothelial barrier function and ionic gradients set up by the sodium-potassium adenosine triphosphatase pump.

Editor's Note: Simple chemical names (eg, sodium and potassium) should always be spelled out. The term ATPase means adenosine triphosphatase and should be spelled out at first mention; thereafter, the abbreviation ATPase can be used (§15.10.2, Molecular Terms: Considerations and Examples, pp 713-720 in print).



5. Because of the small number of patients, the investigators could not statistically correlate HER2/neu protein expression or *HER2/neu* gene amplification and survival.

ANSWER:

Because of the small number of patients, the investigators could not statistically correlate ERBB2 (formerly HER2/neu) protein expression or *ERBB2* gene amplification and survival.

Editor's Note: The preferred term for HER2/neu is now ERBB2. It is appropriate to indicate the former term in parentheses. When used as a gene name, the term should be italicized (§15.10.2, Molecular Terms: Considerations and Examples, pp 713-720 in print).

6. Although the benefits of HMG-CoA reductase inhibitors (statins) for reducing the risk of cardiac and cerebrovascular disease are well established, more widespread use of statin therapy remains controversial.

ANSWER:

Although the benefits of b-hydroxy-b-methylglutaryl-coenzyme A inhibitors (statins) for reducing the risk of cardiac and cerebrovascular disease are well established, more widespread use of statin therapy remains controversial.

Editor's Note: *The terms b-hydroxy-b-methylglutaryl and coenzyme A should be spelled out at first mention and can be abbreviated thereafter as HMG-CoA (§15.10.2, Molecular Terms: Considerations and Examples, pp 713-720 in print).*

7. TBP (Tata box binding protein) was used as a reference marker.

ANSWER:

The TATA-binding protein was used as a reference marker.

Editor's Note: *The term TBP means TATA-binding protein and should be spelled out at first mention; thereafter, the abbreviation TBP can be used. Note that TATA uses all capital letters (§15.10.2, Molecular Terms: Considerations and Examples, pp 713-720 in print).*

8. The investigators demonstrated that inactivation of Akt kinase results in decreased cell survival when cells are exposed to doxorubicin.

ANSWER:

The investigators demonstrated that inactivation of Akt results in decreased cell survival when cells are exposed to doxorubicin. OR The investigators demonstrated that inactivation of protein kinase B results in decreased cell survival when cells are exposed to doxorubicin.

Editor's Note: *Akt kinase is a serine-threonine kinase, also known as protein kinase B, related to the akt oncogene. At first mention, Akt or the full term, protein kinase B, may be used (§15.10.2, Molecular Terms: Considerations and Examples, pp 713-720 in print).*

9. On the basis of data from in vitro and clinical studies, nonsteroidal anti-inflammatory drugs were classified as COX-1 selective, COX-1 nonselective, and COX-2 selective according to their relative selectivity for the COX-1 and COX-2 enzymes at therapeutic dosages.

ANSWER:

On the basis of data from in vitro and clinical studies, nonsteroidal anti-inflammatory drugs were classified as cyclooxygenase (COX) 1 selective, COX-1 nonselective, and COX-2 selective according to their relative selectivity for the COX-1 and COX-2 enzymes at therapeutic dosages.

Editor's Note: *The term COX stands for cyclooxygenase and should be spelled out at first mention; thereafter, the abbreviation COX, with its number (eg, COX-1 and COX-2), can be used (§15.10.2, Molecular Terms: Considerations and Examples, pp 713-720 in print).*



10. Cetuximab leads to cell-cycle arrest in G₁ phase, which induces apoptosis and inhibits tumor angiogenesis.

ANSWER:

Cetuximab leads to cell-cycle arrest in G₁ phase, which induces apoptosis and inhibits tumor angiogenesis.

Editor's Note: G₁ indicates the growth or gap 1 phase of the cell cycle. The term G₁ can be used without expansion and the 1 should be subscript (§15.10.2, *Molecular Terms: Considerations and Examples*, pp 713-720 in print).

11. The receptor activator of nuclear factor κ B ligand (RANKL) is essential for osteoclast and, possibly, osteoblast activation; therefore, RANKL may represent a key link between bone formation and resorption.

ANSWER:

The receptor-activated nuclear factor- κ B ligand (RANKL) is essential for osteoclast and, possibly, osteoblast activation; therefore, RANKL may represent a key link between bone formation and resorption.

Editor's Note: The correct expansion for RANKL is receptor-activated nuclear factor- κ B ligand; thereafter, the abbreviation RANKL can be used (§15.10.2, *Molecular Terms: Considerations and Examples*, pp 713-720 in print).

12. The reduced nicotinamide adenine dinucleotide (NADH) oxidase activity (normalized to citrate synthase activity) was significantly lower in lymphocytic mitochondria from children with autism compared with controls.

ANSWER:

The NADH oxidase activity (normalized to citrate synthase activity) was significantly lower in lymphocytic mitochondria from children with autism compared with controls.

Editor's Note: The term NADH can be used without expansion, or the phrase reduced (or hydrogenated) NAD can be used instead (§15.10.2, *Molecular Terms: Considerations and Examples*, pp 713-720 in print).

