validity of hypothetical therapeutic targets. Rapid validation or invalidation of a potential therapeutic target provides an opportunity to redirect resources to areas more likely to bear fruit and away from "dry holes." Translation medicine and biomarkers are not always available, but modern drug discovery and development scientists who take advantage of these tools when they are available are likely to be a step ahead of those who do not.

QUESTIONS

1. What is the definition of translational medicine?
2. What are the two categories of translational medicine?
3. What is the focus of the four subcategories of translational medicine (T1–T4)?
4. What is a biomarker?
5. What are the major categories of biomarkers?
6. What qualities should an ideal biomarker possess?
7. What is a surrogate endpoint?
8. What are the benefits of using surrogate endpoints and biomarkers in a clinical trial?
9. What are the major types of imaging technology that can be used to peer inside the human body in a non-invasive manner?
10. Why is radioactive decay rate an important issue in PET imaging experiments?
11. Why is it sometimes necessary to develop an alternate synthetic pathway for a PET radioligand as compared to the non-radioactive compound of the same structure?
12. Why is low non-specific binding to proteins an important feature of PET and SPECT imaging?
13. What are the desired pharmacokinetic properties of a PET or SPECT radioligand?

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