TEST QUESTIONS

1. Personalized medicine relies on the patient’s
   o a. genetic factors.
   o b. lifestyle factors.
   o c. environmental factors.
   o d. all of the above

2. The approach of personalized medicine
   focuses on treating patients based on their
   individuality with regard to disease, drug,
   and dosages.
   o a. True
   o b. False

3. Adverse drug reactions (ADRs) are the _____
   leading cause of death in the United States.
   o a. second
   o b. third
   o c. fourth
   o d. fifth

4. Pharmacogenomics refers to the effect
   of a single gene on drug response, while
   pharmacogenetics studies the relationship
   between genomic variations and their effect
   on drugs.
   o a. True
   o b. False

5. What study is the main driver in determining
   a personalized drug regimen for a patient?
   o a. pharmaceutical sales
   o b. pharmacokinetics
   o c. pharmacogenetics
   o d. pharmacogenomics

6. According to the Human Genome project,
   what percent of genes are responsible for an
   individual’s predisposition to disease?
   o a. 0.5
   o b. 1
   o c. 1.5
   o d. 10

7. Which DNA sequence variations act as
   biological markers that determine an
   individual’s response to certain drugs?
   o a. DNAs
   o b. SNVs
   o c. CNPs
   o d. CNVs

8. Personalized drug dosing regimens must
   include an understanding of
   o a. pharmacogenomics (PGx).
   o b. pharmacodynamics (PD).
   o c. pharmacokinetics (PK).
   o d. all of the above

9. The sum of a drug being utilized by the
   body through absorption, distribution,
   metabolism, and excretion is the
   a. PD.
   b. PK.
   c. PGx.
   d. none of the above

10. The physiological and biochemical effects
    that a drug has on the body and how well
    the target cell responds to the drug are the
    a. PD.
    b. PK.
    c. PGx.
    d. PCK.

11. A shift in the balance of PK and PD depends
    on the innate genetic polymorphism of an
    individual.
    o a. True
    o b. False

12. Which polymorphic gene(s) has/have been
    shown to affect the distribution of a drug?
    o a. ABCB1
    o b. ABCB1 and SLC01B1
    o c. SLC01B1
    o d. SLC01B1 and ABCB1

13. The highest levels of polymorphism are
    found in genes involved in drug
    a. distribution.
    b. metabolism.
    c. absorption.
    d. excretion.

14. Which gene accounts for the majority of
    current PGx drug labeling requirements by
    the FDA?
    o a. CYP450
    o b. CPT450
    o c. CYP450
    o d. CPT450

15. Pharmacogenomics information is currently
    present on about _____ drug labels.
    o a. 50
    o b. 140
    o c. 250
    o d. 500

16. How is information on pharmacogenomics
    labeled for a given drug?
    o a. boxed warnings
    o b. FDA clinical pharmacology section
    o c. both a and b
    o d. neither a nor b

17. As of March 2017, the Clinical
    Pharmacogenetics Implementation
    Consortium has published _____ guidelines
    on drug therapy pharmacogenetics
    information.
    o a. 10
    o b. 18
    o c. 36
    o d. 54

18. Pharmacogenetics is also showing a
    promising role in the management of
    adverse drug reactions from drug-drug
    interactions in the neonatal population.
    o a. True
    o b. False

19. What is the name of the study that the
    National Institutes of Health plans to
    launch to further research in understanding
    diseases, diagnoses, and treatment
    strategies?
    o a. AllOfUs
    o b. EachOfUs
    o c. EachOneDifferent
    o d. none of the above

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