

Test Bank for Brody's Human Pharmacology 6th Wecker

SELF-ASSESSMENT QUESTIONS

1. Binding of a drug to its target most often:
 - A. Involves covalent binding between the target and the drug.
 - B. Involves more than one type of weak bond between the drug and its target.
 - C. Requires long-lasting stable bonds between the drug and its target.
 - D. Has a similar affinity for the several stereoisomers of the drug.
 - E. Is characterized by high K_D values.
2. A patient was being maintained on a β -adrenergic receptor antagonist to control hypertension. The continuous exposure of receptor to this antagonist can:
 - A. Result in supersensitivity.
 - B. Desensitize the receptor.
 - C. Produce tachyphylaxis.
 - D. Cause down regulation of the receptor.
 - E. B and C are correct.
3. Which of the following statements regarding drugs' action and cell surface receptors is not correct?
 - A. By acting on receptors, drugs can enhance, diminish, or block generation or transmission of signals.
 - B. The K_D of drug binding to receptors can vary widely.
 - C. Agonist drugs are highly specific for each subtype of receptor in various classes of receptors.
 - D. More than one drug molecule may be required to bind to a receptor and elicit a response.
 - E. Receptors are frequently glycosylated.
4. Which of the following processes are involved in intracellular signaling cascades?
 - A. Tyrosine phosphorylation.
 - B. Receptor association with and stimulation of G proteins.
 - C. Formation of second messengers, such as cAMP.
 - D. Mobilization of Ca^{2+} from the endoplasmic reticulum.
 - E. All of the above.

5. An in vitro experiment was performed that involved adding two different drugs to a solution bathing a strip of intestinal smooth muscle. Both drugs cause relaxation of the muscle but had very different EC_{50} values. Based on this single piece of information, which of the following statements is most correct?
- A. The two drugs have similar chemical structures.
 - B. The two drugs have different potencies in causing relaxation.
 - C. Both drugs activate the same receptor in the muscle.
 - D. Both drugs are directly acting agonists.
 - E. The maximum relaxation caused by the two different drugs will be similar.
6. The affinity constant of a drug for its target (K_D) is:
- A. An intrinsic property of the binding site of the target molecule for the drug and the drug itself.
 - B. The ratio of the reverse to forward rate constants for the drug-target binding equation.
 - C. Determined by the rate of diffusion of the drug in plasma.
 - D. Characterized by A and B above.
 - E. Characterized by C only.
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