

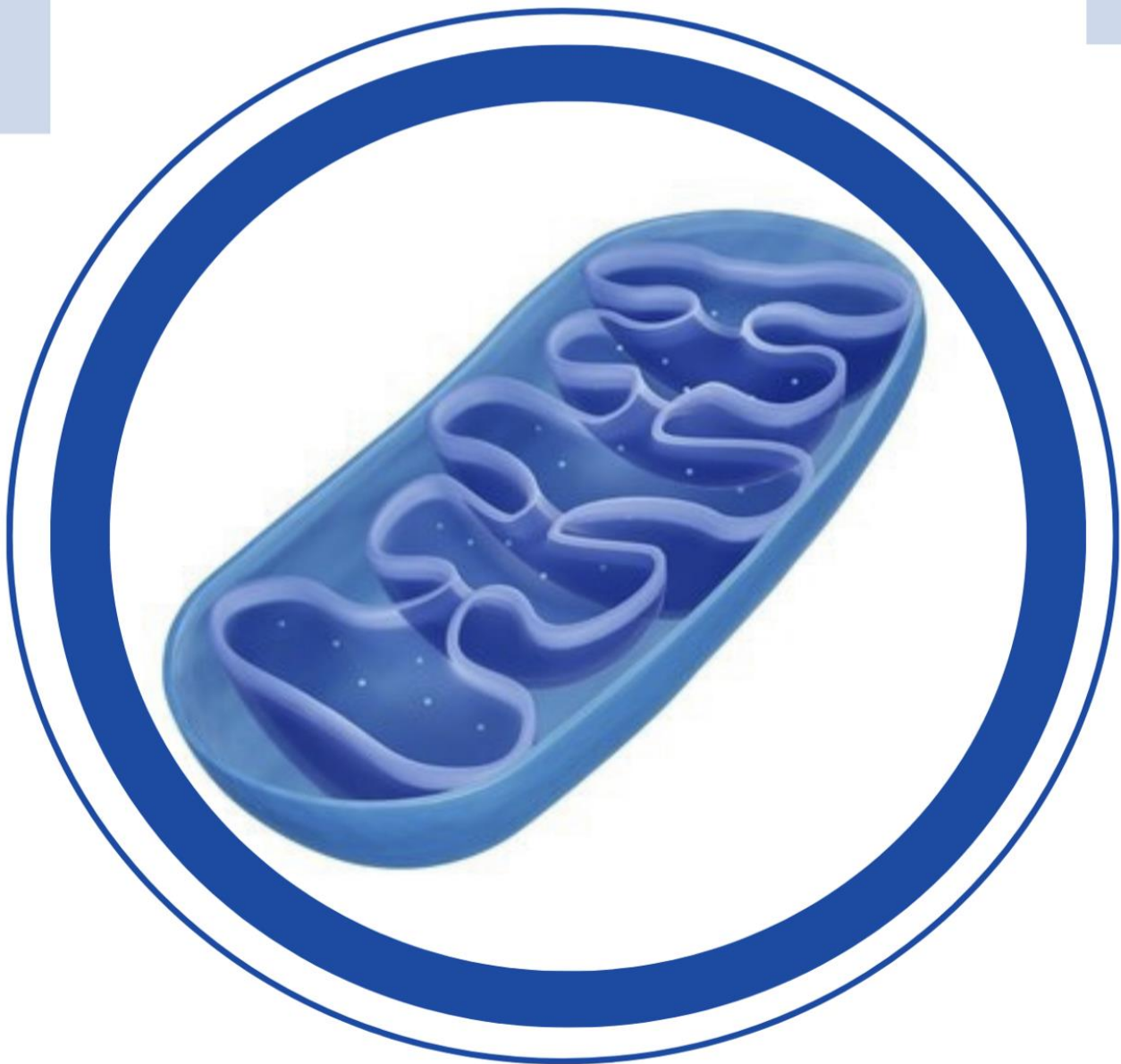


Doctor 021

ENDOCRINE

METABOLISM

PAST PAPERS (017 - 020)



WRITER:
Dema Alajouz
Eman Amjad

CORRECTOR:
Dema Alajouz
Eman Amjad

1-Which is the Largest Hormone:

- A. Glucagon
- B. Angiotensin II
- C. dihydrotestosterone
- D. Thyroxine
- E. Epinephrine

2-Which of the following is NOT true about cholera toxin

- A. increases cAMP inside the cell
- B. causes flow of NaCl outside the cell and can lead to dehydration.
- C. Associated with Tyrosine Kinase

Answers: A - C

3- Best definition of permissive:

- A. one hormone is precursor to the other
- B. one hormone antagonize the other
- C. one hormone is needed to have a larger effect
- D. both hormones have the same action

4-The hormone with the longest $t_{1/2}$ is:

- A. insulin
- B. epinephrine
- C. glucagon
- D. progesterone

Answers: C - D

5-which one of the following is correct about the 7TM receptors:

A-dimer

B- can be phosphorylated on the intracellular domain.

C- linked to tyrosine kinase activity.

D- arrestin catalyzes the phosphorylation of the intracellular domain.

6- all of the following are correct regarding Protein Kinase C except:

A-when activated, it phosphorylates specific tyrosine residues.

B- binds to membrane phospholipids when activated.

C-activated by DAG

D- activated by Ca^{+2}

E- has a pseudo-substrate sequence.

Answers: B - A

7- True about IP3 "inositol 1,4,5-triphosphate":

A- is generated by phosphorylating inositol diphosphate.

B- activates protein Kinase C

C- its activity can be augmented by phosphorylating it into inositol tetraphosphate.

D- produced by G protein-activated enzyme.

8- One of the following domain causes tyrosine phosphorylation:

A- SH2

B- SH3

C-Product of the Rous sarcoma viral gene

D- RAS

E-All of the above

Answers:D - A

9- which statement of the following is incorrect regarding steroid hormone synthesis:

A- Oxidation of the 18-methyl group of corticosterone produces aldosterone.

B- Hydroxylation of progesterone occurs to synthesize androgens.

C- Testosterone can be produced by estrogen methylation.

10- One of the following isn't produced from a specific large precursor:

A-ACTH

B- TSH

C-MSH

D- B-Endorphin

E - Enkephalin

Answers: C- B

11 - If you know that the dissociation Constant K_d equals to 30 ng: At which concentration the receptors will be saturated:

A- 300 Mg

B- 0.6 ug

C- 0.03 Mg

12- Which of the following activate GTP hydrolysis:

A) B- Subunit.

B) The $\alpha\beta\gamma$ heterotrimer of G- protein.

C) RAS

13- The pseudo substrate domain found in:

A) Calmodulin.

B) phosphoinositide.

C) protein kinase C.

Answers: B – C – C

14- Which of the following is right about arrestin binding to a receptor:

- A) activates the G -protein.
- B) Arrestin is bounded to- phosphorylated receptor

15- The EF- domain is found in:

- A) Protein Kinase C.
- B) Calmodulin.

16- What must happen instantly in order to prevent overstimulation by a

- A. Hormones must be degraded and then resynthesizes.
- B. G-proteins must be recycled and then degraded.
- C.Receptors must dimerize.
- D.Receptors must be blocked from continuing to activate G-proteins.

Answers: B - B – D

17- Regardless of how a signal is initiated, the ligand-binding event is propagated via second messengers or protein recruitment.

What is the ultimate, or final biochemical outcome of these binding events?

A. A protein at the bottom of an intracellular signaling pathway is activated.

B. A protein at the top of an intracellular signaling pathway is activated.

C. A protein at the top of an extracellular signaling pathway is activated.

D. A protein in the middle of an intracellular signaling pathway is activated.

E. A protein at the top of an intracellular signaling pathway is deactivated.

Answer: A

18- All domains exist in PKC except:

- A- G protein
- B- calcium binding domain
- C- DAG binding domain (C1)
- D- catalytic domain

19- which hormone Has the least number of peptides

- A- ADH
- B- TRH
- C- CRH

Answers: A – B

20- True about G proteins:

- A- alpha 2 receptors usually are inhibitory.
- B- β 1- or β 2-adrenergic receptors are inhibitory
- C- β 1/ β 2-adrenergic receptors increase IP3

21- Which one doesn't use cAMP as 2nd messenger?

- A- Glucagon
- B- ACTH
- C- Insulin

Answers: A – C

22- removed 😊

23- Ras is a:

- A- Extracellular receptor
- B- Monomeric GTPase protein
- C- Has 3 subunits

24- True about IP3:

- A- It's Cooperative binding is sigmoidal curve.
- B- The full opening of the calcium channels is achieved if the channel is bounded to 2 IP3.

Answers: B – A

25- a receptor that get dimerized after a hormone bound to it :

- A- Jauns kinase 2
- B- Calmodulin

Ans: A

ربّ اشرح لي صدري و يسر لي أمري و احل عقدة من لساني
يفقهوا قولي

Check the yellow color