

A mutation affecting the transcriptional activity of a new gene associated with Alzheimer's disease is reported. The mutation is most likely to be in which of the following?

- a) 3' untranslated region
- b) Mitotic spindle
- c) Poly(A)⁺ tail of mRNA
- d) Promoter region *
- e) Rough endoplasmic reticulum

Which of the following structures is most usually larger in the left than the right hemisphere in a healthy right-handed man?

- a) Frontal lobe
- b) Hippocampus
- c) Inferior temporal gyrus
- d) Internal capsule
- e) Planum temporale *

Select the correct statement regarding the blood-brain barrier.

- a) It actively transports L-DOPA into the brain.
- b) It facilitates entry into the brain of drugs that are highly ionized.
- c) It includes transport mechanisms. *
- d) It refers simply to morphological features of cerebral capillary endothelial cells.
- e) Weak organic acids are passively removed from the brain at the choroid plexus.

Select the adverse effect particularly associated with lamotrigine.

- a) Prolactin elevation
- b) QT prolongation
- c) Stevens-Johnson syndrome *
- d) Weight loss
- e) Worsening of psoriasis

The inhibition of which enzyme is responsible for the effect of disulfiram?

- a) Acetylcholinesterase
- b) Alcohol dehydrogenase
- c) Aldehyde dehydrogenase *
- d) Catechol-O-methyl-transferase
- e) Monoamine oxidase

You are planning to develop an early intervention service for people with psychosis. Which of the following factors is most strongly associated with a long duration of untreated psychosis?

- a) Insidious onset *
- b) Living alone
- c) Low socio-economic status
- d) Lower level of education
- e) Non-white ethnicity

A patient with schizophrenia informs you that a neuropsychologist told him he was impaired on the Hayling Test. He asks you what that means. In which of the following functions would you suggest a deficit?

- a) Response inhibition. *
- b) Tendency to black and white thinking.
- c) Tendency to jump to conclusions.
- d) Verbal fluency.
- e) Visuo-spatial sequencing.

Theme: Genetic mapping

Options:

- A. Concordance
- B. Epigenetic
- C. Genetic association
- D. Genetic linkage
- E. Haplotype
- F. Heritability
- G. Linkage disequilibrium
- H. Penetrance
- I. Recombination fraction

Lead in: From the list of options above, choose the **ONE** most appropriate to the descriptions below.

Each option might be used once, more than once, or not at all.

Which term refers to genetic inheritance that does not involve DNA sequence variation? Choose **ONE** option. B

Which term describes the likelihood that a disease-causing mutation leads to the disease phenotype? Choose **ONE** option. H

Which term describes the contribution of genetic factors to a trait in a population? Choose **ONE** option. F