

1. Please describe 3 structural features of α -helices and β -conformations.
2. Please compare the H-bond in α -helices and β -conformations. 請比較 H-bond 在 α -helices and β -conformations 中相同與相異處.
3. **Please compare the structural properties of myoglobin and hemoglobin and explain why is myoglobin is suitable for oxygen storage and hemoglobin is suitable for oxygen transport.**

比較兩種與氧氣結合的蛋白質：肌紅素 (myoglobin) 與 血紅素 (hemoglobin)：

- (a) 主要功能: _____
- (b) 出現的組織或細胞: _____
- (c) 構形(conformation)數目: _____
- (d) 生肽鏈組成數目: _____
- (e) 與氧氣結合曲線的形狀: _____
- (f) 是否俱有協同作用(cooperativity): _____

並說明為何肌紅素適合氧氣儲存而血紅素適合氧氣運送?

4. What the Bohr Effect? Please draw the O_2 binding curve of Hb to show this effect.