

中山醫學大學 99 學年度碩博士班甄試入學招生考試試題

醫學研究所博士班 乙組

考試科目：分子生物學

時間：80 分鐘

※請注意本試題共(1)張，如發現頁數不足，應當場請求補齊，否則缺頁部份概以零分計算。第 (1)

新聞稿

本試題共一大題，總分 100 分。

一、問答題：

1. Nobel Prize in Physiology of Medicine in this year is related to telomere and telomerase. Please describe the functions of telomere DNA and telomerase (20%)
2. Please describe the differences between epigenetic alteration and mutation? List the forms of epigenetic alterations? (20%)
3. What are the differences and advantages between RT-PCR and Real-time PCR? In what conditions would you use these techniques? (15%)
4. Describe the characteristics and functions of mRNA (messenger RNA) and miRNA (micro RNA) (15%)
5. Describe the steps of gene expression in eukaryotic cells (30%)