國立嘉義大學九十四學年度
生物藥學研究所碩士班招生考試試題

科目：細胞生物學

一、申論題：90 分

1. How do we define primary cells, cell lines, and tumor cells? （15 分）
2. A 42-residue peptide has been implicated in formation of amyloid plaques in Alzheimer's disease, please describe molecular mechanism of the formation of this 42-residue peptide.（20 分）
3. Describe the molecular mechanism of protein degradation through ubiquitin.（20 分）
4. How can we utilize micro-array assay to study genes' functions in cells? (15 分)
5. What is proteomic assay? Please explain its principle and application for studying proteins' functions in cells. (20 分)

二、簡答題：10 分 (每題 5 分)

1. Nitric oxide could cause relaxation of the smooth muscle cells surrounding the blood vessels, what's the intracellular receptor for nitric oxide?
2. What are the mammalian cell-surface pattern recognition receptors responsible for triggering host cell in response to pathogens in most innate immunity? And what kinds of cells are abundant with these receptors?