

Biochemistry Cumulative Examination

February 2, 2012, Total 100 points

1. Briefly describe the overall process of macroautophagy, including the sequence of various vesicle formation (25 points).
2. Briefly describe a key signaling pathway that increases or increases the longevity, respectively, through regulation of autophagy (25 points).
3. Summarize the anti-aging effects of autophagy on proliferating and post-mitotic cells (25 points)
4. Briefly describe how autophagy modulates immune responses (25 points).