

---

**B-2****Oxidation of Ferrocyanochrome c by Membrane-Associated Ferricytochrome c**

Yu Shin Kim\* and Sanghwa Han

Division of Biological Sciences, Kangwon National University

Positively charged cytochrome c interacts with the negatively charged mitochondrial inner membrane. This interaction induces conformational changes in bound cytochrome c. In order to estimate the effect of cytochrome c-membrane interaction on the mitochondrial electron transfer, we have investigated oxidation of ferrocyanochrome c in the presence of anionic phospholipids. Ferricytochrome c became oxidized when added to anionic vesicles in the presence of molecular oxygen. The rate of oxidation increased with surface charge density (*i.e.* mole fraction of anionic phospholipid) of the membrane. Oxidation was also accelerated when ferricytochrome c was bound to the vesicles prior to addition of ferrocyanochrome c. Instantaneous oxidation of ferrocyanochrome c was observed when ferricytochrome c was incubated with the vesicles of neat anionic phospholipids. The results suggest that membrane bound ferricytochrome c has higher redox potential so that it accepts electrons from unbound ferrocyanochrome c.