

**Active oxygens(151-158)**

- 151                                    Role of  $O_2^-$  in "Kada Effects"  
                                      Takahiro MASUDA, Tokyo Metropolitan University,  
                                      Faculty of Science, Department of Chemistry, Hachioji 192-03.

A mechanism of "Kada Effects", which was presented at 34th Meeting, has been reexamined on formation of  $ClOH^-$  at neutral pH, possibility of participation of citrate peroxy radical or DNA peroxy radical, and a possible occurrence of Fenton reaction. Participation of DNA peroxy radical is denied because of their bimolecular process leading to single strand break. Fenton reaction was already denied by Takakura et al. with the experiment on after effect. The mechanism containing citrate peroxy radical can afford an excellent simulation curve, but the estimated rate constant for unimolecular decay of the peroxy radical to get meaningful fit is extraordinarily small compared with ones for analogous organic peroxy radicals. This implies no participation of the peroxy radical in "Kada Effects".

- 152                                    Radio- and drug-sensitivity of normal and  
                                      acatalasemic mouse cell lines.  
\*Hiroshi UTSUMI, \*\*Seiji KODAMA, \*\*\*Hiromitsu WATANABE and \*\*\*Akihiro  
ITO; \*Res. React. Inst., Kyoto Univ. Osaka, \*\*Dept. Pharm. Sci.,  
Nagasaki Univ., Nagasaki, \*\*\*Res. Inst. Nuc. Med. Biol., Hiroshima  
univ. Hiroshima

Fibroblast cell lines have been established from the  $C3H/C_{3b}$  mutant mouse. These cell lines have low levels of a catalase enzyme activity. When compared to wild-type  $C3H/C_{3a}$  cells, the  $C3H/C_{3b}$  cells are markedly more sensitive to the toxicity of hydrogen peroxide and slight sensitive to X-rays and NUV. However these cells are markedly resistant to the toxicity of Bleomycin. These cell lines will be of use in the study of the role which catalase plays in the toxicity of oxidative stress.