Active oxygens(151-158)

151  Role of O$_2^-$ in "Kada Effects"
Takahiro MASUDA, Tokyo Metropolitan University,
Faculty of Science, Department of Chemistry, Hachioji 182-03.

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, ***Hiromitu WATANABE and ***Akihiro
ITO; *Res. React. Inst., Kyoto Univ. Osaka, **Dept. Pharm. Sci.,
univ. Hiroshima

Fibroblast cell lines have been established from the C3H/C$_{a}$b mutant
mouse. These cell lines have low levels of a catalase enzyme
activity. When compared to wild-type C3H/C$_{a}$ cells, the C3H/C$_{a}$b
cells are markedly more sensitive to the toxicity of hydrogen
peroxide and slight sensitive to X-rays and NUV. However this 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.