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Radical Modulating Activity and Cytotoxic Activity of Synthesized
Eugenol-Related Compounds

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The ability of nine synthetic eugenol-related compounds to scavenge O₂· was compared with their radical generation and cytotoxic activity. ESR spectroscopy showed that eugenol (4-allyl-2-methoxyphenol), 2-allyl-4-methoxyphenol, 2-allyl-4-*t*-butylphenol and 2,4-dimethoxyphenol efficiently scavenged O₂· and produced radicals under alkaline conditions. 2-Allyl-4-*t*-butylphenol showed the highest cytotoxic activity and DNA-synthesis inhibitory activity, possibly due to the hydrophobic radical reactivity.