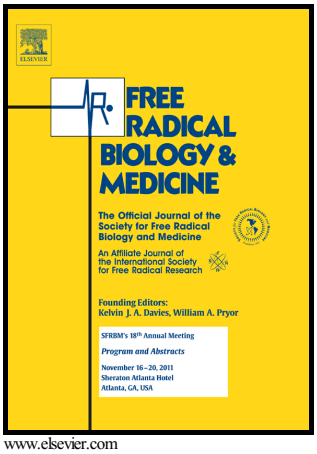



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# Euphorbia factor L1 inhibits osteoclastogenesis by regulating cellular redox status and induces Fas-mediated apoptosis in osteoclast

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**Abstract**

Excessive bone resorption caused by increased osteoclast number or activity leads to a variety of bone diseases including osteoporosis, rheumatoid arthritis and periodontitis. Thus, the therapeutic strategy for these diseases has been focused primarily on the inhibition of osteoclast formation and function. This study shows that euphorbia factor L1 (EFL1), a diterpenoid isolated from *Euphorbia lathyris*, inhibited osteoclastogenesis and induced osteoclast apoptosis. EFL1 suppressed osteoclast formation and bone resorption at both initial and terminal differentiation stages. EFL1 inhibited receptor activator of NF-κB ligand (RANKL)-induced NFATc1 induction with attenuated NF-κB activation and c-Fos