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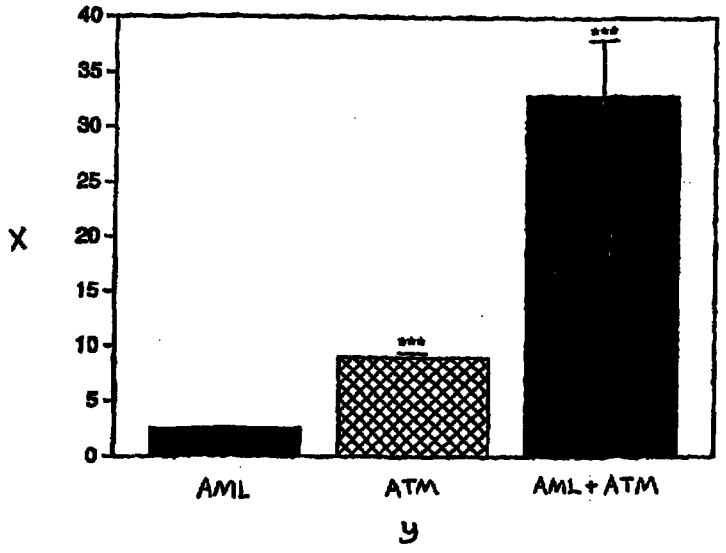
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(54) Title: SYNERGISTIC EFFECTS OF AMLODIPINE AND ATORVASTATIN



(57) Abstract

The combination of amlodipine with either atorvastatin or atorvastatin metabolite shows a synergistic antioxidant effect on lipid peroxidation in human low-density lipoproteins and membrane vesicles enriched with polyunsaturated fatty acids. Inhibition of oxy-radical damage by this drug combination was observed at therapeutic levels in a manner that could not be reproduced by the combination of amlodipine with other statins or the natural antioxidant, vitamin E. The basis for this potent activity is attributed to the chemical structures of these compounds and their molecular interactions with phospholipid molecules, as determined by x-ray diffraction analyses. This combination therapy can be used to treat cardiovascular disorders, especially coronary artery disease, by increasing the resistance of low-density lipoproteins and vascular cell membranes against oxidative modification.