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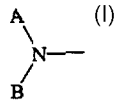
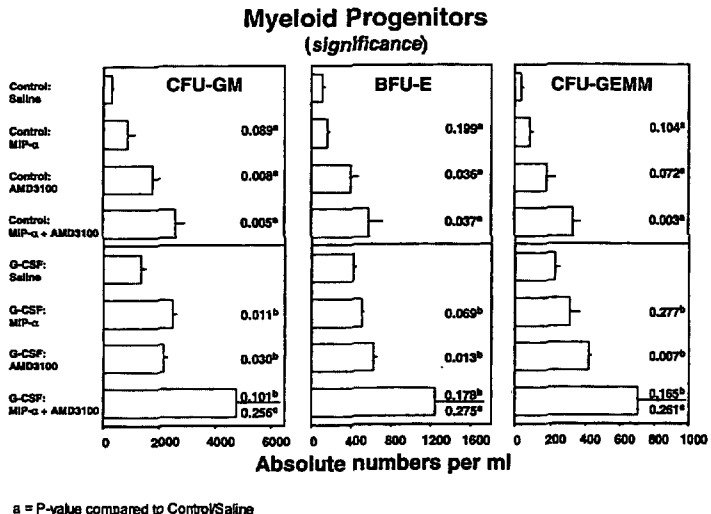
(54) Title: METHODS TO MOBILIZE PROGENITOR/STEM CELLS





a = P-value compared to Control/Saline
b = P-value compared to G-CSF/Saline
c = P-value compared to Control/MIP-1α+AMD3100

(57) Abstract: Methods to elevate progenitor and stem cell counts in animal subjects using compounds which bind to the chemokine receptor CXCR4 are disclosed. Preferred embodiments of such compounds are of the formula Z-linker-Z' (1) or pharmaceutically acceptable salt thereof wherein Z is a cyclic polyamine containing 9-32 ring members of which 3-8 are nitrogen atoms, said nitrogen atoms separated from each other by at least 2 carbon atoms, and wherein said heterocycle may optionally contain additional heteroatoms besides nitrogen and/or may be fused to an additional ring system; or Z is of formula (a), wherein A comprises a monocyclic or bicyclic fused ring system containing at least one N and B is H or an organic moiety of 1-20 atoms, Z' may be embodied in a form as defined by Z above, or alternatively may be of the formula $-N(R)-(CR_2)_n-X$ wherein each R is independently H or straight, branched or cyclic alkyl (1-6C), n is 1 or 2, and X is an aromatic ring, including heteroaromatic rings, or is a mercaptan; "linker" represents a bond, alkylene (1-6C) or may comprise aryl, fused aryl, oxygen atoms contained in an alkylene chain, or may contain keto groups or nitrogen or sulfur atoms.

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