

**Technology:** [Activating extraction of demineralized bone matrix](#)

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**Topic:** Genomics

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The VA has joint ownership with The Regents of the University of California, Oakland

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**Abstract:** Demineralized bone matrix (DBM) and native bone morphogenetic protein (nBMP) are complex mixtures of non-collagenous bone proteins. These mixtures contain many of the BMPs that are available as recombinant molecules. Information regarding the presence in these materials of molecules that may affect the availability and activity of the BMPs is very limited. A chemical extraction of DBM, such as using alkali-urea produces a water soluble extractate which inhibits the osteogenic activity of DBM. Noggin, an extracellular BMP ligand antagonist is found in the water soluble extractate from DBM. Differential chemical extraction is a useful means of removing non-osteogenic, or osteogenic inhibitory molecules from DBM and nBMP.