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Chinese Medicine Inspired Osteoporosis Research, Discovery of NJx-1 Protein and Its Function on Bone

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Osteoporosis is widely recognized as a major public health problem. According to the Chinese medicine theory, a commonly used herbal drug, the root of *Achyranthes bidentata*, possesses functions to strengthen bones. Inspired by the evidences, bioactive constituents of the root on osteoporosis were clarified.

Further structure modification on the active skeleton was performed, and a novel compound, QOA-8a with a dual effect on osteoclast and osteoblast was obtained. The detailed target research on QOA-8a discovered an unnamed protein, temporary named as NJx-1, further knock-in mice revealed that NJx-1 closely related to osteoporosis.

The results demonstrated a great potential of the protein on osteoporosis.

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