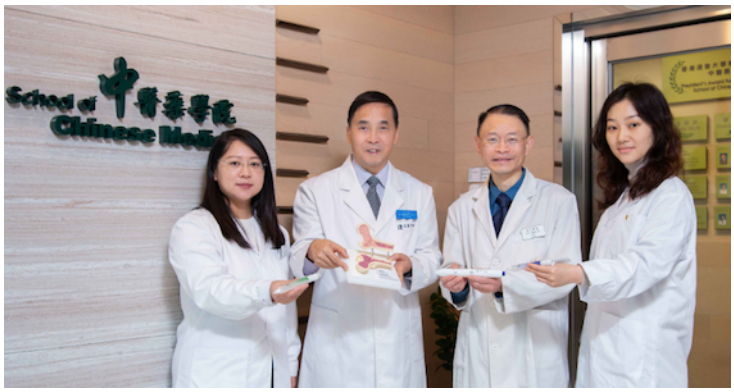
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Hong Kong develops new aptamer drug for bone anabolic therapies

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Clinical trials due to start in 2024



A research team led by Hong Kong Baptist University (HKBU) has identified a molecular target for bone amabolic therapies using a selected aptamer that serves as an inhibitor of sclerostin, a protein that prevents bone growth.

The discovery offers hope for the development of an effective next-generation treatment for osteoporosis and osteogenesis imperfecta that is free of cardiovascular risk compared to the marketed antibody drug.

The research findings have been published in the international academic journals *Nature Communications* and *Theranostics*. The new drug is at the pre-clinical trial development stage, and the research team plans to start clinical trials in the US and on the Mainland in 2024.

Osteoporosis is a metabolic condition which leads to a reduction in bone density, resulting in weakened bones that are more fragile and likely to break. O*steogenesis imperfecta,* also known as “brittle bone disease”, is a rare congenital genetic disorder characterised by extremely fragile bones. Sclerostin has been identified as a therapeutic target for both diseases.

“Searching for reliable and safe alternatives to overcome the limitations of the currently available drugs is crucial to help patients who need bone anabolic therapies. Our ongoing studies, which span from identifying molecular targets for sclerostin inhibition to aptamer drug discovery, offer hope for the development of next-generation sclerostin inhibitors in the near future,” said Professor Zhang Ge, Director of the Law Sau Fai Institute for Advancing Translational Medicine in Bone and Joint Diseases at HKBU.