

*Data S1. Literature search strategy.* In the present study, a comprehensive literature search was conducted to explore the role of chromatin remodeling complexes in bone diseases. The search strategy is outlined as follows:

i) Initial search strategy: Literature was initially searched using the following query: (chromatin remodeling complex [mesh] or chromatin remodeling complex [title/abstract] or chromatin remodeler [title/abstract]) AND (bone disease[mesh] OR bone disease[title/abstract] OR Bone Diseases, Metabolic[title/abstract] OR Bone Diseases, Infectious[title/abstract] OR Bone Diseases, Endocrine[title/abstract] OR Bone Diseases, Developmental[title/abstract]). This search provided a foundational understanding of the role of chromatin remodeling complexes in bone diseases.

ii) Focused search on specific chromatin remodeling complexes: The specific families and subunits of chromatin remodeling complexes were searched. For instance, to explore the SWI/SNF complex, the following query was used: (SWI/SNF chromatin remodeling complex [mesh] OR switch/sucrose-non-fermenting chromatin remodeling complex [title/abstract] OR SWI/SNF [title/abstract] OR switch/sucrose-non-fermenting [title/abstract]) AND (bone disease [mesh] OR bone disease [title/abstract] OR Bone Diseases, Metabolic [title/abstract] OR Bone Diseases, Infectious [title/abstract] OR Bone Diseases, Endocrine [title/abstract] OR Bone Diseases, Developmental [title/abstract]). This search primarily focused on abnormal bone conditions.

iii) Exploring normal bone physiology: To examine the effects of chromatin remodeling complexes on normal bone physiology, additional searches were conducted using similar SWI/SNF keywords with the following terms: (SWI/SNF chromatin remodeling complex [mesh] OR switch/sucrose-non-fermenting chromatin remodeling complex [title/abstract] OR SWI/SNF [title/abstract] OR switch/sucrose-non-fermenting [title/abstract]) AND (bone [mesh] OR bone marrow [title/abstract] OR bone matrix [title/abstract] OR bone lengthening [title/abstract] OR bone resorption [title/abstract]

OR bone regeneration [title/abstract] OR bone tissue [title/abstract] OR Bone Morphogenetic Proteins [title/abstract] OR Bone Growth [mesh] OR Physiological Phenomena [title/abstract] OR Growth and Development [title/abstract] OR Osteogenesis [mesh] OR Chondrogenesis [mesh] OR Osteoclastogenesis [mesh]).

iv) Databases used: The databases searched include PubMed (<https://pubmed.ncbi.nlm.nih.gov/>), Embase (<https://www.embase.com/>), Web of Science (<https://www.webofscience.com/>) and Clinicaltrials (<https://clinicaltrials.gov/>)