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Roles of lncRNA in the crosstalk between osteogenesis and angiogenesis in the bone microenvironment

Key words: Long noncoding RNA (lncRNA), Osteogenesis, Bone angiogenesis, Osteoporosis, Bone microenvironment

Review Summary

This review focuses on the involvement of long noncoding RNAs (lncRNAs) in the crosstalk between osteogenesis and angiogenesis in bone microenvironment. The main ways in which lncRNAs regulate the crosstalk between osteogenesis and angiogenesis to regulate bone metabolism are summarized, including the following:

- Multiple miRNAs
- Key osteogenic factors and angiogenic factors
- Signaling pathways related to osteogenesis and angiogenesis

Innovation points

- **Introduction** of the role of lncRNAs in the crosstalk between osteogenesis and angiogenesis

- **Summary** of recent research progress on the involvement of lncRNAs in the crosstalk between osteogenesis and angiogenesis in the bone microenvironment

- **Emphasis** of lncRNAs as important regulators of osteogenesis-angiogenesis coupling in bone microenvironment

Innovation points

A series of comprehensive tables and figure were generated to summarize the regulatory roles of lncRNAs

Figure 1 | The crosstalk between osteogenesis and angiogenesis in the bone microenvironment.

Table 1 | Some lncRNAs in osteogenic differentiation of BMSCs.

Table 2 | The role of lncRNAs in regulating the crosstalk between angiogenesis and osteogenesis in the bone microenvironment.