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# Knockdown of long non-coding RNA XIST inhibits cell viability and invasion by regulating miR-137/PXN axis in non-small cell lung cancer

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Running Title: XIST regulates NSCLC via miR-137/PXN axis

**Abstract**

Long non-coding RNAs (lncRNAs) may serve as miRNA sponges to modulate the expressions of miRNA target genes. LncRNA X-inactive specific transcript (XIST) has been demonstrated to be upregulated and act as an oncogene in non-small cell lung cancer (NSCLC). However, the sponge role of XIST in NSCLC progression remains largely unknown. In this study, we demonstrated that XIST was substantially upregulated and miR-137 was aberrantly downregulated in NSCLC tissues and cells. XIST was identified to function as a competitive endogenous RNA (ceRNA) for miR-137 to promote NSCLC cell viability and invasion. Additionally, our results suggested that miR-137 targeted the 3'UTR of paxillin (PXN) to suppress NSCLC cell viability and invasion. Meanwhile, miR-137 was negatively correlated with PXN expression while XIST was positively correlated with PXN expression.