**PRECLINICAL ANTITUMOR ACTIVITY AND MECHANISMS OF ACTION OF APRICOXIB, A CLINICAL COX-2 INHIBITOR**

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**ABSTRACT**

Apricoxib is a clinical COX-2 inhibitor. Previous studies have shown that it is a highly selective and potent inhibitor of COX-2 with nanomolar IC50 values. In preclinical models, apricoxib preferentially inhibits COX-2 and has demonstrated single-agent activity in a variety of tumor types.

**MATERIALS AND METHODS**

- **In vitro** assays: COX-2 activity and expression
- **In vivo** assays: tumor growth delay, tumor cell cytotoxicity

**RESULTS**

**In vitro** assays showed that apricoxib had a strong inhibitory effect on COX-2 activity and expression in a variety of cell lines, including colon, breast, and prostate cancer cell lines. In addition, apricoxib inhibited COX-2-mediated prostaglandin E2 (PGE2) production in these cells.

**In vivo** assays demonstrated that apricoxib significantly retarded tumor growth in various preclinical models, including breast, colon, and prostate cancer models. The drug was well tolerated, and no significant toxicity was observed.

**DISCUSSION**

Apricoxib is a highly selective and potent COX-2 inhibitor that demonstrates single-agent activity in preclinical models. Further studies are needed to evaluate its potential as a clinical anticancer agent.

**CONCLUSIONS**

- Apricoxib shows promise as a single-agent therapy in preclinical models.
- Further studies are needed to evaluate its therapeutic potential in clinical trials.

**REFERENCES**


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- **Figures and tables** are not included in this abstract.

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