**Abstract**

Clinical and preclinical studies have demonstrated that platinum (II) (Pt) complexes are effective in treating cancer, but many patients relapse due to resistance. CCRX3 expression is regulated by transcription factor HIF-1α, which is upregulated in hypoxic conditions. CCRX3 expression is also upregulated in tumors with a Pt-resistant phenotype. Several inhibitors of CCRX3 expression have been identified in preclinical studies. However, the mechanisms and consequences of CCRX3 expression in Pt-resistant tumors are not well understood.

In this study, we investigated the role of CCRX3 expression in Pt-resistant tumor cell lines. We found that CCRX3 expression is upregulated in Pt-resistant cell lines compared to Pt-sensitive cell lines. We also found that CCRX3 expression is associated with a decrease in Pt sensitivity and an increase in tumor cell survival.

**Intratumoral-inhibition of CCRX3 with Pt therapy**

We found that inhibition of CCRX3 expression with Pt therapy effectively suppressed tumor growth in Pt-resistant cell lines. In vivo, CCRX3 inhibition significantly reduced tumor growth compared to control groups. These findings suggest that CCRX3 expression may be a promising target for Pt-resistant tumor treatment.

**Conclusion**

In conclusion, our results demonstrate that CCRX3 expression is upregulated in Pt-resistant tumor cell lines and that inhibition of CCRX3 expression with Pt therapy effectively suppresses tumor growth. These findings suggest that CCRX3 expression may be a promising target for Pt-resistant tumor treatment.

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**Intratumoral-inhibition of CCRX3 with Pt therapy**

A. **Low dose Pt**

B. **High dose Pt**

C. **Pt + CCRX3 inhibition**

D. **Pt + CCRX3 inhibition + CCRX3 expression**

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**Summary and Conclusion**

- **Pt + CCRX3 inhibition** significantly reduces tumor growth compared to control groups.
- **Pt + CCRX3 inhibition + CCRX3 expression** further reduces tumor growth, indicating that CCRX3 expression may be a promising target for Pt-resistant tumor treatment.

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**Proposed Mechanism of Action**

- **Modulates immune contexture**
- **Inhibits angiogenesis**
- **Augments photodynamic therapy (PDT)**
- **Augments PTT**

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*All images and data are representative of the research conducted in the laboratory.*