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## IL-6/STAT3 regulation of SRD5A1 in prostate cancer cells

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### Introduction

▪ To investigate the transcriptional mechanism of IL-6 regulation of SRD5A1 in prostate cancer cells

### Methods

Cells were treated with IL-6, STAT3 inhibitor AG490 and dutasteride alone or in combination in groups: control group, IL-6 group, dutasteride group, IL-6 combined with dutasteride group, AG490 group, IL-6 combined with AG490 group. The correlation of IL-6, STAT3 and SRD5A1 was verified. A rescue assay was used to assess STAT3-mediated IL-6 regulation of the biological behavior of SRD5A1 and prostate cancer cells.

### Results

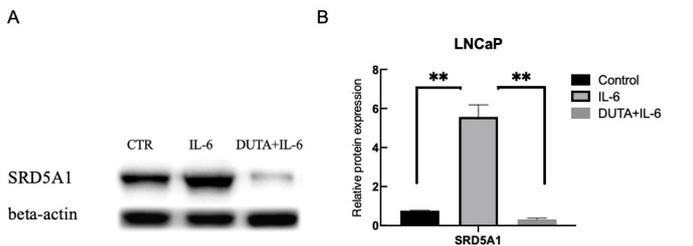


Fig. 1: SRD5A1 expression using western blot by IL-6 alone or combination of dutasteride.

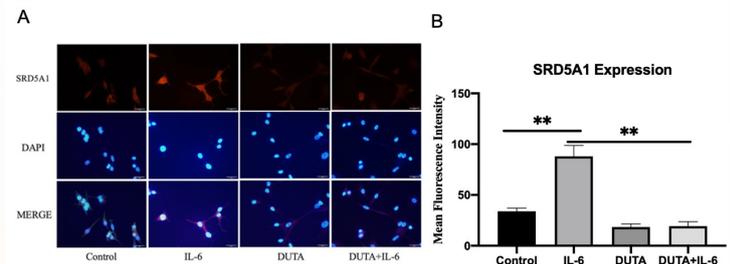


Fig.2 SRD5A1 expression using Immunocytochemistry by IL-6 alone or combination dutasteride.

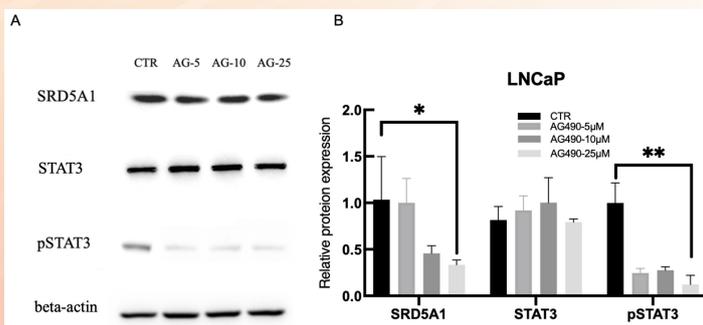


Fig.3 SRD5A1 expression and STAT3 along with phosphorylation by STAT3 inhibitor AG490

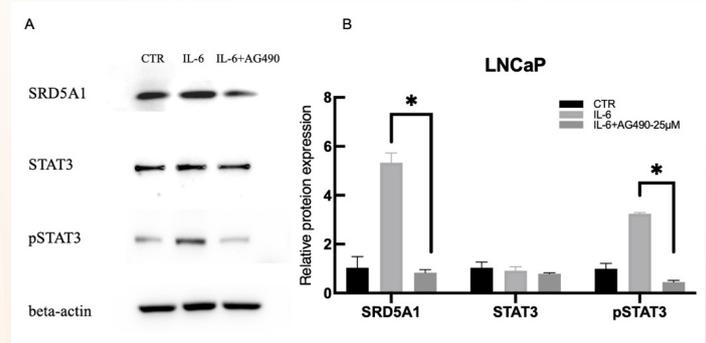


Fig.4 (A) STAT3 inhibitor AG490 reverse the effect of IL-6 on SRD5A1 (B) relative bar

### Conclusion

IL-6 upregulated SRD5A1 expression in LNCaP cells, STAT3 mediated SRD5A1 transcription in prostate cancer cells, and IL-6 mediated SRD5A1 expression through STAT3 and promoted prostate cancer progression.