



## Re: INSL3 in the Benign Hyperplastic and Neoplastic Human Prostate Gland

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### EDITORIAL COMMENT

Insulin-like peptide 3 (INSL3), relaxin-like factor is a member of the relaxin/insulin gene family. It is expressed in testicular Leydig cells. It is critical for testis descent in boys. INSL3 is essential in the first phase of testis descent for the growth of the gubernaculum testis.

The INSL3 hormone is a marker of testicular Leydig cells in the post-pubertal testis. In this study, the authors investigated the expression of human INSL3 in patients with benign prostate hyperplasia, prostate intraepithelial neoplasia and prostate carcinoma tissues. An autocrine/paracrine INSL3-LGR8 ligand receptor system within the human prostate has been proven. LGR8 has been identified as the INSL3/relaxin receptor and was shown *in vitro* to promote a strong proliferative response in fetal rat gubernaculum cells upon exposure to rat INSL3. As a result of this study, they have demonstrated for the first time the presence of a potentially functional INSL3-LGR8 ligand receptor system in human benign hyperplastic and neoplastic prostate and identified INSL3, motility enhancing factor for the human prostate carcinoma cell line PC-3. INSL3 may be a biomarker that represents the Leydig cell function. Moreover, with further comprehensive studies, it may be considered as a marker like testosterone for detection of castration level like testosterone in prostatic carcinoma.

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