Author's response to reviews

Title: DNA methylation and histone modifications regulate SOX11 expression in lymphoid and solid cancer cells

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Author's response to reviews:

Dear Editor,

Enclosed is our manuscript “DNA methylation and histone modifications regulate SOX11 expression in lymphoid and solid cancer cells” that we would like to submit as an original paper to BMC Cancer. SOX11 has during recent years been identified as an important cancer-associated protein with diagnostic and prognostic importance. However, the regulation and functional role of SOX11 is still under explored.

In this study, we show that SOX11 is silenced by repressive histone marks in non-malignant cells. In contrast, regulations in neoplastic tissues are more complex involving both DNA methylation and histone modifications. SOX11-negative lymphomas show a homogeneous layer of dense methylation at the SOX11 promoter, probably added during tumorigenesis, while solid tumors display a more diverse de novo methylation. The possibility to re-express SOX11 in non-methylated tissue is of clinical relevance, and was successfully achieved in cell lines with low levels of SOX11 methylation. Thus, the present study shows that SOX11 is regulated by multiple layers of epigenetic modifications in both lymphoid and solid cancer cells.

We are looking forward to hear from you.

Sincerely yours
Sara Ek, Associated Professor