



Neil Patel

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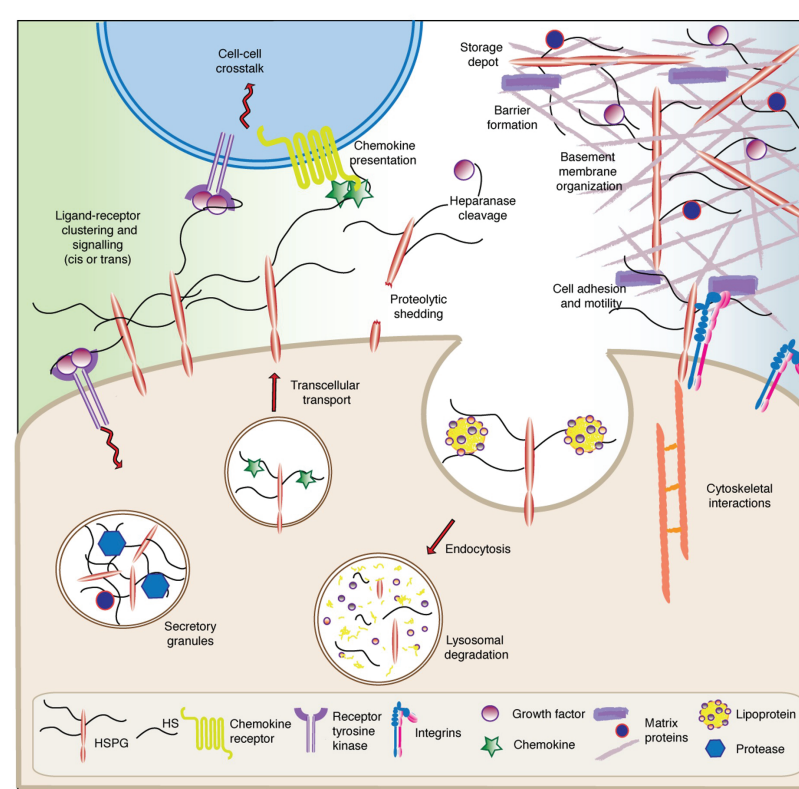


UNIVERSITY OF
GEORGIA

The Non-canonical EZH2/TRIM28/SULF1 Axis Mediates Heparan Sulfate Assembly and Melanoma Cell Growth

Heparan sulfate is a complex linear polysaccharide chain which is crucial to various cell physiological functions. Alterations in heparan sulfate assembly have been implicated in the progression of various types of tumors. We uncovered a novel regulatory axis involved in fine-tuning heparan sulfate structure and explore how this axis alters melanoma tumor progression.

Heparan Sulfate Function

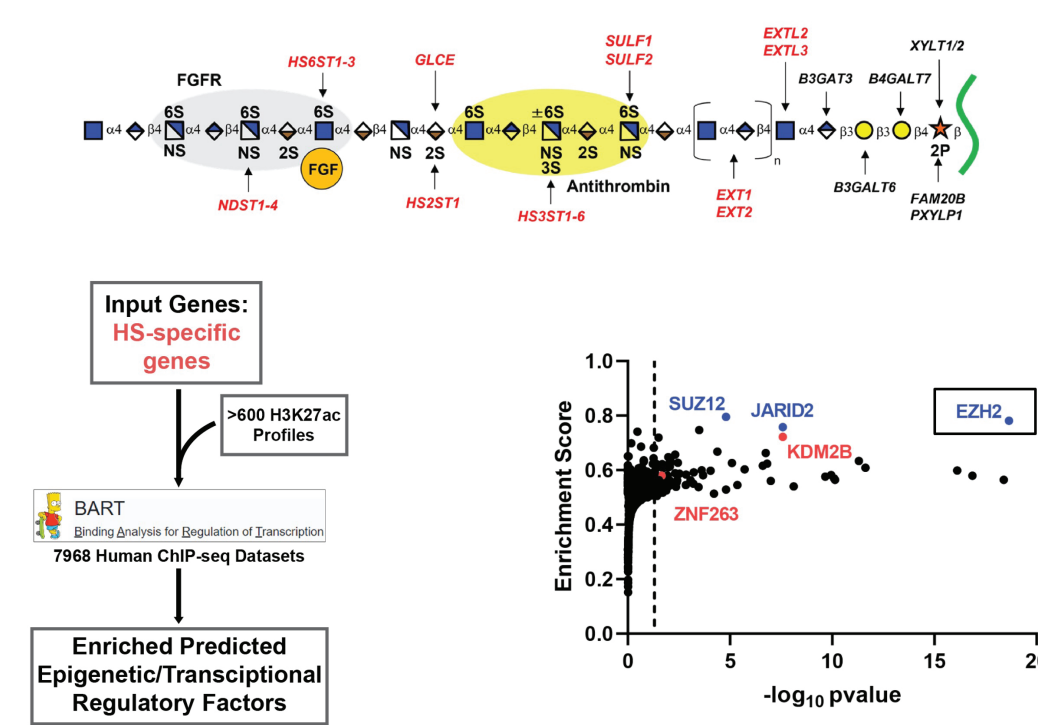


- Growth factor signaling complexes
- Tethering and presentation of chemokines
- Protein oligomerization and protection
- ECM architecture
- Cell adhesion and motility
- Endocytosis and clearance

Serrazin, Esko, et al. Cold Spring Harb Perspect Biol. 2011.

1

Mining ChIP-Seq Data for HS regulatory factors

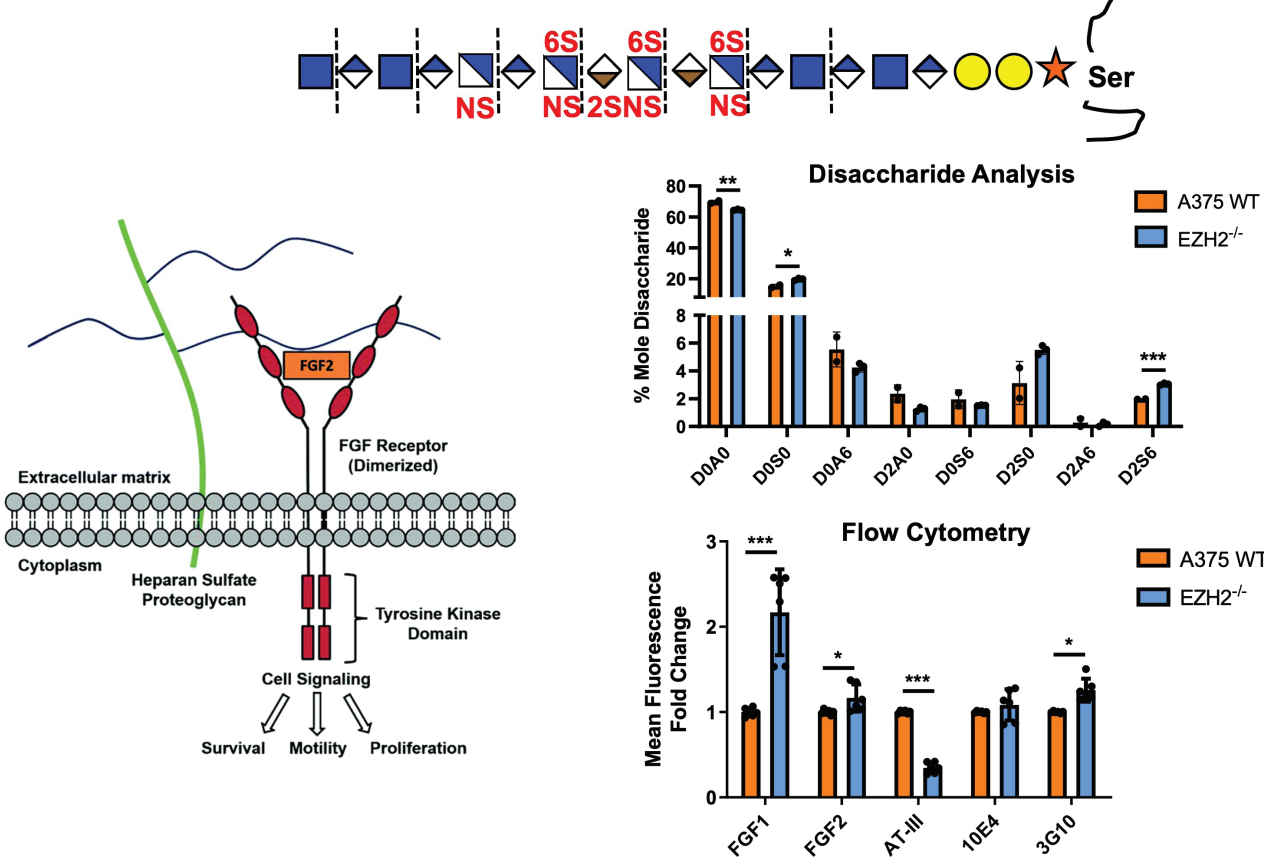


Wang et al. Bioinformatics. 2018.

Weiss et al. PNAS. 2020.
Weiss et al. Nat. Chem. Biol. 2021.

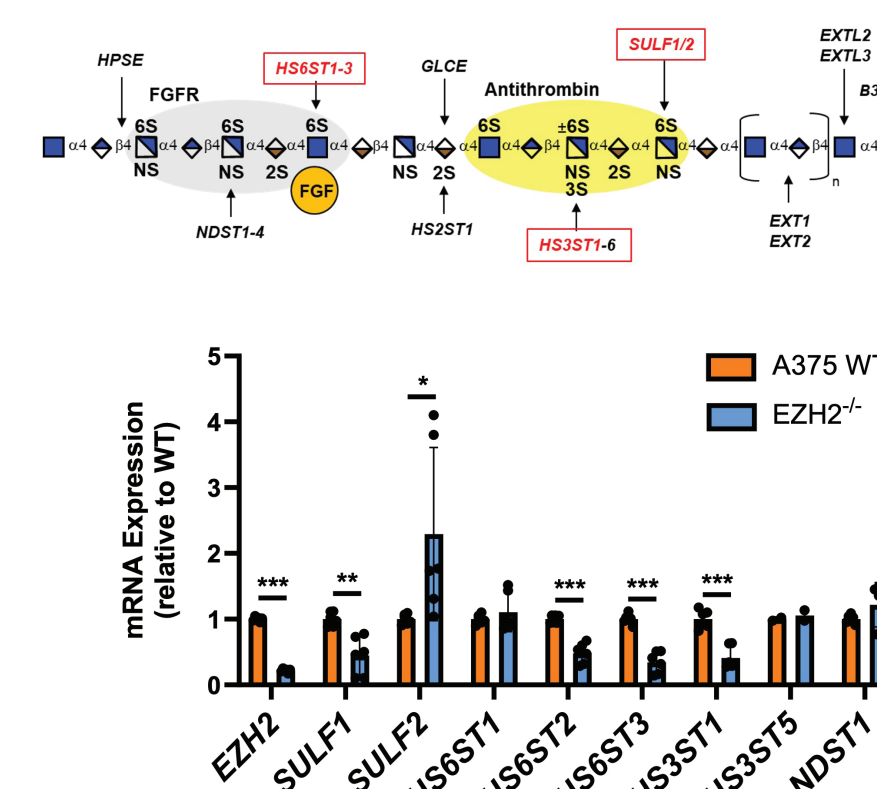
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Loss of EZH2 Alters HS Structure and Function



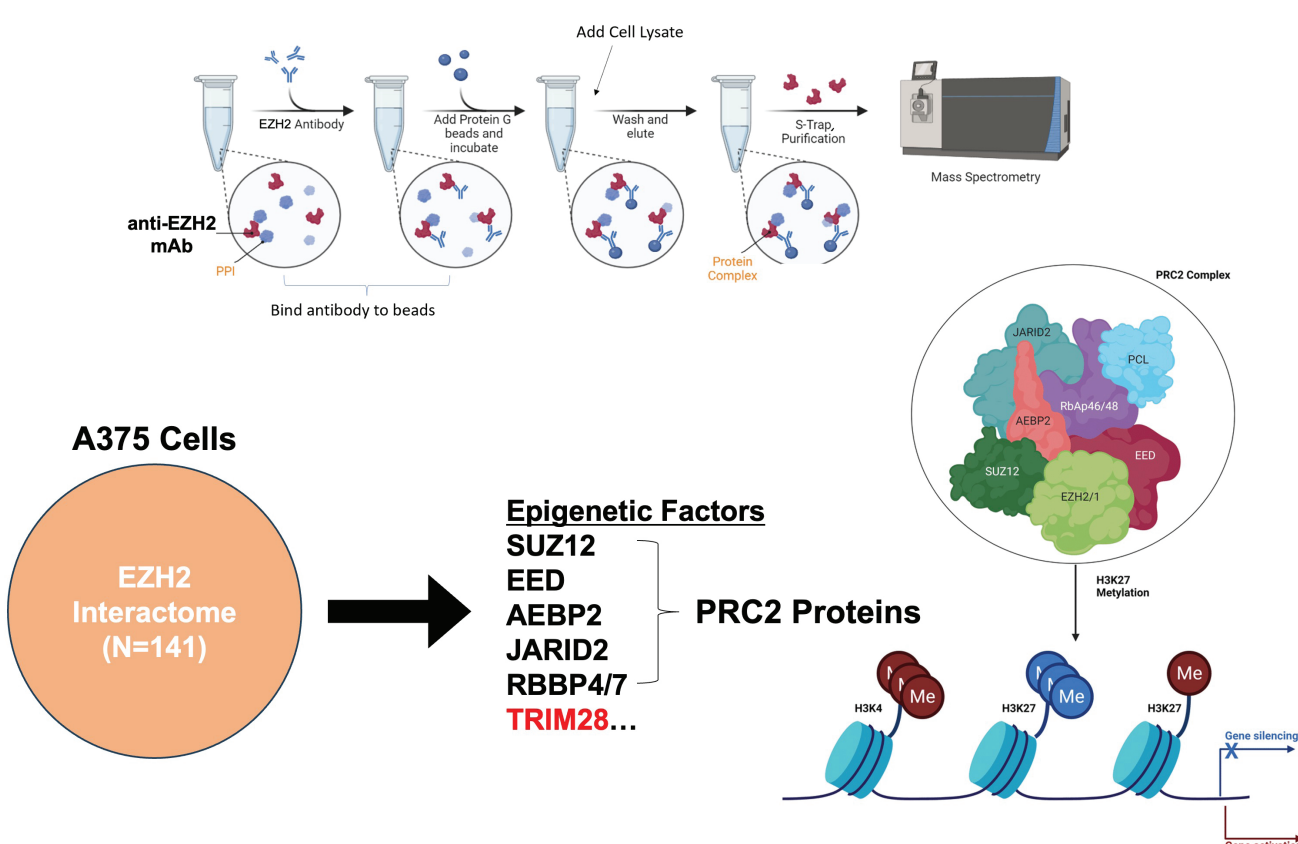
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EZH2 Regulates HS Gene Expression



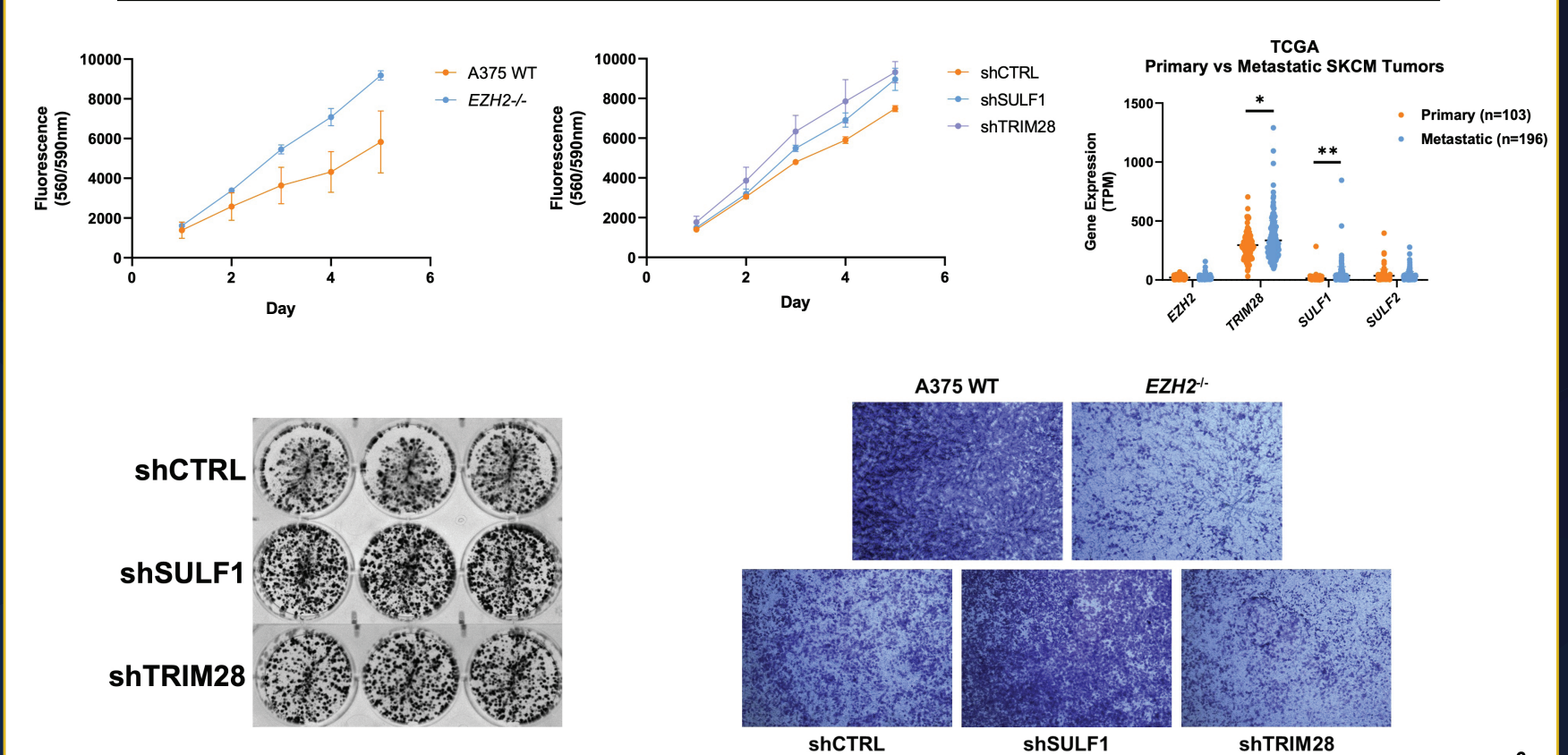
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EZH2 Interactome Studies



5

EZH2/TRIM28/SULF1 Axis Tunes Melanoma Cell Growth *in vitro*



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