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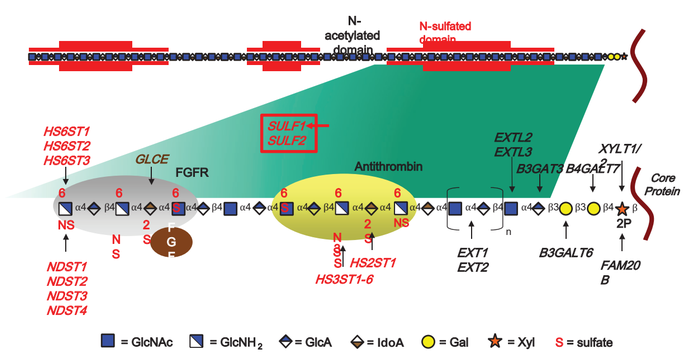
1785

Pharmacological Targeting of Heparan Sulfate in Melanoma Metastasis

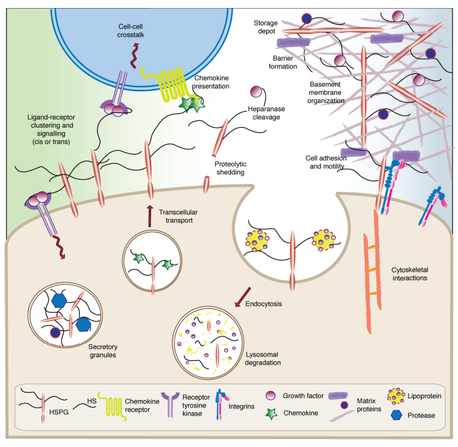
Our previous work demonstrated genetically targeting SULF1, a heparan sulfate-modifying enzyme, reduces metastasis formation in mice. Here, we demonstrate we can use a polysaccharide derived from sea cucumbers to inhibit SULF1 activity and reduce melanoma cell migration and invasiveness.

Structure – Assembly – Function



1

Heparan Sulfate Function

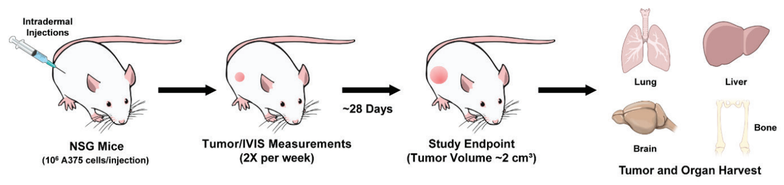


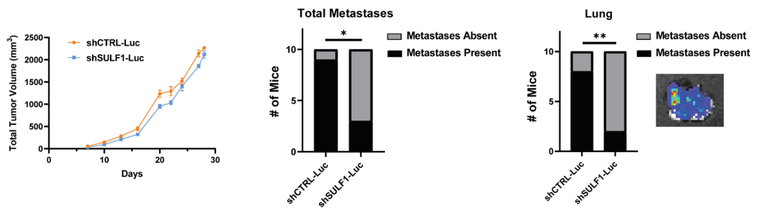
- Growth factor signaling complexes
- Tethering and presentation of chemokines
- Protein oligomerization and protection
- ECM architecture
- Cell adhesion and motility
- Endocytosis and clearance

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

2

Depletion of SULF1 Reduces Melanoma Metastasis *in vivo*





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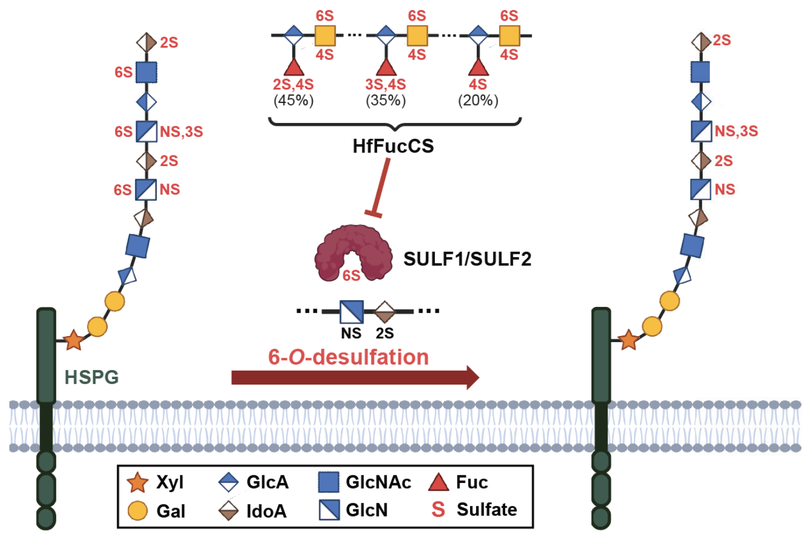

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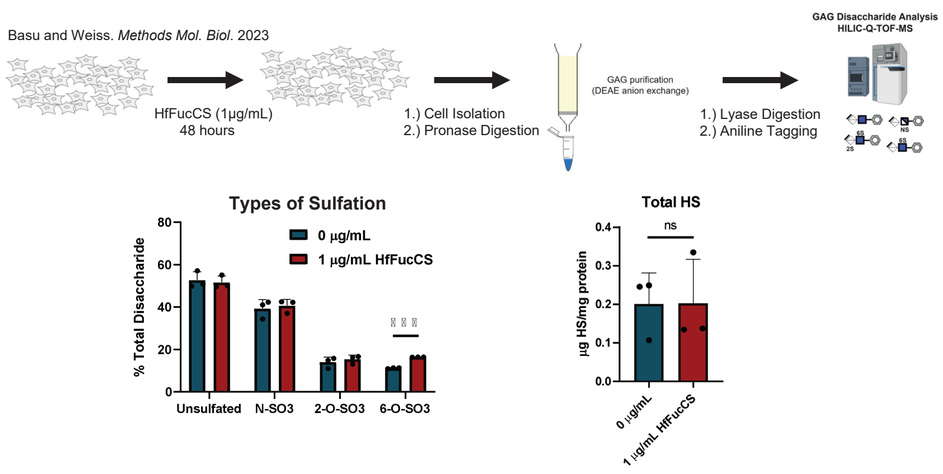
HfFucCS Selectively Increases Cell Surface HS 6-*O* Sulfation



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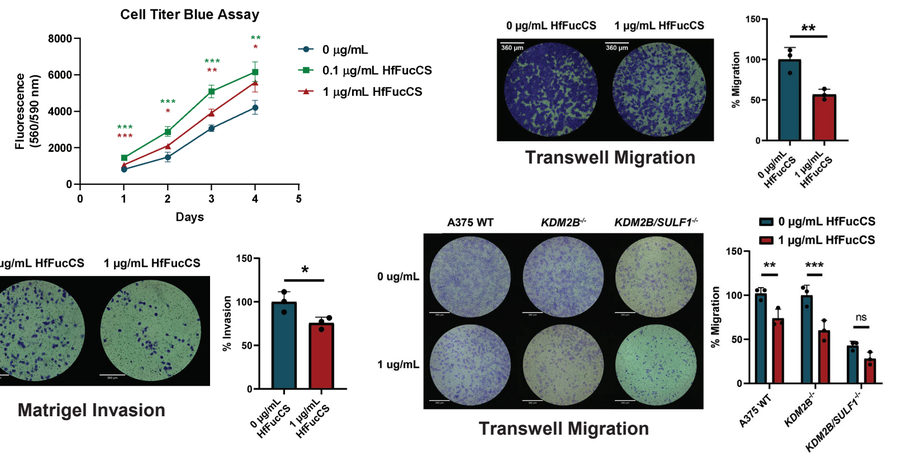
HfFucCS Attenuates Melanoma Cell Migration and Invasion SULF1-Dependently



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