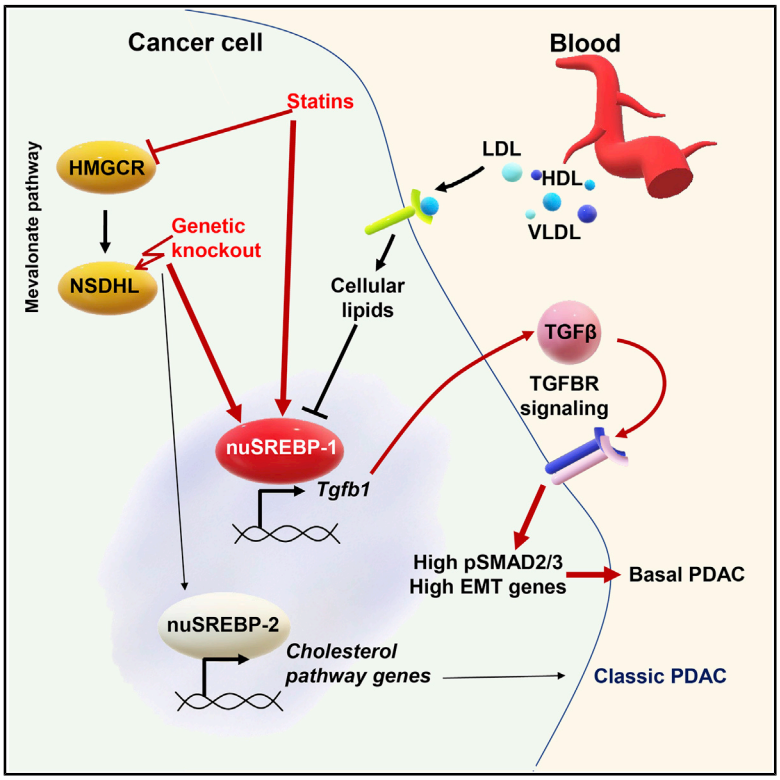
Article

Cancer Cell

Cholesterol Pathway Inhibition Induces TGF-β Signaling to Promote Basal Differentiation in Pancreatic Cancer

Graphical Abstract



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In Brief

Gabitova-Cornell et al. show that disruption of cholesterol biosynthesis by *Nsdhl* knockout or treatment with statins switches glandular pancreatic carcinomas to a basal subtype via activation of SREBP1, which induces *Tgfb1* expression, autocrine TGF-β-SMAD2/3 signaling, and epithelial-mesenchymal transition.

Highlights

- Knockout of *Nsdhl* switches pancreatic carcinoma from glandular to basal
- Statins or *Nsdhl* knockout activates SREBP1-dependent *Tgfb1* expression and EMT
- PDACs in patients receiving statins have enhanced mesenchymal features
- LDL cholesterol *in vitro* or in patients antagonizes SREBP1 and autocrine TGF-β

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