

# Fibroblast activation protein alpha (FAP) in severe fatty liver disease (NASH)



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A.W. Morrow Gastroenterology and Liver Centre (Head: Geoff McCaughan)  
Royal Prince Alfred Hospital

Charles Perkins Centre – Fibrosis node



Sydney Medical School, Faculty of Medicine and Health  
University of Sydney

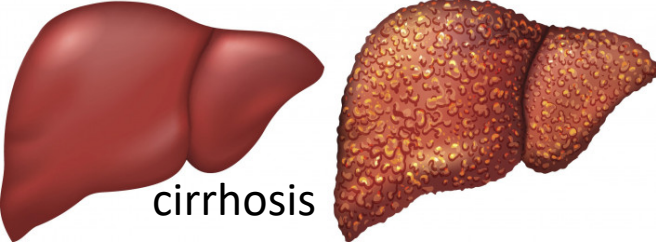
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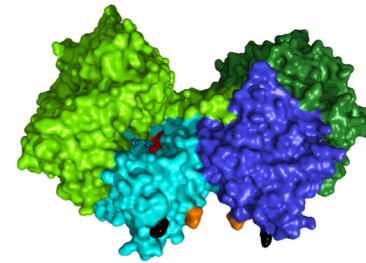
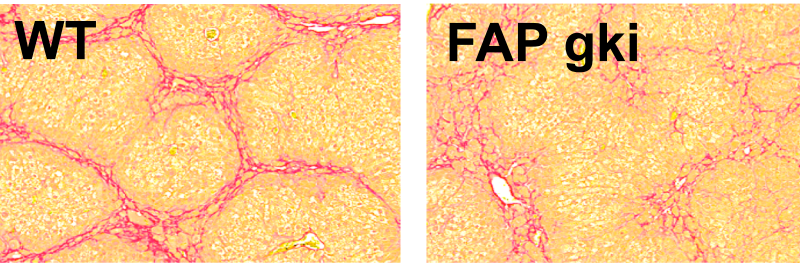


cirrhosis

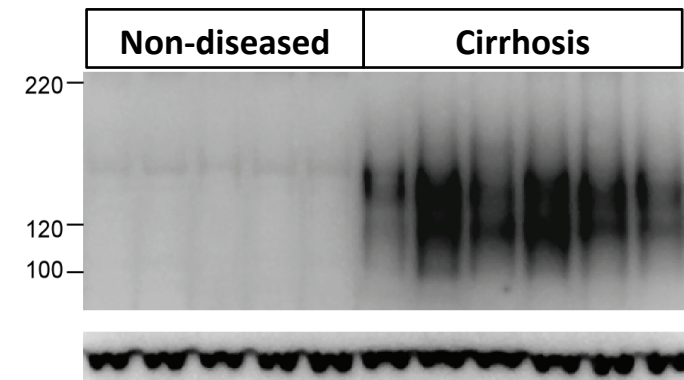
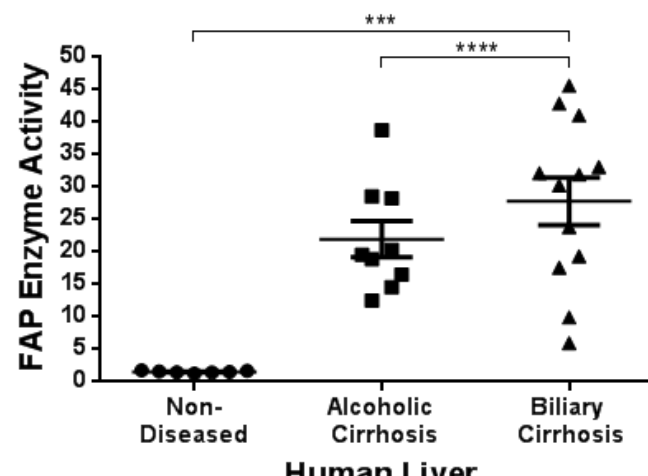
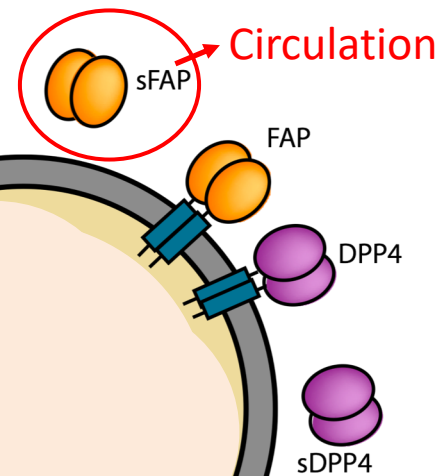
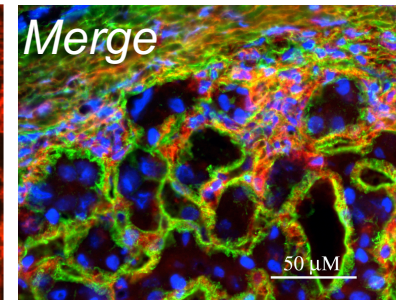
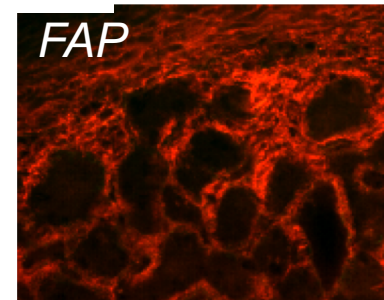
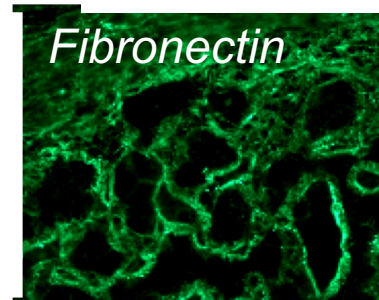
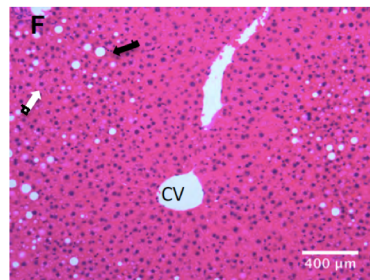
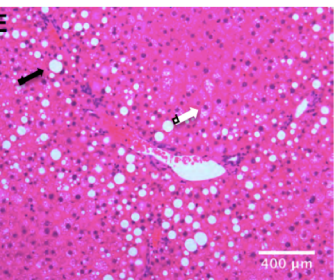
# FAP in human liver

- Expression increases massively in chronic injury
- Both liver and serum FAP up with fibrosis severity
- Fibrosis, insulin resistance and fibrinolysis roles.

## FAP in mouse liver

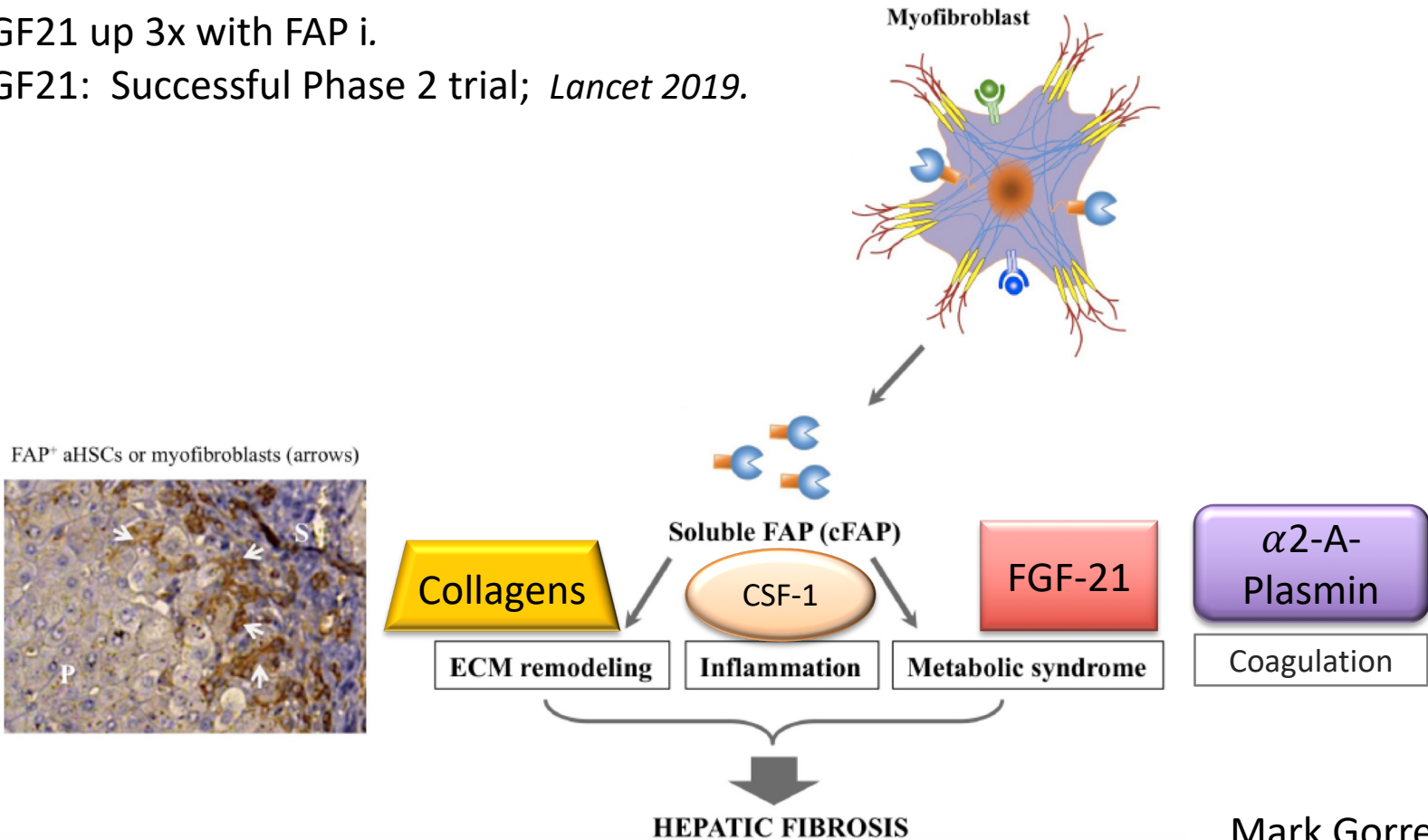
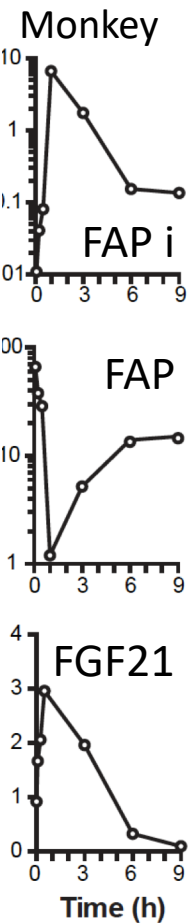


cirrhosis



# FAP in NASH fibrosis; key substrates

- Collagens,  $\alpha 2$ -anti-plasmin and FGF21 are degraded by FAP in humans.



Mark Gorrell

# Need selective potent protease inhibition

Dipeptidyl  
peptidase  
activity

**DPP4**

**FAP**

Endopeptidase  
activity

**PEP**

