A broadly neutralizing monoclonal antibody targeting HCV prevents viral infection \textit{in vitro} and in human liver chimeric mice

Ahmed A. Mesalam

Center for Vaccinology
Ghent University
Introduction

- **Hepatitis C virus:** positive stranded RNA virus
  - enveloped particle: E1 and E2
  - 7 genotypes
  - DAA therapies: improved SVR

- **HCV induced end stage liver disease:**
  - poor therapy efficacy
  - liver transplantation
  - universal infection of liver graf

Neutralizing antibodies?
In vitro characterization of anti-HCV mAb-2A5

HCVpp

HCVcc

% Neutralization

mAb-2A5 conc. (log₁₀, mg/mL)

neutralization of HCVpp-H7c (%)

neutralization of HCVpp-JFH1 (%)

mAb concentration (µg/mL)

mAb concentration (µg/mL)
In vivo characterization of anti-HCV mAb-2A5

Conclusion:

mAb-2A5 neutralizes HCV in vitro and in vivo.

mAb-2A5 could be used to prevent HCV infection of liver graft.
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