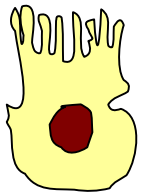
1) HEPATOCYTE (HC)

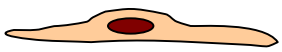


- primary target for several agents/conditions able to induce cell injury and death
- most of agents/conditions leading to HC injury are able to generate ROS, HNE, and other free radicals
- damaged HC can release ROS and other reactive intermermediates in the surrounding microenvironment
- HC can also release IGF-1 and, under hypoxia, VEGF
- during chronic liver diseases, surviving HC can proliferate in an attempt to repopulate injured liver

2) MONONUCLEAR CELLS (Mc) KUPFFER CELLS (KC)

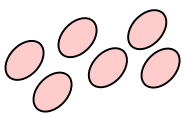
- recruited Mc and resident KC become activated in conditions of chronic liver injury
- Mc and KC can act by phagocytosis of cell debris & apoptotic bodies as well as APC
- on activation, they can generate and release: ROS and other reactive intermediates; several GFs, CKs & mediators, including PDGF, bFGF, TGFβ, TNFα, IL-1, PGs, etc; selected MMPs

3) SINUSOIDAL ENDOTHELIAL CELLS (SEC)



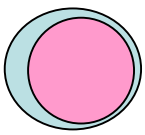
- partecipate to angiogenesis, being recruited and stimulated by GFs, mainly VEGF
- when injured/activated, SEC can potentially release: GFs & CKs like PDGF, bFGF, IL-1, TGFβ, IGF-1, PGs, ETs, VEGF; NO and ROS

4) PLATELETS



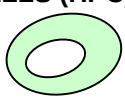
- when recruited/activated at the site of injury they can release: PDGF, EGF, TGFα, TGFβ, TXAs, IGF-1

5) T LYMPHOCYTES



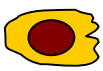
- recruited to the liver under conditions of chronic liver injury induced by viruses (HBV, HCV), chronic alcohol consumption, auto-immune conditions, etc.
- may contribute to perpetuation of liver injury
- once activated, may release TNFα or IFNγ as well as other CKs

6) HEPATIC PROGENITOR CELLS (HPC)



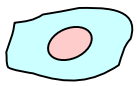
- under certain conditions (i.e. chronic liver injury) may contribute to parenchymal repopulation
- HPC are bipotent cells, able to give rise to either HC or biliary epithelial cells (BEC)

7) BILIARY EPITHELIAL CELLS (BEC)



- BEC can actively proliferate in different conditions of acute & chronic liver injury
- BEC can establish cross-talks with surrounding cells and may release a number of mediators, including PDGF, TGFβ II, ETs and VEGF

8) ENDOTHELIAL PROGENITOR CELLS (EPC)



- circulating and/or bone marrow (BM) derived cells that may contribute to liver angiogenesis, possibly together with BM - derived monocyte lineage cells