Summary

The final event of chronic liver injury, independently from the aetiological agent, is hepatic fibrosis. It is characterized by excessive extracellular matrix (ECM)deposition that distorts the hepatic architecture by forming fibrotic scars, and the subsequent development of nodules of regenerating hepatocytes this defines liver cirrhosis which leads to liver cell failure.

Hepatic fibrosis was historically thought to be a passive phenomenon because of the collapse of the hepatic parenchyma following necrosis but currently, hepatic fibrosis is considered a model of the wound-healing response to chronic liver injury .

Activation of hepatic stellate cells (HSCs), leading to accumulation of extracellular matrix, is the central event of fibrogenesis.

Exciting progress has been made in understanding the molecular basis of this process.

1) The effects (and signalling pathways) of key cytokines on HSCs.

2) understanding the transcriptional regulation following HSC activation.

3) characterisation of matrix proteases and their inhibitors

4) demonstration of apoptosis as an important event in the resolution of hepatic fibrosis, and identification of its mediators.

5) understanding the role of other cellular elements in hepatic fibrosis and their interaction with HSCs**.**

Growing understanding of the pathogenesis of hepatic fibrosis indicates potentially powerful noninvasive (blood) biomarkers of hepatic fibrogenesis and fibrosis which can be sub-divided in two classes: Class I fibrosis biomarkers are pathophysiologically derived from ECM turnover and/or from changes of the fibrogenic cell types in liver. These biomarkers do not indicate the extent of connective tissue deposition, that is, the stage of fibrotic transition of the organ In contrast, class II fibrosis markers have been statistically proven (multi-variate analyses) to be best correlated with fibrosis and to a lesser extent with fibrogenesis or fibrolysis. Class II markers mostly estimatethe degree of the fibrosis **.**

There is no standard treatment for liver fibrosis**.** Although obvious in principle, it is important to emphasize that the most effective antifibrotic therapies are likely to remove the underlying stimulus to fibrogenesis. For example eradication or inhibition of hepatitis B virus or hepatitis C virus (HCV) leads

to reversion of fibrosis, even in some patients with histologic cirrhosis .

There is other new abroaches for the treatment of hepatic fibrosis either by:

1) Anti inflammatories suppressing the infilamatory response to the injuirous aggents.

2) Moddulation of the immune response of the liver tissue.

3) Downregulation of hepatic stellate cells activations.