New insights into the roadmap of pathogenesis of liver fibrosis

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Liver fibrosis is a wound healing scar response following acute and chronic liver diseases including chronic hepatitis B and C, autoimmune hepatitis, non-alcoholic steatohepatitis and alcoholic liver disease. The patho-histological findings of liver cirrhosis, the end-stage of liver fibrosis, show hepatocellular death, a lobular inflammatory cell infiltrate, excessive deposition of ECM proteins, and the appearance of regenerative nodules that may result in liver failure, portal hypertension and hepatocellular carcinoma. The pathophysiology of liver injury has attracted the interest of experimentalists and clinicians over many centuries. With the discovery of liver-HSC, the insight into the cellular and molecular pathobiology of liver fibrosis has evolved and the pivotal role of HSC as a precursor cell-type for ECM-producing myofibroblasts has been established. Although activation and trans-differentiation of HSC to myofibroblasts (MFs) is still regarded as the pathogenetic key mechanism of fibrogenesis, recent studies point to a prominent heterogeneity of the origin of myofibroblasts. The newly discovered pathways supplement the concept of HSC activation to MFs, point to fibrosis as a systemic response involving extrahepatic organs (lung and kidney) and reactions and offer innovative approaches for the development of non-invasive biomarkers and anti-fibrotic agents.

Biography
Eman El-Ahwany is a Professor of Immunology at Immunology and Drug Evaluation Department, Theodor Bilharz Research Institute (TBRI). She was graduated from Faculty of Science, Cairo University in 1991. She has received her PhD in Immunology in 2001 and has worked as Teaching Assistant and Faculty (part-time) in the Biology Department, the American University in Cairo (1999-2014). She is a Member in the TBRI Technical Office and the TBRI Internal Research Projects Committee since 2011. She is a Member in the European Association of Liver Diseases (EASL). Her field of interest is miRNAs and the epigenetic changes as non-invasive diagnostic and therapeutic tools in HCV-induced liver fibrosis and HCC. She has shared and worked as participant, Co-PI and PI in 20 research projects sponsored by international and national agencies, published 35 research articles in peer reviewed international journals, presented several abstracts in 30 international conferences and supervised 15 MSc and PhD thesis. She has been awarded the TBRI excellence award in 2014. She is the Coordinator of MOU between TBRI and Basque University in Spain (2016). She has obtained Post doctorate fellowships in Germany (2007) and France (2014). She has been awarded the TBRI Excellence Award in 2014.

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