ESTABLISHMENT OF TBRIBIOBANK FOR LIVER DISEASES: RESEARCH TRANSLATION AND PRECISION MEDICINE IN HEPATOLOGY

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Liver diseases, including viral infections, nonalcoholic fatty liver disease, autoimmune hepatitis, metabolic diseases, and hepatocellular carcinoma (HCC) are major causes of illness and death worldwide. In Egypt, the burden of liver disease is exceptionally high, having the highest prevalence of hepatitis C virus (HCV), as well as rising rates of HCC. Although an important therapeutic advancement was achieved with the recent discovery of potent direct acting antiviral agents (DAAs) against HCV, many infected patients still suffer from its dangerous complications. Thus, there is a need for early diagnostic and prognostic tools to prevent progression of liver diseases. As a result, the need to establish appropriate infrastructure to link high quality clinical data with advanced molecular and genetic technologies has become apparent. A cornerstone to achieve this capacity is the development of biobanks that can collect and maintain human biospecimens needed to support precision (personalized) medicine. Disease-specific biobanks have a great impact on the discovery of bio-markers, targeted drug development and in-general, research on treatment of diseases. The biobanks aim to provide research groups with a platform of web-based socio-demographic information, detailed longitudinal clinical data coupled with high quality biological samples.

The Aim of this work is founding a Theodor Bilharz Research Institute (TBRI)biobank that keep blood, serum, RNA, DNA, and tissue samples from adult patients having liver diseases. This biobank will enable the researchers to analyze detailed clinical information for retrospective and prospective studies and to discover the noninvasive molecular and epigenetic biomarkers that contribute tothe detection of liver disorders. This biobank will be a good chance for interconnectivity with other biobanks and biobank initiatives. This connection will lead to the collection of large pool of samples for research community. Eventually, it will lead to advancement in biotechnology, scientific and medical research in hepatology. Finally, TBRI biobank will participate in improvement of both public health and individual hepatic patient care.

Keywords - Liver Diseases- Biobank- Bio specimens.