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### Hepatitis B and C: Epidemiology, treatment and prevention strategy

Hepatitis B virus (HBV) and hepatitis C virus (HCV) infections are major public health issues worldwide and the leading cause of chronic liver disease, cirrhosis, and hepatocellular carcinoma. Globally, these infections are responsible for over 1.4 million deaths annually. Approximately, 64-103 million and 240 million people around the globe are chronically infected with HCV and HBV respectively. HCV, which belongs to *Flaviviridae* family, is highly variable and classified into six major genotypes further divided into more than 67 subtypes. HCV genotyping is correlated with disease severity, therapy response and is a critical factor in determining the optimal treatment duration. Furthermore, considerable progress has been achieved in the efficiency of therapy outstandingly improved by the development of new drugs and new therapeutic strategies. The availability of direct acting antivirals (DAA) treatments has tremendously improved HCV cure rates, which now exceed 95% in most patient populations. HCV epidemic in north Africa falls into an intermediate range, characterized by a decreasing east-west gradient, with the average seroprevalence estimated between 1.2 and 1.9%. HBV epidemic is more rampant, with countries classified as highly or intermediately infected. Egypt harbors, the highest HCV prevalence globally, hovering around 14.7%, with 15% of the total population having been infected, since the parenteral antischistosomal therapy implemented in the 1920s and an HBV prevalence averaging 4%. Libya borders Egypt, yet has a lower endemicity for both HBV and HCV, estimated at 2.2 and 1.3%, respectively. Tunisia and Morocco are intermediate for both HBV and HCV, with rates for HBsAg falling between 4-7% (Tunisia) and 1.81% (Morocco), and anti-HCV seropositivity at 0.4 (Tunisia) and 1.58% (Morocco) for the general population and 60% was found among intravenous drug users. The majority of IDUs shared their needles. HCV genotypes 1 and 2 are the most prevalent in Morocco while genotypes 3, 4 and 5 are less common. Sequence analysis of HCV NS5B region of genotype 2 has shown that HCV subtype 2i is predominant. IDUs exhibited genotypes 1a, 3a and 4 predominantly, as compared to the predominant 1b and 2a/2c genotypes found in general population. The IDUs genotypic profile closely matches the one in other European countries which are invariably speculated as the potential source of currently-circulating genotypes in Moroccan IDUs. On the other hand, HBV genotype D is predominant in Morocco, as this is the major HBV genotype in Mediterranean countries. High circulation of precore and basal core promoter mutants is common in chronic hepatitis B infection in Morocco.

### Biography

Abdelouaheb Benani is the Head of Molecular Biology Laboratory at Pasteur Institute of Morocco which is a national reference Molecular Biology Laboratory for Hepatitis C RAMED Program (Moroccan Ministry of Health). He is also the Elect-President of Arab Society for Virology, 2nd Vice-President of Moroccan Society for Virology and an Active Member on the Advisory Board, Consultative Meeting on Regional Strategy for Prevention and Control of Viral Hepatitis and Other Epidemics-Prone Blood-Borne Diseases, in 2008 (WHO/EMRO, Cairo, Egypt). In 2002, he got his PhD in Molecular Microbiology (Fes, Morocco) on the Molecular Epidemiology of Hepatitis C in Morocco. In 1993, he got his Master of Molecular Biology and Biotechnology at Université Libre de Bruxelles (ULB, Belgium) in anti-tumoral action of *Parvoviruses*. He is an Active Researcher in molecular epidemiology of HBV and HCV in general population and high-risk groups in Morocco. He has organized the 1st International Symposium for Virology in Morocco in 2003 (Marrakech, Morocco), the First PCR Forum and Molecular Typing at Pasteur Institute of Morocco, and the Hepatitis C Workshop at the 5th World Congress on Virology (Atlanta, USA 2015). He is implicated in student's research for their training, Master and PhD. He has participated in several international and national workshops and congresses. He has published in several international journals including *Journal of medical virology*, *BMC public health*, *Virology Journal*, *European Journal of Public Health*. He serves as a Reviewer as well as Editorial Board Member of some international journals. Currently, he is a reviewer of some grant agency.

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