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**Jonathan Forde\***, 300 Pulteney St., Geneva, NY 14456. *Models of Chronic Hepatitis B Infection.*

Chronic hepatitis B infection is a major public health burden, leading to more than 750,000 deaths per year as result of cirrhosis and hepatocellular carcinoma. Understanding the interplay between viral factors and the host immune reaction is essential for designing interventions. We develop a mathematical model of chronic HBV infection, incorporating long-term effects such as gradual exhaustion of the immune response. Interacting feedback loops on differing time scales help explain the eventual collapse of immune control. (Received January 20, 2020)