1077-92-1269 **Azmy S. Ackleh*** (`ackleh@louisiana.edu`), Department of Mathematics, University of Louisiana at Lafayette, Lafayette, LA 70504-1010, and **Paul Salceanu** (`salceanu@louisiana.edu`), Department of Mathematics, University of Louisiana at Lafayette, Lafayette, LA 70504-1010. *Persistence and Competitive Exclusion for a Nonautonomous Multi-Strain SIR Epidemic Model with Nonlinear Host Mortality.* Preliminary report.

We study a nonautonomous version of the SIR multi-strain epidemic model developed by Ackleh and Allen (2003). We give sufficient conditions for the persistence of the total population, as well as of the susceptible and infected subpopulations. We also discuss the competitive exclusion among the n infection strains, namely when a single infection strain survives and all the others go extinct. Numerical examples that demonstrate coexistence between different strains are also presented. (Received September 18, 2011)