1023-92-1282   **Thanate Dhirasakdanon**, Department of Mathematics and Statistics, Arizona State University, Tempe, AZ 85287-1804, **Horst R. Thieme*** (`thieme@math.asu.edu`), Department of Mathematics and Statistics, Arizona State University, Tempe, AZ 85287-1804, and **Pauline van den Driessche**, Department of Mathematics and Statistics, University of Victoria, Victoria, B.C., Canada. *Disease extinction and persistence in spatially heterogeneous host-parasite models with inter-patch travel.* Preliminary report.

We consider the SEIRS model proposed by Arino and van den Driessche and some extensions. The host population is distributed over many patches and each epidemiological class travels between the patches. Salmani and van den Driessche demonstrated that the model exhibits the common threshold feature that the disease free state is globally asymptotically stable if the basic replacement ratio satisfies $R_0 < 1$ and unstable if $R_0 > 1$.

It is investigated under which additional assumptions the disease is uniformly weakly or even uniformly strongly persistent if $R_0 > 1$.

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