USE OF VITAMIN E TOCOTRIENOLS FOR THE INHIBITION OF INTRACELLULARLY OBLIGATE PATHOGEN CHLAMYDIA

Abstract

This invention reveals the beneficial use of vitamin E tocotrienols for inhibition of chlamydial infections. Chlamydial infection levels in mouse macrophages treated with tocotrienol were decreased >50%, with concomitant aberrant pathogen development. The number of large and small inclusions in tocotrienol-versus-control cells was decreased 3-fold and 2-fold, respectively. When treated with delta tocotrienol, *Chlamydia* in human lymphocytes was inhibited by at least 2.6-fold in 1.5 days. Dietary delta tocotrienol inhibited *Chlamydia* infection and persistence in hypercholesterolemic patients with a corresponding drop in LDL. These studies demonstrate that tocotrienol lowers cholesterol, thus preventing or diminishing the cholesterol hijacking by *Chlamydia* obligatory for its infectivity and replication. Therefore, hypolipidemic agents used to treat cardiovascular diseases, metabolic syndrome, and diabetes are used as monotherapies, or in combination with tocotrienol to treat *Chlamydia.*

Figure 1.