

Abstract

Red yeast rice has been used as a food supplement and traditional Chinese medicine for blood circulation. The fermentation process of red yeast rice by *Monascus purpeus* creates many metabolites including monacolin family members. One of these family members is monacolin K, otherwise known as lovastatin. Statins have been shown to be immunomodulatory apart from their ability to lower cholesterol. Due to the use of red yeast rice as an alternative to traditional statin drugs to lower cholesterol, the purpose of this study is to determine if red yeast rice also alters the immune response. The focus of this study was to determine if red yeast rice alters the production of antibody isotypes, IgM and IgG. Using the Enzyme-Linked Immuno Sorbant Assay (ELISA), red yeast rice suppressed lipopolysaccharide (LPS) induced IgM secretion, but not total IgG secretion. As far as IgG subtypes, red yeast rice reduced IgG 1 secretion, but not IgG2c secretion. Overall, red yeast rice demonstrated an ability to alter the production of certain antibody isotypes.

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