

10TH AMERICAN PEDIATRICS HEALTHCARE & PEDIATRIC INFECTIOUS DISEASES CONGRESS

September 20-22, 2017 | Toronto, Canada

Anti-rotavirus activity of rhubarb extract and emodin *in vitro*

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The aim of this study was to evaluate the antiviral activity of rhubarb extract and emodin on rotavirus R709 strain *in vitro*. The titer and viral inhibition rate was evaluated for the antiviral activity of rhubarb extract and emodin in MA-104 cells infected with rotavirus(RV)R709 strain. Meanwhile, we carried out experiments through the three ways of preventive effect, virucidal effect, and antiviral biosynthesis effect against RV. The extracts from rhubarb showed significant inhibitory activity against rotavirus on MA-104 cells in a dose dependent manner when added at different stages of viral replication cycles. When added before, during or after viral infection, the 50% inhibitory concentration (IC_{50}) was $101.08 \pm 1.57 \mu\text{g mL}^{-1}$, $111.27 \pm 4.94 \mu\text{g mL}^{-1}$ and $46.88 \pm 3.5 \mu\text{g mL}^{-1}$ respectively. The therapeutic

index (TI) of rhubarb extract was 3.13 ± 0.13 , 3.45 ± 0.06 and 7.45 ± 0.56 respectively. Rhubarb extract was highly active against rotavirus *in vitro*. However, emodin showed mild antiviral activity.

Speaker Biography

Yang Zhan-qiu has completed his MD from Wuhan University School of Medicine. He is the Director of Institute of Medical Virology, Wuhan University. He has published more than 150 papers in reputed journals and has been serving as an Editorial Board Member of repute.

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