Anti-influenza virus activity of EGCg

Data of Professor Kurokawa's study group at Kyushu University of Health and Welfare

Virus	EC50, ppm (Effective conc. for 50% plaque reduction)			
	①Virus＋EGCg →Cells	② Virus＋Solvent →Cells	③EGCg+Cells →Virus	④ Virus+Cells →EGCg
Influenza virus type A				
Bangkok/93/03(H1N1)	1.41±0.17	>30	>30	19.3±1.8
PR8/8/34(H1N1)	2.19±0.09	>30	>30	>30
Aichi/2/68(H3N2)	2.76±0.23	>30	>30	22.9±1.4
Influenza virus type B				
Singapore	0.93±0.35	>30	>30	11.1±1.6

CC50 value (cytotoxic conc. for 50% reduction of cell growth) of EGCg was 85.6 ppm.

Summary of Methods and Results

①EGCg-treated virus was adsorbed to cells.
EGCg was significantly effective in inhibiting the adsorption and/or invasion of influenza virus type A and B to cells. EC50 values of EGCg were 31 to 92-folds lower thatn the CC50 value.

②Solvent-treated virus was adsorbed to cells. Components of solvent except EGCg did not show any anti-influenza virus activity

③Virus was adsorbed and infected to EGCg-treated cells.
EGCg was not effective in interfering with virus adsorption and/or invasion in EGCg-pretreated cells.

④Virus-adsorbed and infected cells were incubated in the presence of EGCg.
Progeny virus probably contacted with EGCg contained in medium and the adsorption and/or invasion into cells were interrupted.

Conclusion

Direct contact of virus particles and EGCg is important in inhibiting virus infection to cells.