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Plasmid Elimination and Immunomodulation by 3-Benzazepines *In Vitro*

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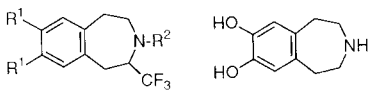
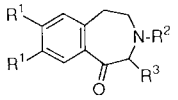
Abstract: For studying the mechanisms of biological activity on 3-benzazepines, antimicrobial effect, F'lac plasmid elimination activity (a plasmid curing effect on F'lac plasmid) and antibody-dependent cellular cytotoxicity (ADCC) test were performed. A weak antiplasmid effect was found at sub-inhibitory concentrations. A combination of KF3 with verapamil did not alter the ineffectivity, however, KF3 could inhibit the antiplasmid effect of promethazine, as compared to the control (promethazine alone) plasmid curing effect. A competition between promethazine and KF3 might exist in plasmid elimination effect. ADCC activity of human leukocytes was enhanced by KF1, KF2, KF4, dopamine and norepinephrine at 1.0 _g/mL concentrations. The majority of 3-benzazepines (KS02, KM57, KN50, KE04, KI10, KP80) was ineffective for plasmid curing, however, inhibited the ADCC reaction, but they did not show a real dose-dependent effect.



KF1 R^1=OH, R^2=H
KF2 R^1=OH, R^2=Me
KF3 R^1=OMe, R^2=H

KF4



KS02 R^1=OMe, R^2=SO_2Me, R^3=Me
KM57 R^1=OMe, R^2=SO_2CF_3, R^3=Me
KN50 R^1=H, R^2=SO_2CF_3, R^3=H
KE04 R^1=OMe, R^2=SO_2CF_3, R^3=H
KI10 R^1=OMe, R^2=SO_2CF_3, R^3=$CHMe_2$
KP80 R^1=OMe, R^2=SO_2CF_3, R^3=Ph

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