in LA countries. Daptomycin showed consistent potency against recent clinical isolates of SA collected in LA medical centers, including MDR strains. Resistance to other compounds did not adversely influence daptomycin potency and with S rates at over 99.9% during the past five years suggests that daptomycin has maintained in vitro activity in LA countries.

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48.003

In vitro activity of new compound YF-13-1 against gram-postive and gram-negative bacteria strains of clinical isolates in chain

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Background: The Present study is undertaken to evaluate and compared the activity of the new compound YF-13-1 alone and with eight antibiotics against gram — positive and gram — negative. Bacterial strains. The majority of bacterial strains evaluated in this study were recent clinical isolates obtained from several hospital sources in China.

Methods: Determination of antibacterial activity in vitro: Minimum inhibitory concentrations (MICs) were determined according to CLSI(formerly NCCLs guidelines using cation — adjusted Mueller-Hinton agar.) by the agar dilution method with a Multiple innoculator replicator (steers-folty replicator) serialtwofold dilutions of the compounds will be prepared 10-fold in agar, ranged from 128 to 0.008 ug/ml (for extremely sensitive organisms, further dilutions).the lowest concentration which allowed the growth of no more than three colonies is considered to be the MICs.

Results: The results showed that YF-13-1 was a broad-Spectrum Antibiotics. MIC50, MIC90 values for YF-13-1 were each 0.25 mg/L and 1 mg/L against ciprofloxacin-susceptible and levofloxacin- susceptible S.aureus strains. It inhibited 90% tested Ciprofloxacin and levofloxacin- resistant S. aureus strains at less than 16 mg/L. MIC 90 values against S. aureus MRSA, MSSA was 4 mg/L, 0.25 mg/L respectively. YF-13-1 was more active against coagulose-negative. Staphylococci and S.epidermidis MRSE, MSSE, MIC90 were 1 mg/L, 8 mg/L; 2 mg/L and 0.25 mg/L respectively. MIC90 was)4 mg/L against S.pyogenes, S.pneumoniae and Enterococccus. MIC 90 4, 8, 0.5 mg/L against Branhemella bacteria, influengae and Gonococcal respectively. Whereas, the YF-MIC50, MIC90 was 2 mg/L and 8 mg/L against P. aerogenes respectively, But, it less active against acinetobacter baumannii, MIC50, MIC90 was 8 mg/L, 128 mg/L respectively.

Conclusion: The results showed that YF-13-1 was a broad-Spectrum Antibiotics.

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48.004

10-hydroxy-2-decenoic acid induce dispersion of *Streptococcus mutans* biofilms

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Background: Hydroxy decenoic acid is a bioactive component of royal jelly that occupies its 10% of the total weight. Biofilms progress through multiple developmental stages, beginning with reversible attachment to a surface, followed by irreversible attachment and development of microcolonies, when dispersion occurs, releasing cells into the bulk liquid. Colonization and Biofilm formation of *Streptococcus mutans* is the causative agent of dental plaques and subsequently dental caries.

Methods: 10-hydroxy decenoic acid was purified by means of HPLC. Glass slides were used for biofilm formation in treated media with each slide in a total area of 6 cm2. Microtiter plate dispersion bioassays were used to test various preparations for their ability to exogenously induce *Streptococcus mutans* ATCC 25175 biofilm dispersion.

Results: Hydroxy decenoic acid is capable of inducing the dispersion of established biofilms and of inhibiting biofilm development. When added exogenously to *Streptococcus mutans* biofilms at a native concentration of 2.5 nM, it was shown to induce the dispersion of biofilm microcolonies. These dispersion events were observed to originate at the center of microcolonies near the substratum, but only within microcolonies that had attained a minimum diameter of 40 μ and a minimum thickness of 10 μm.

Conclusion: Active at nanomolar concentrations, hydroxy-2-decenoic acid appears to be functionally and structurally related to the class of short-chain fatty acid signaling molecules such as diffusible signal factor, which act as cell-to-cell communication molecules in bacterial colonies.

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