Activity of Friulimicin B and Five Other Antimicrobial Agents against 179 Gram-Positive Obligate Anaerobic Bacteria

B. Schumann, D. Adler, S. Pelzer, H. Labischinski, A. C. Rodloff

1Univ. of Leipzig, Leipzig, Germany, 2Combinature Biopharm AG, Berlin, Germany

Methods

Bacterial Strains: 179 Gram-positive anaerobes were taken from the culture collection of the Institute for Medical Microbiology and Epidemiology of Infectious Diseases, University of Leipzig, Germany. The strains were collected from clinical specimens at the institute and from national and international studies and obtained in part from other laboratories. The following strains were used: Clostridium difficile (n=52), C. perfringens (n=34), Peptostreptococcus spp. (n=22), Propionibacterium acnes (n=19), Lactobacillus spp. (n=19), Enterococcus spp. (n=18), E. faecalis, E. faecium, and E. durans (n=11), and Bacteroides spp. (n=9). The strains were also determined by agar dilution according to CLSI standard M11-A6.

Results and Discussion

The figures 2-9 show the scatter histograms of MIC values obtained for FRI and the five other antimicrobial agents against 179 strains of Gram-positive obligately anaerobic bacteria included in this study. The results obtained by testing in agar are indicated as Friulimicin/AD in each histogram. FRI was particularly active against C. difficile (Figure 2), F. magna (Figure 4), and Peptostreptococcus spp. (Figure 5), where it was equal to or more active than DAP and metronidazole.

Overall the intravital activity of FRI seems to be better than the intravital activity of DAP.

The MIC values against eubacteria (Figure 9) seem to display a lower susceptibility to FRI as well as to DAP.

Conclusions

• The novel lipopeptide friulimicin B has excellent activity against several pathogenic species of anaerobes.

Friulimicin B has good activity against C. difficile and was more active than all 5 comparator drugs. C. difficile infections are now a major problem in many hospitals and institutions and friulimicin B could be a valuable agent for their treatment.

Overall in vitro activity of friulimicin B compares favourably with that of daptomycin, metronidazole and moxifloxacin.

Literature