study, was to test for antibacterial activity of a green alga, Caulerpa sertularioides from the Persian Gulf.

Methods: The extract from C. sertularioides was prepared by 20 minutes boiling of alga in 20% glycerine solution and it was then sterilized using the filtration. A bacterial concentration of 500000 colony forming units (CFU)/ml of Staphylococcus epidermidis (ATCC 14990) as a gram positive or Escherichia coli (ATCC 25922) as a gram negative bacteria were tested with different concentrations of the extract in Mueller-Hinton broth for evaluation of antibacterial effect. Controls without the extract were treated by the same way. Results. The extract showed antibacterial activity against S. epidermidis and E. coli in the concentrations of 34 mg/ml and 27.2 mg/ml, respectively.

Conclusion: C. sertularioides could be a suitable source for isolation of antibacterial compounds and further in-vivo investigations.

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66.018
Clinical and Microbiological Efficacy of Continuous Versus Intermittent Administration of Meropenem in Critically Ill Patients
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Background: Beta-lactam antibiotics efficacy depends on the duration of time in which serum concentration exceeds MIC. The aim of open prospective randomized study was to compare clinical and microbiological efficacy of continuous infusion versus intermittent administration of meropenem in critically ill patients.

Methods: Patients admitted to interdisciplinary ICU suffering from severe infection indicated to meropenem administration were randomized to receive either a 2 g iv loading dose of meropenem followed by a daily 4 g continuous infusion (CONTINUOUS group) or intermittent administration of 2 g of meropenem iv in every 8 h (INTERMITTENT group). Antibiotic therapy was stopped at administration of 2 g of meropenem iv in every 8 h continuous infusion (CONTINUOUS group) or intermittent iv loading dose of meropenem followed by a daily 4 g administration were randomized to receive either a 2 g administration of meropenem in critically ill patients.

Conclusion: Continuous infusion and intermittent administration of meropenem in critically ill patients provided significantly decreased the total dose of meropenem. Grant acknowledgment: This study is supported by the Czech Ministry of Education (project MSM0021620819)

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66.019
Longitudinal Analysis of Tigecycline Activity against US isolates of Enterobacteriaceae and Acinetobacter spp. Based on Patient Location and Specimen Source
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Background: In 2005, tigecycline (TIG) a novel glycyclcline was approved in the US for treatment of complicated skin and skin structure infections (cSSSI) and complicated intra-abdominal infections (cIAI). As such, it is important to continue to monitor TIG activity against target pathogens for these indications. This study reports the in vitro activity of TIG against Enterobacteriaceae (EN) and Acinetobacter spp. (AC) as observed during development (‘01—’04), and during the years following its approval for use (‘05, ‘06 and ‘07). The results were further stratified to determine whether any potential variability in TIG activity against EN and AC exists according to patient location (PL) and specimen source (SS).

Methods: EN and AC isolates were collected from multiple locations across all nine US Bureau of Census regions during the following years (Y): ’01—’04 (EN: 1330, AC: 224), ’05 (EN: 1151, AC: 77), ’06 (EN: 958, AC: 255), and ’07 (EN: 599, AC: 114). Isolates were centrally tested using broth microdilution according to current CLSI standards. TIG activity was analyzed by patient location (PL; outpatient [OP], intensive-care unit [ICU], and inpatient non-ICU [IP]) and by specimen source (SS; blood [BL], respiratory [RP], urine [UR: EN only], and skin and skin structure [SSST]). EN FDA breakpoints (BPs) were used to interpret all TIG MIC results (as BPs for TIG against AC do not currently exist).

Results: Against EN overall, TIG had an MIC90 of 1 mg/L in each study period (‘01—’04, ’05, ’06, and ’07), and EN isolates were ≥99% susceptible (S) to TIG throughout. The activity of TIG for each study period was consistent by MIC90, regardless of PL (MIC90 = 1 mg/L against OP, ICU, and IP) or SS (MIC90 = 1 mg/L against BL, RP, and SST, 0.5—1 mg/L for UR isolates). In the most recent period evaluated (‘07), EN isolates were ≥99% S to TIG for all PL and SS evaluated. Against AC overall, TIG had an MIC90 of 2 mg/L in ‘01—’04 and ‘07 and 1 mg/L in ’05 and ’06. The % S of AC went from 97% in ‘01—’04 to ≥99.5% in ’05, ’06 and ’07. For each study period, little variation in TIG MIC90 was observed either by PL or SS (1—2 mg/L). In ’07, 100% of tested acinetobacter were susceptible to TIG (EN BPs were utilized for AC).

Conclusion: Little to no alteration in the in vitro activity of TIG against EN and AC was apparent by MIC90 over the
Dalbavancin Tested Against *Staphylococcus* spp. and *Streptococcus* spp. Isolates collected from Five European Countries: Comprehensive DECIDE Program Results (2007)

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*Background:* Dalbavancin is a novel lipoglycopeptide with an extended half-life and intended for treating complicated skin and skin structure infections caused by *S. aureus* (SA) and β-haemolytic streptococci (BHS). The DECIDE Program was initiated to assess the activity of dalbavancin compared to vancomycin or teicoplanin (Italy only) against recent (2007) clinical isolates from across Europe (EU).

**Methods:** Eighteen sites in France, Germany, Spain, Italy, and UK utilized standardized, reference-quality agar diffusion methods including Etest and CLSI (M2-A9) disk diffusion (DD) tests with concurrent QC (CLSI M100-S18, 2008). 1,127 strains were tested against dalbavancin and comparison glycopeptides by Etest. DD was used for linezolid, cefotixin, levofloxacin, gentamicin, tetracycline, erythromycin, clindamycin (plus D-test), penicillin and ceftriaxone. Dalbavancin susceptibility was defined at ≤0.25 mg/L.

**Results:** Dalbavancin exhibited potent activity against the SA and coagulase-negative staphylococci (CoNS; MIC$_{50/90}$, 0.064/0.19 mg/L), and BHS (MIC$_{50/90}$, ≤0.016/0.047 mg/L). Overall, vancomycin and teicoplanin were ≥eight-fold less potent. Italy had higher dalbavancin MIC values (two-fold) for SA and the highest MRSA rate (44%) compared to other nations (8–36%). Dalbavancin MIC$_{90}$ values were slightly higher for group B (0.047 mg/L) compared to group A (0.032 mg/L) streptococci. Nearly 4% of BHS isolates were levofloxacin-non-susceptible. Among SA, resistance rates were: erythromycin (29%), clindamycin (13%), gentamicin (10%), and levofloxacin (29%) with higher resistance rates among MRSA. Inducible clindamycin resistance was high among SA (72%) and CoNS (48%) and less among BHS (25%). Rare strains had non-susceptible MIC values for linezolid (0.3%) and vancomycin (0.1%).

**Conclusions:** Dalbavancin demonstrated pronounced activity (MIC, ≤0.25 mg/L) against staphylococci and BHS from European countries. Due to dalbavancin's high molecular weight, like other peptides, care must be taken when interpreting Etest-generated MICs (false resistance). Dalbavancin provides coverage of contemporary Gram-positive pathogens, including resistant isolates recovered from patients in Europe, confirming earlier USA reports.

**In-vitro Activity of Ertapenem against Bloodstream Isolates of Bacteria at the National University Hospital, Singapore**

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**Background:** Ertapenem is a relatively new carbapenem with broad activity. There are however limited studies regarding its efficacy in bacteremic patients. We evaluated the in-vitro activity of Ertapenem against blood culture isolates (community onset and nosocomial) at a tertiary hospital.

**Methods:** Bacteria isolated from blood cultures from hospitalized patients admitted to the National University Hospital, Singapore (Dec 2003–May 2004) were identified using the Vitek instrument (bioMerieux, NC) and Microbact 12A and 12B (Oxoid Australia). Gram-stain, catalase, coagulase (Pastorex Staph Plus, Bio-Rad, CA) and PYR disk testing were done for *Staphylococcus* and *Streptococcus* spp. Ertapenem susceptibilities were determined using the Kirby-Bauer disk method on cation-adjusted Mueller-Hinton plates according to the CLSI performance standards. *Burkholderia pseudomallei* (*B. pseudomallei*) isolates were further tested using the E-test (AB Biodisk, Sweden).

**Results:** 333 blood stream isolates were studied, including 157 Enterobacteriaceae (73 Extended spectrum beta-lactamase (ESBL) positive) and 29 isolates of *B. pseudomallei*. All 157 Enterobacteriaceae isolates were Ertapenem susceptible. 26 *B. pseudomallei* strains were susceptible and 3 strains intermediate to Ertapenem by disk testing, but the E-test showed that only 5 of the 29 strains were susceptible (MIC≤2 mcg/ml). Of the non-fermenting gram-negatives, 26 of 64 isolates were susceptible (including 4/6 *B. cepacia*, 8/26 *A. baumannii* and 3/10 *P. aeruginosa* isolates). All isolates of *S. maltophilia* (9/9) were resistant. Of the gram-positives, 2/2 *L. monocytogenes* and all *S. viridans* (5/5), beta-hemolytic *Streptococcus* (11/11), *S. pneumoniae* (6/6), methicillin susceptible *S. aureus* (32/32) were susceptible. All 12 strains of penicillin susceptible *E. faecalis* were non-susceptible to Ertapenem, whilst 9 of the 10 *B. fragilis* strains tested were.

**Conclusions:** Ertapenem demonstrates excellent activity against enterobacteriaceae including ESBL producing strains at our institution but is lacking against *A. baumanii*, *P. aeruginosa*, *S. maltophilia* and *E. faecalis*. It also has poor activity against *B. pseudomallei* and cannot be recommended as therapy for melioidosis.

**66.021**

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