Macro E-test MIC of 6.0 μg/ml for both glycopeptides. This suggests that periodic screening of *S. aureus* isolates from BSI may be useful to check for the occurrence of hVISA.

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44.028

Tigecycline and Comparators Against *S. pneumoniae*: A Global Study

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Objectives: *S. pneumoniae* (SPN) continues to be recognized as a significant respiratory and bacteremic pathogen. Resistance to both oral and parenteral antibiotics used to treat SPN infection is evolving and newer antibiotics are needed with anti-SPN activity. This report documents the activity of tigecycline and comparators against 5501 SPN collected globally since 2004.

Methods: Between 2004—2007, 387 hospital sites in 48 countries collected 5501 SPN deemed clinically significant from a variety of sources. MICs were determined at each site using supplied broth microdilution panels and MIC results interpreted by CLSI standards at each site.

Results: The % SPN inhibited at each MIC are shown below:

Conclusions: Tigecycline demonstrated excellent in vitro activity against SPN with 100% of isolates inhibited at ≤0.5 mcg/ml. Globally, only 61.5% of SPN were susceptible to penicillin, while 0.2% were resistant to levofloxacin. Continued surveillance of resistance in SPN to new and established antimicrobials is warranted.

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44.029

Tigecycline Comparison with Minocycline Resistance Pathogens. A Worldwide Perspective

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Objectives: Tigecycline, a new glycylcycline is an analogue of tetracycline that demonstrates activity against bacterial strains carrying tetracycline (minocycline) resistance mechanisms. This report documents the activity of TIG against minocycline resistant isolates collected worldwide, 2004—2007, as part of the Tigecycline Evaluation Surveillance Trial (TEST) study.

Methods: Between 2004 and 2007, 387 hospital sites in 48 countries collected significant pathogens associated with 8 specimen types, were identified to species level and MICs

Results: The table below illustrates the activity of tigecycline to minocycline resistant pathogens.

Conclusions: Tigecycline MIC_{90}s were ≤0.5 mcg/ml for minocycline resistant gram-positive pathogens such as *Enterococcus* and *S. aureus* (including MRSA) and ≤8 mcg/ml for minocycline resistant gram-negative pathogens such as *Enterobacteriaceae*, including ESBL producers. Tigecycline demonstrated minimal activity against *P. aeruginosa*. Tigecycline demonstrates enhanced activity to many minocycline resistant pathogens.

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44.030

Multi-Drug Resistant (MDR) S. aureus Against Tigecycline and Comparators: A Global Evaluation

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Background: Worldwide *S. aureus* are increasingly displaying resistance to multiple drug classes. Therapeutic options to multi-drug resistant (MDR) *S. aureus* phenotypes are limited. Tigecycline, a new glycylcycline offers the potential of enhanced activity against MDR *S. aureus*. The tigecycline evaluation surveillance trial (T.E.S.T.) evaluated the activity of tigecycline and comparators to MDR *S. aureus* isolated worldwide.

Methods: 335 hospital sites in 47 countries between 2004 and 2007 collected 7,557 clinically significant *S. aureus*. MICs were determined using broth microdilution panels and results interpreted as specified by CLSI at each site. *S. aureus* strains were categorized into groups according to the number of drug classes to which they were resistant (MDR groups 0 to 4).

Results: MIC_{90} of tigecycline and comparators for MDR groups 0 to 4 are shown in the table.

Conclusions: Tigecycline in comparison to 10 relevant comparators exhibited the lowest MIC_{90} against *S. aureus* isolated worldwide irrespective of MDR phenotype and multiple drug class resistance.

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44.031

Antimicrobial Activity of Daptomycin and Comparator Agents Tested Against Gram-positive Organisms from Hong Kong, Indonesia, Philippines, Singapore and Thailand

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Background: Daptomycin is a cyclic lipopeptide with potent bactericidal activity against Gram-positive organisms. Daptomycin has been used in the USA and Europe for the treatment of complicated skin and soft tissue (cSSTI)

and bloodstream infections (BSI) for several years. We evaluated the in vitro activity of daptomycin and comparators against recent (2006) clinical isolates collected in 5 Asia-Pacific (APAC) countries.

Methods: 523 consecutive strains were collected in (no. of strains; medical centers) Hong Kong (100; 1), Indonesia (63; 3), Philippines (124; 2), Singapore (119; 1) and Thailand (117; 2). Most isolates were from cSSTI and BSI. Organisms evaluated included: *S. aureus* (SA; 326 strains); coagulase-negative staphylococci (CoNS; 31), enterococci (92), viridans group streptococci (VGS; 32) and β-haemolytic streptococci (BHS; 42). Antimicrobial susceptibility was evaluated by reference broth microdilution methods in cation-adjusted Mueller-Hinton broth with 50 mg/L of calcium for daptomycin tests.

Results: Daptomycin was highly active against SA (100.0% susceptibility) with minor variations among countries. Among SA, oxacillin resistance varied from 29.6% in Thailand to 80.4% in Singapore; while the highest rates of resistance to clindamycin and trimethoprim/sulfamethoxazole were observed in Indonesia (46.9 and 59.6% respectively), Thailand (28.3 and 39.1%) and Singapore (29.6 and 31.5%). Daptomycin inhibited all CoNS strains at ≤1 mg/L or less and was two- to four-fold more potent than vancomycin or linezolid against SA and CoNS. Enterococci were also very susceptible to daptomycin ($MIC_{50/90}$, 1/4 mg/L; 100.0% susceptible) and vancomycin resistance was observed only in Thailand (2.0%, VRE). VGS and BHS strains showed lower daptomycin MIC values (MIC_{90}, 1 and 0.25 mg/L respectively).

Conclusions: Antimicrobial susceptibility patterns of Gram-positive organisms varied substantially among the APAC nations evaluated and daptomycin exhibited complete coverage (100.0% susceptibility) and high potency against a large collection of contemporary clinical strains collected in 9 hospitals from 5 APAC countries.

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44.032

Daptomycin Activity Tested Against Gram-positive Bacteria Isolated from Medical Centers Located in China (2006)

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Background: Daptomycin, a novel cyclic lipopeptide, exhibits a unique mechanism of action that includes binding to, and depolarizing, the bacterial membrane resulting in rapid loss of cellular function and cell death. We evaluated the in vitro activity of daptomycin against recent clinical isolates collected in ten Chinese hospitals.

Methods: 924 consecutive strains were collected in Chinese medical centers in 2006. The organisms, one per patient, were isolated mainly from bloodstream and skin and soft tissue infections. The following pathogens were evaluated: *S. aureus* (SA; 37.5% oxacillin-resistant [MRSA]); coagulase-negative staphylococci (CoNS; 88.9% oxacillin-resistant), *Enterococcus* spp. (0.5% vancomycin-resistant [VRE]) and viridans group streptococci (VGS; 43.8 penicillin-susceptible). The strains were susceptibility tested by broth microdilution methods in cation-adjusted Mueller-Hinton broth supplemented to 50 mg/L of calcium for daptomycin tests. Numerous comparator agents were tested.

Results: All organisms tested were considered susceptible to daptomycin. Daptomycin was highly active against SA (MIC_{90}, 0.5 mg/L) and CoNS (MIC_{90}, 1 mg/L), and two- to four-fold more potent than vancomycin or linezolid against these organisms. MRSA showed high rates of resistance to clindamycin (92.4%), levofloxacin (96.2%) and gentamicin (95.5%), and daptomycin MIC values slightly higher compared to oxacillin-susceptible SA. All enterococcal strains were inhibited at the daptomycin susceptible breakpoint of ≤4 mg/L, including a few VRE strains. *E. faecalis* (MIC_{90}, 2 mg/L) exhibited daptomycin MIC values lower than *E. faecium* (MIC_{90}, 4 mg/L). Quinupristin/dalfopristin showed limited activity (61.7% susceptibility) against *E. faecium*; and *E. faecalis* showed high rate of high-level resistance to gentamicin (49.8%) and streptomycin (51.7). Daptomycin was very active against VGS (MIC_{90}, 0.5 mg/L).

Conclusions: Daptomycin showed significant potency and broad-spectrum activity against recent clinical isolates of Gram-positive organisms isolated in Chinese medical centers, including multidrug-resistant subsets. All Gram-positive organisms tested were susceptible to daptomycin.

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44.033

Comparative Evaluation of Tigecycline and other Antimicrobials in the United States Against Multi-drug Resistant (MDR) Staphylococcus aureus

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Objectives: Worldwide methicillin-resistant *S.aureus* (MRSA) are increasing dramatically with corresponding resistance to multiple drug classes (MDR). Tigecycline, a new glycylcycline offers the potential of enhanced activity against MDR *S. aureus*. The tigecycline evaluation surveillance trial (T.E.S.T.) evaluated the activity of tigecycline and comparators to MDR *S. aureus*(including MR + MS strains) isolated in the United States.

Methods: 193 hospital sites in the United States, between 2004 and 2007, collected 5280 clinically significant *S. aureus*. MICs were performed as specified by CLSI at each site.

Results: MIC_{90} of tigecycline and comparators to *S. aureus* resistant groups 0—3+ are shown in the following table:

Conclusions: Tigecycline demonstrated in vitro activity comparable to that of linezolid and vancomycin against all multidrug resistant groups of *S. aureus*. Tigecycline in vitro activity is unaffected by multidrug resistant phenotypes of *S. aureus* and offers an alternative in the treatment of infections due to *S. aureus* where approved indications apply.

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