

References

- Aarestrup, F. M. (1995):*** Occurrence of glycopeptide resistance among *Enterococcus faecium* isolates from conventional and ecological poultry farms. *Microb. Drug. Resist.*, 1:255–257.
- Abadia, P. L.; Courvalin, P. and Perichon, B. (2002):*** *vanE* gene cluster of vancomycin-resistant *Enterococcus faecalis* BM4405. *J. Bacteriol.*, 184: 6457–64.
- Andrewes, F. W. and Horder, T. J. (1906):*** A study of the streptococci pathogenic for man. *Lancet*, ii: 708-713.
- Ardino, R.C. and Murray, B.E. (1990):*** *Enterococcus*: antimicrobial resistance. In: Mandell GL, Douglas RG Jr, Bennett JE, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York, NY: Churchill Livingstone; Update Vol 2, No 4.
- Arthur, M.; Depardieu, F.; Gerbaud, G.; Galimand, M.; Leclercq, R. and Courvalin, P. (1997):*** The *vanS* sensor negatively controls *vanR*-mediated transcriptional activation of glycopeptide resistance genes of Tn1546 and related elements in the absence of induction. *J. Bacteriol.*, 179:97–106.
- Arthur, M.; Depardieu, F.; Reynolds, P. and Courvalin, P. (1996):*** Quantitative analysis of the metabolism of soluble cytoplasmic peptidoglycan precursors of glycopeptide-resistant enterococci. *Mol. Microbiol.*, 21:33–44.

- Arthur, M.; Molinas, C. and Courvalin, P. (1992):** The *vanS-vanR* two-component regulatory system controls synthesis of depsipeptide peptidoglycan precursors in *Enterococcus faecium* BM4147. *J. Bacteriol.*, 174:2582–91.
- Arthur, M.; Molinas, C.; Dutka-Malen, S. and Courvalin, P. (1991):** Structural relationship between the vancomycin resistance protein VanH and 2-hydroxycarboxylic acid dehydrogenases. *Gene*, 103:133–134.
- Arthur, M.; Reynolds, P. and Courvalin, P. (1996):** Glycopeptide resistance in enterococci. *Trends Microbiol.*, 4:401–7.
- Baptista, M.; Depardieu, F.; Courvalin, P. and Arthur, M. (1996):** Specificity of induction of glycopeptide resistance genes in *Enterococcus faecalis*. *Antimicrob. Agents Chemother.* , 40:2291–2295.
- Barbier, N.; Saulnier, P.; Chachaty, E.; Dumontier, S. and Andremont, A. (1996):** Random amplified polymorphic DNA typing versus pulsed field gel electrophoresis for epidemiological typing of vancomycin-resistant enterococci. *Journal of Clinical Microbiology*, 34: 1096-1099.
- Bates, J.; Jordens, J. Z. and Griffiths, D. T. (1995):** Farm animals as putative reservoir for vancomycin-resistant enterococcal infection in man. *Antimicrob. Agents. Chemother.*, 39:781–785.

- Bates, J.; Jordens, Z. and Selkon, J. B. (1993):** Faecal carriage and nosocomial spread of vancomycin-resistant *Enterococcus faecium*. Lancet, 342:490–491.
- Belinda, E.O. ; William, E.T. ; Annette, H.S. ; Stephen, B.Q. ; Stacey, H. ; Loretta, A.C. ; Bertha, C.H. ; Matthew, J.A. ; Matthew, J.K. and William, R. J. (2001):** Control of Vancomycin-Resistant *Enterococcus* in Health Care Facilities in a Region. New England Journal Of Medicine, 344: 1427-1433.
- Bo, Z.; Haruyoshi, T. ; Yong, H.X. ; Shan, W. ; Yun, L. and Yasuyoshi, I. (2007):** Molecular Characterization of Vancomycin-Resistant *Enterococcus faecium* Isolates from Mainland China. Journal of Clinical Microbiology, 45: 2813-2818.
- Boyce, J. M. (1997):** Vancomycin-resistant enterococcus: detection, epidemiology and control measures. Infect. Dis. Clin. North Am., 11:367–384.
- Boyce, J. M.; Mermel, L. A. ; Zervos, M. J. ; Rice, L. B. ; Potter-Bynoe, G.; Giorgio, C. and Medeiros, A. A. (1995):** Controlling vancomycin-resistant enterococci. Infect. Control Hosp. Epidemiol. , 16:634–637.
- Boyce, J. M.; Opal, S. M. ; Chow, J. W. ; Zervos, M. J.; Potter-Bynoe, G.; Sherman, C. B. ; Romulo, R. L. ; Fortna, S. and Medeiros, A. A. (1994):** Outbreak of multi-drug resistant *Enterococcus*
-

faecium with transferable VanB class vancomycin resistance. J. Clin. Microbiol. , 32:1148–1153.

British society for antimicrobial chemotherapy (BSAC) (2009): Methods for antimicrobial susceptibility testing. Version 8. Page 40-41.

Brooks, G.F.; Butel, J.S. and Morse, S.A. (2007): The streptococci. chapter 15. In Jawetz, Melnick and Adelberg's Medical microbiology. Twenty fourth edition. Mc Grow Hill. P: 233-248.

Bugg, T. D. H.; Dutka-Malen, S.; Arthur, M.; Courvalin, P. and Walsh. C. T. (1991): Identification of vancomycin resistance protein *vanA* as a D-alanine-D-alanine ligase of altered substrate specificity. Biochemistry , 30:2017–2021.

Carmeli, Y.; Mattew, H.; Samore, M.H. and Huskins, W.C. (1999): The association between antecedent vancomycin treatment and hospital-acquired vancomycin resistant enterococci. Arch. Intern. Med., 159(11):2461-2468.

Centers for Disease Control and Prevention (CDC, 1995): Recommendations for preventing spread of vancomycin resistance. Infect. Control Hosp. Epidemiol., 16:105–113.

Centers for Disease Control and prevention (CDC, 1999): Vancomycin resistant Enterococci and clinical laboratory. Fact sheet. At: http://www.cdc.gov/ncidod/dhqp/ar_lab_vre.html

Centers for Disease Control and Prevention. (CDC, 2000): *Staphylococcus aureus* with reduced susceptibility to vancomycin—Illinois, 1999. Morb. Mortal. Wkly. Rep. 48:1165–1167.

Centers for Disease Control and Prevention (CDC, 2002): Vancomycin-resistant *Staphylococcus aureus*, Pennsylvania,. MMWR Morb. Mortal. Wkly. Rep., 51:902.

Center for disease control and prevention (CDC, April 2008): Vancomycin resistant enterococci. Information for the public about VRE . At: <http://www.cdc.gov/>

Cercenado, E.; Garcia-Garrote, F. and Bouza, E. (2001): In vitro activity of linezolid against multiple resistant Gram-positive clinical isolates. J. Antimicrob. Chemother., 47, 77–81.

Cetinkaya, Y.; Pamela, F. and Glen, C.M. (2000): Vancomycin resistant enterococci. Clinical Microbiology Reviews, 13(4): 686-707.

Chang, S.; Sievert, D.M.; Hageman, J.C. (2003): Infection with vancomycin- resistant *Staphylococcus aureus* containing the *vanA* resistance gene. NEJM., 348:1342–7.

Charlene, R. J.; Paula, J. F. and John, B. B. (2004): Use of a Genus- and Species-Specific Multiplex PCR for Identification of Enterococci. J. Clin. Microbiol., 42(8):3558-3565.

- Cheesbrough, M. (2004) (a):** District laboratory practice in tropical countries. Part 2. Cambridge University Press. Chapter 7: Biochemical tests to identify bacteria. Pages (68-69).
- Cheesbrough, M. (2004) (b):** District laboratory practice in tropical countries. Part 2. Cambridge University Press. Chapter 7: antimicrobial sensitivity testing. Pages (136- 141)
- Clark, N. C.; Cooksey, R. C. ; Hill, B. C. ; Swenson, J. M. and Tenover, F. C. (1993):** Characterization of glycopeptide-resistant enterococci from US hospitals. Antimicrob. Agents Chemother. , 37:2311–2317.
- Cleaveland, D. B. (1990):** Movable genetic elements and antibiotic resistance in enterococci. Eur. J. Clin. Microbiol. Infect. Dis., 9:90–102.
- Courvalin, P. (2006):** Vancomycin Resistance in Gram-Positive Cocci. CID, 42 (Suppl 1):S25-34.
- Currie, B.P.; Gnass, S. and Levi, M.H. (1996):** A hospital-based rectal swab culture survey to detect vancomycin- resistant enterococci: Utility and application. Int. J. Infect. Dis., 1:87-91.
- Dahl, K. H.; Simonsen, G. S. ; Olsvik, Q. and Sundsfjord, A. (1999):** Heterogeneity in the *vanB* gene cluster of genomically diverse clinical strains of vancomycin-resistant enterococci. Antimicrob. Agents. Chemother., 43:1105–1110.
- Dahms, R. A.; Johnson, E. M. ; Statz, C. L. ; Lee, J. T. ; Dunn, D. L. and Beilman, G. J. (1998):** Third generation cephalosporins and
-

vancomycin as risk factors for postoperative vancomycin-resistant Enterococcus infection. Arch. Surg., 133:1343–1346.

Dan, M.; Poch, F.; Leibson, L.; Smetana, S.; and Priel, I. (1999): Rectal colonization with vancomycin resistant enterococci among high risk patients in an Israeli hospital. J. Hosp. Infect., 43(3): 231-8.

De la Maza; Luis, M.; Marie, T. P. and Janet, T. S. (2004): Color Atlas of Medical Bacteriology. Washington, DC: American Society for Microbiology Press.

Depardieu, F.; Bonora, M.G.; Reynolds, P.E. and Courvalin, P. (2003) (b): The *vanG* glycopeptide resistance operon from Enterococcus faecalis revisited. Mol. Microbiol, 50:931–48.

Depardieu, F.; Reynolds, P.E. and Courvalin, P. (2003) (a): VanD-type vancomycin-resistant Enterococcus faecium 10/96A. Antimicrob. Agents Chemother., 47:7–18.

Desai, P.J.; Pandit, D.; Mathur, M. and Gogate, A. (2001): Prevalence, identification and distribution of various species of enterococci isolated from clinical specimens with special reference to urinary tract infection in catheterized patients. Journal of Indian microbiology, 19(3):132-137.

Descheemaeker, P.; Ieven, M.; Chapelle, S.; Lammens, C.; Hauchecorne, M.; Wijdooghe, M.; Vandamme, P. and Goossens, H. (2000): Prevalence and molecular epidemiology of glycopeptide-

resistant enterococci in Belgian renal dialysis units. *Journal of Infectious Diseases* ,181:235–241.

Devriese, L. A.; Collins, M. D. and Wirth,R. (1991): The genus *Enterococcus*, In Ballows,A.; Tru“per, H. G. ; Dworkin, M.; Harder, W. and Schleifer, K. H. (ed.), *The prokaryotes*. p. 1465–1477. Springer-Verlag, New York, N.Y.

Devrim, I.; Genel, F.; Atlihan, F.; Erhan, O. and Gamze, G.(2009): Risk Factors for Vancomycin-Resistant Enterococci Colonization in Infants in Neonatal Intensive Care Unit. *Cent. Eur . J. Med.* DOI: 10.2478/s11536-009-0073-y.

DiazGranados, C.A.; Zimmer, S.M.; Klein, M. and Jernigan, J.A. (2005): Comparison of mortality associated with vancomycin-resistant and vancomycin-susceptible enterococcal bloodstream infections: a meta-analysis. *Clin Infect Dis*, 41:327–33.

Diekema, D.J.; BootsMiller, B.J.; Vaughn, T.E.; Woolson, R.F.; Yankey, J.W.; Ernst, E.J. (2004): Antimicrobial resistance trends and outbreak frequency in United States hospitals. *Clin Infect Dis*, 38:78–85.

Donskey, C.J.; Chowdhry, T.K.; Hecker, M.T.; Hoyer, C.K.; Hanrahan, J.A.; Hujer, A.M. (2000): Effect of antibiotic therapy on the density of vancomycin-resistant enterococci in the stool of colonized patients. *N. Engl .J .Med.*, 343:1925–32.

- Drews, S.J.; Richardson, S.E.; Wray, R. (2008):** An outbreak of vancomycin-resistant *Enterococcus faecium* in an acute care pediatric hospital: Lessons from environmental screening and a case-control study. *Can J. Infect. Dis. Med. Microbiol.*, 19(3):233-236.
- Durmishkhan, T.; Mamuka, k.; Arnold, k.; Glenn, j. M. and Alexander, S. (2000):** Improved Pulsed-Field Gel Electrophoresis for Typing Vancomycin-Resistant *Enterococci*. *Journal of clinical microbiology*, 38(11):4242–4245.
- Dutka-Malen, S.; Evers, S. and Courvalin, P. (1995):** Detection of glycopeptide resistance genotypes and identification to the species level of clinically relevant enterococci by PCR. *J. Clin. Microbiol.* , 33:24–27.
- Dutta, I. and Reynolds, P.E. (2003):** The *vanC-3* vancomycin resistance gene cluster of *Enterococcus flavescens* CCM 439. *J. Antimicrob. Chemother.*, 51:703–6.
- Edmond, M. B.; Ober, J. F. ; Weinbaum, D. L. ; Pfaller, M. A. ; Hwang, T. ; Sanford, M. D. and Wenzel, R. P. (1995):** Vancomycin-resistant *Enterococcus faecium* bacteremia: risk factors for infection. *Clin. Infect. Dis.*, 20:1126–1133.
- El Kholy, M.; Hadia, B.; Geraldine, S.; Gary, W. P. and David, L. L. (2003):** Antimicrobial resistance in Cairo, Egypt 1999–2000: a survey of five hospitals. *Journal of Antimicrobial Chemotherapy*, 51: 625-630.
-

- Eliopoulos, G. M. (1997):** Vancomycin-resistant enterococci: mechanism and clinical relevance. *Infect. Dis. Clin. North Am.*, 11:851–865.
- Endtz, H. P.; Braak, N. V.; Van, B. A.; Goessens, W. H. ; Kreft, D.; Stroebe, A. B. and Verbrugh, H. A. (1998):** Comparison of eight methods to detect vancomycin resistance in enterococci. *J. Clin. Microbiol.*, 36:592–594.
- European Antimicrobial Resistance Surveillance System (2007):** Susceptibility results for *E. faecium* isolates in 2006. Available at: <http://www.rivm.nl/earss/database/> [accessed 29 May 2007].
- Evelina, T. and Maria, A.C. (2008):** Vancomycin-resistant enterococci (VRE): transmission and control. *International Journal of Antimicrobial Agents*, 31:99–106.
- Evers, S. and Courvalin, P. (1996):** Regulation of *VanB* type vancomycin resistance gene expression by the *vanSB-vanRB* two-component regulatory system in *Enterococcus faecalis* V583. *J. Bacteriol.*, 178:1302–1309.
- Evers, S.; Sahm, D. F. and Courvalin, P. (1993):** The *vanB* gene of *Enterococcus faecalis* V583 is structurally related to genes encoding D-Ala, D-Ala ligases and glycopeptide-resistance proteins *vanA* and *vanC*. *Gene*, 124:143–144.
- Facklam, R.R. and Collins, M.D. (1989):** Identification of *Enterococcus* species isolated from human infections by a conventional test scheme. *J Clin Microbiol*, 27(4):731-734.

- Facklam, R.R. and Sahm, D.F. (1995):** Enterococci. Manual of Clinical Microbiology, sixth edition. American Society for microbiology, Washington DC, 308-14.
- Facklam, R.R. and Teixeira, L.M. (1998):** Enterococci. In Topley & Wilson's Microbiology and Microbial infections, Collier L., Balows A. and Sussman M.(editors), ninth edition, 669-682.
- Facklam, R.R. and Washington, J.A. (1991):** Streptococci and related catalase-negative gram-positive cocci. In A.Balows, W.J. Hausler, Jr., K.R.Herrman, H.D.Isenberg, and H.J.Shadomy (ed.), Manual of clinical microbiology, 5th ed. American Society for Microbiology, Washington, D.C p. 238-257.
- Facklam, R.R.; Sahm, D.F. and Teixeira, L.M. (1999):** Enterococcus. In: Manual of Clinical Microbiology. Murray PR., Baron EJ., Pfaller MA, Tenover FC.& Tenover FC. (Editors). 7th edition., ASM Press, Washington, D.C.297-305.
- Facklam, R.R.; Carvalho, M.S. and Teixeira, L.M.(2002):** History, taxonomy, biochemical characteristics and antibiotic susceptibility testing of enterococci. Chapter one. In Gilmore, M.S. The enterococci: pathogenesis, molecular biology and antibiotic resistance.ASM press.Washington, DC.
- Fischetti, V.A.; Novick, R.P.; Ferretti, J.J.; Portnoy, D.A. and Rood, J.I. (2000):** Gram-Positive Pathogens. ASM Press. (Am. Soc. Microbiol.,Washington, DC).

- Frainow, H.; Knob, C.; Herrero, I. and Patel, R. (2005):** Putative VanRS-like two component regulatory system associated with the inducible glycopeptide resistance cluster of *Paenibacillus popilliae*. *Antimicrob. Agents Chemother.* , 49, 2625–2633.
- Franchi, D.; Climo, M.W. ; Wong, A. H. M. ; Edmond, M.B. and Wenzel, R.P.(1999):** Seeking Vancomycin Resistant *Staphylococcus aureus* among Patients with Vancomycin-Resistant Enterococci. *Clinical Infectious Diseases*, 29:1556–8.
- French, G.L. (1998):** Enterococci and vancomycin resistance. *Clin Infect Dis* , 27(suppl 1):75-83.
- Friden, T. R.; Munsiff, S. S. ; Low, D. E.; Willey, B. M. ; William, G.; Faur, Y.; Eisner, W.; Warren, S. and Kreiswirth, B. (1993):** Emergence of vancomycin-resistant enterococci in New York City. *Lancet*, 342:76–79.
- Gambarotto, K.; Ploy, M.C.; Turlure, P.; Grelaud, C.; Martin, C. and Bordessoule, D. (2000):** Prevalence of vancomycin-resistant enterococci in fecal samples from hospitalized patients and non hospitalized controls in a cattle-rearing area of France. *J. Clin. Microbiol.* , 38:620–4.
- Gelsomino, R.; Vancanneyt, M.; Cogan, T.M. and Swings, J. (2002):** Source of Enterococci in a Farmhouse Raw-Milk Cheese. *Appl. Environ. Microbiol.*, 68(7): 3560–3565.

- Gonzalez, C.; Rubio, M.; Romero-Vivas, J.; Gonzalez, M. and Picazo, J.J. (1999):** Bacteremic pneumonia due to *Staphylococcus aureus*: a comparison of disease caused by methicillin-resistant and methicillin-susceptible organisms. Clin. Infect. Dis., 29: 1171–7.
- Gordillo, M.E.; Singh, K.V. and Murray, B.E. (1993):** Comparison of ribotyping and pulsed field gel electrophoresis for subspecies differentiation of strains of *Enterococcus faecalis*. Journal of Clinical Microbiology, 31: 1570-1574.
- Gordts, B.; Herman, V. L.; Margaretha, I.; Peter, V. and Herman, G. (1995):** Vancomycin-Resistant Enterococci Colonizing the Intestinal Tracts of Hospitalized Patients. Journal of clinical microbiology, 33(11): 2842–2846.
- Gülhan, T.; Aksakal, A.; Hakk, S.; Savafian, S. and Boynukara, B. (2006):** Virulence Factors of *Enterococcus faecium* and *Enterococcus faecalis* Strains Isolated from Humans and Pets. Turk. J. Vet. Anim. Sci., 30:477-482.
- Hancock, R.E. (2005):** Mechanisms of action of newer antibiotics for Gram-positive pathogens. Lancet Infect Dis, 5, 209–218.
- Handwerger, S.; Raucher, B.; Altarac, D.; Manka, J.; Marchione, S.; Sing, K. V. ; Murray, B. E. ; Wolff, J. and Walters, B. (1993):** Nosocomial outbreak due to *Enterococcus faecium* highly resistant to vancomycin, penicillin, and gentamicin. Clin. Infect. Dis., 16:750–755.

- Hayden, M. K.; Trenholme, G. M.; Schultz, J. E. and Sahn, D. F. (1993):** In vivo development of teicoplanin resistance in *vanB* *Enterococcus faecium* isolate. J. Infect. Dis., 167:1224–1227.
- Hee-Jeon, H.; Matthew, I. H. and Mark, J. B. (2008):** Bacterial Signal Transduction: Networks and Drug Targets. Chapter 14, page 203, edited by Ryutaro Utsumi.
- Hendrix, C.W.; Hammond, J.M.; Swoboda, S.M.; Merz, W.G.; Harrington, S.M.; Perl, T.M. (2001):** Surveillance strategies and impact of vancomycin-resistant enterococcal colonization and infection in critically ill patients. Ann. Surg., 233: 259-265.
- Herman, D. J. and Gerding, D. N. (1991):** Screening and treatment of infections caused by resistant enterococci. Antimicrob. Agents Chemother.; 35: 215–219.
- Hijazi, N.; Abdelraouf, A. E. and Al-Hindi, A. (2009):** Vancomycin-resistant enterococci in fecal samples from hospitalized patients and non-hospitalized individuals in Gaza City. J. Public Health ,17:243–249.
- Hospital Infection Control Practices Advisory Committee (HICPAC), (1995):** Recommendations for preventing the spread of vancomycin resistance: Recommendations of the Hospital Infection Control Practices Advisory Committee. MMWR, Morb. Mortal. Wkly. Rep., 44:1–13.

- Huang, S.S.; Datta, R. and Platt, R. (2006):** Risk of acquiring antibiotic-resistant bacteria from prior room occupants. *Arch. Intern. Med.*, 166:1945–51.
- James, A. K.; George, G. Z. and Daryl, J. H.(1999):** Vancomycin-Resistant Enterococci Colonization of High-Risk Patients in Tertiary Care Canadian Hospitals. *Diagn. Microbiol. Infect. Dis.* ;35:1–7.
- Jayarão, B.M.; Dore, J.R. and Oliver, S.P. (1992):** Restriction fragment length polymorphism analysis of 16S ribosomal DNA of *Streptococcus* and *Enterococcus* species of bovine origin. *Journal of Clinical Microbiology*, 30: 2235-2240.
- Jett, B.; Free, L. and Sahm, D. F. (1996):** Factors influencing the Vitek Gram-Positive Susceptibility system's detection of vanB-encoded vancomycin resistance among enterococci. *J. Clin. Microbiol.*, 34:701–706.
- Jordan, D.C. and Inniss, W.E. (1959):** Selective inhibition of ribonucleic acid synthesis in *Staphylococcus aureus* by vancomycin. *Nature*, 184: 1984–1985.
- Jordan, D.C. and Mallory, H.D. (1964):** Site of action of vancomycin on *Staphylococcus aureus*. *Antimicrob. Agents Chemother.*, 10, 489–494.
- Kahne, D.; Leimkuhler, C.; Wei, L. and Christopher, W. (2005):** Glycopeptide and Lipoglycopeptide Antibiotics. *Chem. Rev.*, 105, 425- 448.

- Kainer, M.A.; Devasia, R.A.; Jones, T.F.; Simmons, B.P.; Melton, K.; Chow, S. (2007):** Response to emerging infection leading to outbreak of linezolid- resistant enterococci. *Emerg Infect Dis*, 13:1024–30.
- Karanfil, L. V.; Murphy, M.; Josephson, A.; Gaynes, R.; Mandel, L.; Hill, B. C. and Swenson, J. M. (1992):** A cluster of vancomycin-resistant *Enterococcus faecium* in an intensive care unit. *Infect. Control Hosp. Epidemiol.* , 13:195– 200.
- Kern, W.V. (2006):** Daptomycin: first in a new class of antibiotics for complicated skin and soft-tissue infections. *Int. J .Clin. Pract.*, 60, 370–378.
- Kirst, H.A.; Thompson, D.G. and Nicas, T.I. (1998):** Historical yearly usage of vancomycin. *Antimicrob. Agents. Chemother.*, 42:1303–4.
- Kjerulf, A.; Pallesen, L. and Westh, H. (1996):** Vancomycin-resistant enterococci at a large university hospital in Denmark. *APMIS*, 104:475–479.
- Kohner, P. C.; patel, R.; Uhl, J. R.; Garin, K. M.; Hopkins , M. K. ; Wegener, L. T. and Cockerill, F. R. (1997):** Comparison of Agar Dilution, Broth Microdilution, E-Test, Disk Diffusion, and Automated Vitek Methods for Testing Susceptibilities of *Enterococcus* spp. to Vancomycin. *Journal of Clinical Microbiology*, 35(12): 3258–3263.

Korniewicz, D. M.; Kirwin, M.; Cresci, K.; Markut, C. and Larson, E.

(1992): In-use comparison of latex gloves in two high-risk units: surgical intensive care and acquired immunodeficiency syndrome. *Heart Lung*, 21:81–84.

Kühn, L.; Burman, L. G.; Haeggman, S.; Tullus, K. and Murray, B.E.

(1995): Biochemical finger printing compared with ribotyping and pulsed field gel electrophoresis of DNA for epidemiological typing of enterococci. *J. Clin. Microbiol.*, 33:2812-2817.

Kuhnen, E.; Richter, F., Richter, K. and Andries, L. (1988): Establishment

of a typing system for group D streptococci. Cited from *Zentralbl. Bakteriol. Parasitenkd. Infektionskr. Hyg. Abt.* , 267:322-336.

Lacoux, P.A.; Jordens, J.Z.; Fentin, C.M; Guiney, M. and Pennington,

T.H. (1992): Characterization of enterococcal Isolates by restriction enzyme analysis of genomic DNA. *Epidemiol. Infect.* , 109:69-80.

Lancaster, A.D. (1994): Draft guideline published on preventing the spread

of VRE infections. *Hospital Infection Control Practices Advisory Committee. Asepsis*, 16:19–22.

Lancefield, R. C. (1933): Serological differentiation of human and other

groups of haemolytic streptococci. *J. Exp. Med.*, 57:571–595.

- Lautenbach, E.; Bilker, W. and Brennan, P. J. (1999):** Enterococcal bacteremia: risk factors for vancomycin resistance and predictors of mortality. *Infect. Control Hosp. Epidemiol.*, 20:318–323.
- Leclercq, R. and Courvalin, P. (1997):** Resistance to glycopeptides in enterococci. *Clin. Infect. Dis.*, 24:545–556.
- Leclercq, R.; Derlot, E.; Duval, J. and Courvalin, P. (1988):** Plasmid-mediated resistance to vancomycin and teicoplanin in *Enterococcus faecium*. *N. Engl. J. Med.*, 319:157–61.
- Lee, W.G.; Jung, M.K. and Kwak, Y.S. (1998):** Vancomycin resistant enterococci; incidence, antimicrobial susceptibility, and resistance genotypes. *Korean J. Clin. Path.*, 18:51-56.
- Levine, D.P. (2006):** Vancomycin: a history. *Clin Infect Dis* , 42 (Suppl 1): S5–12.
- Livornese, L. L.; Dias, S.; Samel, C. ; Romanowski, B.; Taylor, S.; May, P.; Pitsakis, P.; Woods, G.; Kaye, D. and Levison, M. E. (1992):** Hospital-acquired infection with vancomycin-resistant *Enterococcus faecium* transmitted by electronic thermometers. *Ann. Intern. Med.*, 117:112–116.
- Livornese, L. L.; Dias, S.; Samel, C.; Romanowski, B.; Taylor, S.; May, P.; Pitsakis, P.; Woods, G.; Kaye, D. and Levison, M. E. (1992):** Hospital-acquired infection with vancomycin-resistant *Enterococcus faecium* transmitted by electronic thermometers. *Ann. Intern. Med.*, 117:112–116.
-

- Low, D.E.; Keller, N.; Barth, A. and Jones, R.N. (2001):** Clinical prevalence, antimicrobial susceptibility, and geographic resistance patterns of enterococci: results from the Sentry Antimicrobial Surveillance Program, 1997-1999. Clin Infect Dis, 32(Supply 2), S133-45.
- Luginbuhl, L.M.; Rotbart, H. A.; Facklam, R.R.; Roe, M. H. and Elliott, J. A. (1987):** Neonatal enterococcal sepsis: case control study and description of an outbreak. Pediatr. Infect. Dis. J., 6:1022-1030.
- Malathum, K.; Singh, K.V.; Weinstock, G.M. and Murray, B.E. (1995):** Repetitive sequence-based PCR versus pulsed-field gel electrophoresis for typing of *Enterococcus faecalis* at the subspecies level. Journal of Clinical Microbiology, 36: 211-215.
- Manley, K.J.; Fraenkel, M.B.; Mayall, B.C. and Power, D.A.(2007):** Probiotic treatment of vancomycin-resistant enterococci: a randomised controlled trial. Med. J. Aust. 7, 186(9):454-7.
- Marco, J. A. ; Naranjo, O. R.; Felipe, R.; Buenaventura, B. and Jesus, S. S. (2008):** Mechanisms of Resistance by Gram-Positive Bacteria (Streptococci and Enterococci). Chapter 1. In I. W. Fong and K. Drlica (eds.). Antimicrobial Resistance and Implications for the Twenty-First Century. P: 25-28.

- Mascini, E.M. and Bonten, J.M. (2005):** Vancomycin-resistant enterococci: consequences for therapy and infection control. Clin. Microbiol. Infect., 11(Suppl. 4):43–56.
- Mathur, P.; Kapil, A.; Chandra,R.; Sharma, P. and Das, B. (2003):** Antimicrobial resistance in *Enterococcus faecalis* at a tertiary care centre of northern India. Indian J Med Res ;118: 25-28.
- Mato, R.; Almeida, F.; Pires, R.; Rodrigues, P.; Ferreira, T. and Santos-Sanches, I. (2009):** Assessment of high-level gentamicin and glycopeptide-resistant *Enterococcus faecalis* and *E. faecium* clonal structure in a Portuguese hospital over a 3-year period. Eur J Clin Microbiol Infect Dis, 28:855–859.
- Mato, R.; deLancestre, H.; Carraher, M.; Roberts, R. B. and Tomasz, . (1996):** Multiplicity of genetic backgrounds among vancomycin-resistant *Enterococcus faecium* isolates recovered from an outbreak in a New York City Hospital. Microb. Drug Resist. , 2:309–317.
- McKessar, S.J.; Berry, A.M.; Bell, J.M.; Turnidge, J.D. and Paton, J.C. (2000):** Genetic characterization of *vanG*, a novel vancomycin resistance locus of *Enterococcus faecalis*. Antimicrob. Agents Chemother.,44:3224–8.
- Meera, V.; Archana, C. and Walid, A. (2008):** Enterococcal Infection: Treatment & Medication. eMedicine specialities > Pediatrics: General Medicine > Infectious disease.

- Metwally, F. (2003):** Isolation and genotypic characterization of vancomycin resistant enterococci in faecal specimens. J. Med. Lab. Sci. (ESIC), (12):2.
- Michael, B. E.; Janis, F. O.; David, L. W.; Michael, A. P.; Taekyu, H. and Melissa, D.(1995):** Vancomycin-Resistant *Enterococcus faecium* Bacteremia: Risk Factors for Infection. Clinical infectious disease, 20(5): 1126-1133.
- Miranda, A.G.; Singh, K.V. and Murray, B.E. (1991):** DNA fingerprinting of *Enterococcus faecium* by pulsed-field gel electrophoresis may be a useful epidemiologic tool. Journal of Clinical Microbiology, 29: 2752-2757.
- Moellering, R.C. (1995):** Enterococcus species, streptococcus bovis, and leuconostoc species. In: Mandell GL, Bennett JE, Dolin R, eds. Principles and Practice of Infectious Diseases. 4th ed. New York, NY: Churchill livingstone: 1826- 1835.
- Montecalvo, M.; Horowitz, H. and Gedris, C. (1994):** Outbreak of vancomycin -,ampicillin-, and aminoglycoside-resistant *Enterococcus Faecium* bacteremia in an adult oncology unit. Antimicrob. Agents Chemother., 38:1363-7.
- Montecalvo, M. A. (2003):** Ramoplanin: a novel antimicrobial agent with the potential to prevent vancomycin-resistant enterococcal infection in high-risk patients. Journal of Antimicrobial Chemotherapy, 51(Suppl. S3), iii31–iii35.

- Montecalvo, M. A.; deLancestre, H.; Carraher, M. ; Gedris, C.; Chung, M. ; Horn, K.V. and Wormser, G. P. (1995):** Natural history of colonization with vancomycin-resistant *Enterococcus faecium*. *Infect. Control Hosp. Epidemiol.*, 16: 680–685.
- Morris, J. G.; Shay, D. K. ; Hebden, J. N. ; McCarter, R. J. ; Perdue, B. E. ; Jarvis, W.; Johnson, T. A. ; Dowling, T. C. ; Polish, L. B. and Schwalbe, R. S. (1995):** Enterococci resistant to multiple antimicrobial agents, including vancomycin: establishment of endemicity in a university medical center. *Ann. Intern. Med.*, 123:250–259.
- Mundy, L. M.; Sahm, D. F. and Gilmore, M. (2000):** Relationships between Enterococcal Virulence and Antimicrobial Resistance. *Clinical Microbiology Reviews*, 13(4):513-522.
- Murray, B. E. (1990):** The life and times of the enterococcus. *Clin. Microbiol. Rev.*, 3:45–65.
- Murray, B. E. (1992):** β -Lactamase-producing enterococci. *Antimicrob. Agents Chemother.*, 36:2355–2359.
- Murray, B. E. (1997):** Vancomycin-resistant enterococci. *Am. J. Med.* , 101: 284–293.
- Murray, B.E. (1998):** Diversity among multidrug-resistant enterococci. *Emerg. Infect. Dis.*; 4:37-47.
- Nallapareddy, S.R.; Singh, K.V.; Sillanpää, J.; Garsin, D.A.; Höök, M.; Erlandsen, S.L. and Murray, B.E. (2006):** Endocarditis and
-

biofilm-associated pili of *Enterococcus faecalis*. *Journal of Clinical Investigation.* , 116: 2799-2807.

Nathan, A.L. ; Kingshuk, D. ; Michael, E. ; Celine, R.D. ; Sandrine, M. ; Sonia, C. and William, M.D. (2007): Evaluation of a novel chromogenic agar medium for isolation and differentiation of vancomycin resistant *enterococcus faecium* and *enterococcus faecalis* isolates. *Journal of Clinical Microbiology*, 45:1556-1560.

National Committee for Clinical Laboratory Standards. (NCCLS) (2000): Methods for dilution antimicrobial susceptibility tests for bacteria that grow aerobically, 4th ed. Approved standard. M7-A4. National Committee for Clinical Laboratory Standards, Wayne, Pennsylvania.

National committee for clinical laboratory standards (NCCLS,2003): Methods for dilution antimicrobial susceptibility tests for bacteria that grow aerobically. M7-A6. Wayne, Pennsylvania.

National Nosocomial Infections Surveillance (NNIS) (1999): System report, data summary from January 1990–May 1999, issued June 1999. *American Journal of Infection Control*, 27: 520–32.

Nelson, R.R.S.; McGregor, K.F.; Brown, A.R. (2000): Isolation and characterization of glycopeptide resistant enterococci from hospitalized patients over a 30-month period. *J. Clin. Microbiol.*, 38(7):2112-2116.

Nicoletti, G.; Boghossian, V. and Borland, R. (1990): Hygienic hand disinfection: a comparative study with chlorhexidine detergents and soap. *J. Hosp. Infect.*, 15:323–337.

Noskin, G. A.; Stosor, V.; Cooper, I. and Peterson, L. R. (1995): Recovery of vancomycin-resistant enterococci on fingertips and environmental surfaces. *Infect. Control Hosp. Epidemiol.*, 16:577–581.

Orla-Jensen, S. (1919): The lactic acid bacteria. *Mem. Acad. R. Soc. Danemark Sect. Sci. Ser.*, 85:81-197.

Padiglione, A.A.; Wolfe, R.; Grabsch, E.A., Olden, D.; Pearson, S.; Franklin, C.; Spelman, D.; Mayall, B.; Johnson, P.D. and Grayson, M.L. (2003): Risk factors for new detection of vancomycin resistant enterococci in acute care hospitals that employ strict infection control procedures. *Antimicrob. Agents Chemother.*, 47(8): 2492-8.

Patel, R. (2003): Clinical impact of vancomycin-resistant enterococci. *Journal of Antimicrobial Chemotherapy*, 51(Suppl. S3): iii13–iii21.

Patel, R.; Piper, K.; Cockerill, F.R.; Steckelberg, J.M. and Yousten, A.A. (2000): The biopesticide *Paenibacillus popilliae* has a vancomycin resistance gene cluster homologous to the enterococcal VanA vancomycin resistance gene cluster. *Antimicrob. Agents Chemother.*, 44, 705–709.

- Perl, T. M. (1999):** The threat of vancomycin resistance. *Am. J. Med.*, 106(Suppl. 5A):26S–37S, 48S–52S.
- Perlada, D.E.; Smulian, A.G.; and Cushion, M.T. (1997):** Molecular epidemiology and antibiotic susceptibility of enterococci in Cincinnati, Ohio: a prospective citywide survey. *J. Clin. Microbiol.*, 35(9): 2342-7.
- Pfeiffer, R.R. (1981):** Structural features of vancomycin. *Rev Infect Dis*, 3: 205.
- Poyart, C.; Quesne, G. and Trieu-Cuot, P. (2000):** Sequencing the gene encoding manganese-dependent superoxide dismutase for rapid species identification of enterococci. *J. Clin. Microbiol.* , 38:415-418.
- Prystowsky, J.; Siddiqui, F.; Chosay, J.; Shinabarger, D. L.; Millichap, J.; Peterson, L. R. (2001):** Resistance to linezolid: characterization of mutations in rRNA and comparison of their occurrences in vancomycin-resistant enterococci. *Antimicrobial Agents and Chemotherapy*, 45: 2154–6.
- Purva, M.; Arti, K.; Rachna, C., Pratibha, S. and Bimal, D. (2003):** Antimicrobial resistance in *Enterococcus faecalis* at a tertiary care centre of northern India. *Indian J. Med .Res.* , 118: 25-28.
- Quale, J.; Landman, D.; Saurina, G.; Atwood, E.; DiTore, V. and Patel, K. (1996):** Manipulation of a hospital antimicrobial formulary to

control an outbreak of vancomycin-resistant enterococci. Clin Infect Dis, 23:1020–5.

Quintiliani, R. and Courvalin, P. (1994): Conjugal transfer of the vancomycin resistance determinant *vanB* between enterococci involves the movement of large genetic elements from chromosome to chromosome. FEMS Microbiol. Lett., 119:359–364.

Ray, A. J. ; Pultz, N. J. ; Bhalla, A.; Aron, D.C. and Donskey, C. J. (2003): Coexistence of Vancomycin-Resistant Enterococci and *Staphylococcus aureus* in the Intestinal Tracts of Hospitalized Patients .CID, 37 (1): 875-881.

Reina, M.F.; James, A. and Tomas, W.R. (2000): Vancomycin-Resistant Enterococci: Approach to Treatment and control. Clinical Microbiology Reviews, 13:686-707.

Reynolds, P. E.; Depardieu, F.; Dutka-Malen, S.; Arthur, M. and Courvalin, P. (1994): Glycopeptide resistance mediated by enterococcal transposon Tn1546 requires production of *vanX* for hydrolysis of D-alanyl-D-alanine. Mol. Microbiol., 13:1065–1070.

Reynolds, P.E. and Courvalin, P. (2005): Vancomycin resistance by synthesis of precursors terminating in D-alanyl-D-alanine. Antimicrob. Agents Chemother., 49:21–5.

Ross, P.W. (1996): streptococcus and enterococcus. chapter 12. *In Colle, J.G.; Marmion, B.P.; Fraser, A.G. and Simmons, A.* Practical medical microbiology. Fourteenth edition. Volume one. Section B. P:263- 274.

Rossi, S. (2006): Australian Medicines Handbook. ISBN 0-9757919-2-3

Satake, S.; Clark, N.; Rimland, D.; Nolte, F. S. and Tenover, F. C. (1997): Detection of Vancomycin-Resistant Enterococci in Fecal Samples by PCR. journal of clinical microbiology, 35(9): 2325–2330

Schaberg, D.R.; Culver, D.H. and Gaynes, R.P. (1991): Major trends in the microbial etiology of nosocomial infection. Am. J. Med., 91: 72S-75S.

Schleifer, K.H. and Kilpper-Balz, R. (1984): Transfer of *Streptococcus faecalis* and *Streptococcus faecium* to the genus *Enterococcus* nom. Int. J. Sys. Bacteriol. , 34: 31-34.

Schulz, J. E. and Sahm, D. F. (1993): Reliability of the E Test for Detection of Ampicillin, Vancomycin, and High-Level Aminoglycoside Resistance in *Enterococcus* spp. Journal of Clin. Micro. , 31(12): 3336-3339.

Sharath, S. H.; Noe, R. ; Tania, W.; Nicole, V. ; Robert, S.; Julia, M. ; Kone, K. ; John, P. ; Roger, T. ; Jeng-Pyng, S. ; Glen, O. and Kevin, J. (2004): Pharmacodynamics of Telavancin (TD-6424), a

Novel Bactericidal Agent, against Gram-Positive Bacteria.
Antimicrobial agent and chemotherapy , 48(8), 3043–3050.

Sherman, J. M. (1937): The streptococci. Bacteriol. Rev., 1:3–97.

Slaughter, S.; Hayden, M. K. ; Nathan, C.; Hu, T. C. ; Rice, T.; Van Voorhis, J.; Matushek, M.; Franklin, C. and Weinstein, R. A. (1996): A comparison of the effect of universal use of gloves and gowns with that of glove use alone on acquisition of vancomycin-resistant enterococci in a medical intensive care unit. Ann. Intern. Med., 125:448–456.

Small, P.M. and Chambers, HF (1990): Vancomycin for *Staphylococcus aureus* endocarditis in intravenous drug users. Antimicrob. Agents Chemother., 34: 1227–31.

Smith, D.W. (1999): Decreased antimicrobial resistance after changes in antibiotic use. Pharmacotherapy, 19:129S–32S.

Smyth, C.J.; Matthews, H.; Halpenny, M. K.; Brandis, H. and Colman, G. (1987): Biotyping , serotyping and phage typing of *streptococcus faecalis* isolated from dental plaque in the human mouth. J.med.microbiol., 23: 45-54.

Srinivasan, A.; Dick, J. D. and Perl, T. M. (2002): Vancomycin Resistance in Staphylococci. Clinical microbiology reviews, 15(3): 430–438.

Steigbigel, N.H. (1995): Macrolides and clindamycin. In: Mandel GL, Bennett JE, Dolin R, eds. Principles and Practice of Infectious

Diseases. 4th ed. New York, NY: Churchill Livingstone: 334-346.

Stobberingh, E.; van den Bogaard, A.; London, N.; Driessen, C.; Top, J. and Willems, R. (1999): Enterococci with glycopeptide resistance in turkeys, turkey farmers, turkey slaughterers, and suburban residents in the south of The Netherlands: evidence for transmission of vancomycin resistance from animals to humans. *Antimicrob. Agents Chemother.*, 43:2215–21.

Suntharam, N.; Lankford, M.G.; Trick, W.E.; Peterson, L.R. and Noskin, G.A. (2002): Risk factors for acquisition of vancomycin resistant enterococci among hematology-oncology patients. *Diagn. Microbiol. Infect. Dis.*, 43(3):183-8.

Suzanne, M.P. ; William, E.T. ; Fred, C.T. ; Mary, L. ; Susan, C. ; Valentina, S. ; Ralph, L.C. and Lance, R.P. (2003): Comparison of PCR Assay to Culture for Surveillance Detection of Vancomycin-Resistant Enterococci .*Journal Of Clinical Microbiology*, 41:4805-4807.

Swaney, S. M.; Aoki, H.; Ganoza, M. C. and Shinabarger, D. L. (1998): The oxazolidinone linezolid inhibits initiation of protein synthesis in bacteria. *Antimicrobial Agents and Chemotherapy* , 42, 3251–5.

Swenson, J. M.; Clark, N. C. ; Ferraro, M. J. ; Sahm, D. F. ; Doern, G.; Pfaller, M. A.; Reller, L. B. ; Weinstein, M. P. ; Zabransky, R. J. and Tenover, F. C. (1994): Development of a standardized

screening method for detection of vancomycin-resistant enterococci. J. Clin. Microbiol. , 32:1700–1704.

Taconelli, E.; Karchmer, A.W.; Yokoe, D. and D'Agata, E.M. (2004):

Preventing the influx of vancomycin-resistant enterococci into health care institutions, by use of a simple validated prediction rule. Clin. Infect. Dis., 39:964–70.

Tenover, F. C.; Swenson, J.M.; O'Hara, C.M. and Stocker, S. A. (1995):

Ability of commercial and reference antimicrobial susceptibility testing methods to detect vancomycin resistance in enterococci. J. Clin. Microbiol., 33:1524–1527.

Tenover, F. C.; Tokars, J.; Swenson, J.; Paul, S.; Spitalny, K. and Jarvis, W. (1993):

Ability of clinical laboratories to detect antimicrobial agent-resistant enterococci. J. Clin. Microbiol. , 31:1695–1699.

Thiercelin, M. E. (1899): Sur un diplocoque saprophyte de l'intestin

susceptible de devenir pathogen. Cited from C. R. Soc. Biol. ,5:269-271.

Thierry, N.; Nicolas, F.; Renaud, S.; Colette, S. ; Antoine, D. and Patrice, N. (2005):

First Nosocomial Outbreak of Vancomycin-Resistant *Enterococcus faecium* Expressing a VanD-Like Phenotype Associated with a *vanA* Genotype. Journal Of Clinical Microbiology, 43:3642–3649

Thorne, G.M. and Alder, J. (2002): Daptomycin: a novel lipopeptide

antibiotic. Clin Microbiol News L, 24, 33–40.

Tokars, J.I.; Satake, S.; Rimland, D.; Carson, L.; Miller, E.R.; Killum, E.; Sinkowitz-Cochran, R.L., Arduino, M.J.; Tenover, F.C.; Marston, B. and Jarvis, W.R. (1999): The prevalence of colonization with vancomycin-resistant enterococcus at a Veterans' Affairs institution. *Infection Control and Hospital Epidemiology*, 20:171–175.

Tornieporth, N. G.; Roberts, R. B.; John, J.; Hafnier, A. and Riley, L. W. (1996): Risk factors associated with vancomycin-resistant *Enterococcus faecium* infection or colonization in 145 matched case patients and control patients. *Clin. Infect. Dis.*, 23:767–772.

Trick, W.E.; Paul, S.M.; Cunningham, S.; Cordell, R.L.; Lankford, M.; Stensor, V.; Solomon, S.L.; and Peterson, L.R. (2004): Detection of vancomycin resistant enterococci before and after antimicrobial therapy: use of conventional culture and polymerase chain reaction. *Clin. Infect. Dis.*, 38(6): 780-6. Epub 2004 Feb 27.

Tyrell, G.J.; Bethune, R.N.; Willey, B. and Low, D.E. (1997): Species identification of enterococci via intergenic ribosomal PCR. *Journal of Clinical Microbiology*, 35: 1054-1060.

Udo, E.E.; Al-Sweih, N.; Philips, O.A. and Khugh, T.D. (2003): Species prevalence and antibacterial resistance of enterococci isolated in Kuwait hospitals. *J. Med. Microbiol.*, 52:163-168.

Vanessa, V.; Tim, V.A.; Carl, V.; Christine, L.; Sabine, C.; Rosaria, R.; Daniela, J. and Herman, G. (2004): Development of a

Multiplex PCR for the Detection of *asa1*, *gelE*, *cylA*, *esp*, and *hyl* Genes in Enterococci and Survey for Virulence Determinants among European Hospital Isolates of *Enterococcus faecium*. Journal of Clinical Microbiology, 42 (10): 4473-4479.

Vannufel, P. and Cocito, C. (1996): Mechanism of action of streptogramins and macrolides. Drugs, 51 (Suppl. 1): 20–30.

Vergis, E.N.; Hayden, M.K.; Chow, J.W.; Snyderman, D.R.; Zervos, M.J.; Linden, P.K. (2001): Determinants of vancomycin resistance and mortality rates in enterococcal bacteremia. A prospective multicenter study. Ann Intern Med, 135:484–92.

Wade, J. J. (1995): The emergence of *Enterococcus faecium* resistant to glycopeptides and other standard agents—a preliminary report. J. Hosp. Infect., 30(Suppl.):483–493.

Wade, J. J.; Dessai, N. and Casewell, M. W. (1991): Hygienic hand disinfection for the removal of epidemic vancomycin-resistant *Enterococcus faecium* and gentamicin-resistant *Enterobacter cloacae*. J. Hosp. Infect., 18:211–218.

Weinstein, J. W.; Tallapragada, S.; Farrel, P. and Dembry, L. M. (1996): Comparison of rectal and perirectal swabs for detection of colonization with vancomycin-resistant enterococci. J. Clin. Microbiol., 34:210–212.

Wells, C.L.; Juni, B.A.; Cameron, S.B. (1995): Stool carriage, clinical isolation, and mortality during an outbreak of vancomycin-

resistant enterococci in hospitalized medical and/or surgical patients. Clin. Infect. Dis., 21:45–50.

Wendt, C.; Krause, C.; Xander, L.U.; Loffler, D. and Floss, H. (1999):

Prevalence of colonization with vancomycin-resistant enterococci in various population groups in Berlin, Germany. Journal of Hospital Infection, 42:193–200.

Westenfelder, G. O.; Paterson, P. Y.; Reisberg, B. E. and Carlson, G. M.

(1973): Vancomycin-streptomycin synergism in enterococcal endocarditis. JAMA, 223:37–40.

Willems, R.J.; Homan, W.; Top, J.; van Santen-Verheuvél, M.; Tribe, D.

and Manzioros, X. (2001): Variant *esp* gene as a marker of a distinct genetic lineage of vancomycin-resistant *Enterococcus faecium* spreading in hospitals. Lancet, 357:853–5.

Wisplinghoff, H.; Bischoff, T.; Tallent, S.M.; Seifert, H.; Wenzel, R.P. and

Edmond, M.B. (2004): Nosocomial bloodstream infections in US hospitals: analysis of 24 179 cases from a prospective nationwide surveillance study. Clin Infect Dis, 39:309–17.

Wong, M. T.; Kauffman, C. A. ; Standiford, H.C. ; Linden, P.; Fort, G.;

Fuchs, H.J. ; Porter, S. B. and Wenzel, R. P. (2001): Effective Suppression of Vancomycin-Resistant *Enterococcus* Species in Asymptomatic Gastrointestinal Carriers by a Novel Glycolipodepsipeptide, Ramoplanin. CID, 33 (1 November):1476-1482.

- Woodford, N.; Johnson, A. P. and Morrison, D. (1995):** Current perspectives on glycopeptide resistance. Clin. Microbiol. Rev., 8:585–615.
- Wu, Z.; Wright, G. D. and Walsh, C. T. (1995):** Overexpression, purification and characterization of *vanX*, a D-,D-dipeptidase which is essential for vancomycin resistance in *Enterococcus faecium* BM4147. Biochemistry , 34:2455–2463.
- Young-Bem, S.; Hyoung-Joon, C.; Hyeong-Joong, Y.; Dong-Won, K.; Yong, K. and Suck-Jun, O. (2009):** Incidence and Risk Factors of Infection Caused by Vancomycin-Resistant *Enterococcus* Colonization in Neurosurgical Intensive Care Unit Patients. J Korean Neurosurg Soc ,46 : 123-129.
- Zaas, A.K.; Song, X.; Tucker, P. and Perl, T.M. (2002):** Risk factors for development of vancomycin-resistant enterococcal bloodstream infection in patients with cancer who are colonized with vancomycin-resistant enterococci. Clin Infect Dis, 35:1139–46.
- Zabransky, R. J.; Dinuzzo, A. R. and Woods, G. L. (1995):** Detection of vancomycin resistance in enterococci by the Alamar MIC system. J. Clin. Microbiol., 33:791–793.
- Zabransky, R. J.; DiNuzzo, A. R.; Huber, M. B. and Woods, G. L. (1994):** Detection of vancomycin resistance in enterococci by the Vitek AMS System. Diagn. Microbiol. Infect. Dis., 20:113–116.

