

## **Challenges and Prospects for Controlling Staphylococcal Infections in 2006**

Anthony W. Chow, MD, FRCPC, FACP. Professor of Medicine, Division of Infectious Diseases, Department of Medicine; Director, MD/PhD Program and Director, Strategic Training Program for Translational Research in Infectious Diseases, University of British Columbia and Vancouver Hospital Health Sciences Center, Vancouver, BC, Canada.

Infections due to *Staphylococcus aureus* and coagulase negative staphylococci continue to pose important health hazards in humans and dairy animals alike. The emergence of multiple antibiotic resistance, including vancomycin and methicillin, has severely limited options for treatment. In this lecture, the strategies utilized by staphylococci for persistent infection and treatment failure are reviewed. Key among these is the ability of these superbugs to easily adapt to the local environment, and to evade host immune defenses. The prevalence and significance of community-acquired methicillin resistance among *S. aureus*, and implications for treatment and prevention is also addressed. Finally, prospects for overcoming these formidable virulence factors, including newer treatment regimens, effective infection control measures and prevention strategies are discussed.