

## Adhesion and survival of *Serratia marcescens* clinical keratitis isolates

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*Serratia marcescens* (*S. marcescens*) is a Gram-negative bacterium found ubiquitously in nature and in most tap water sources. *S. marcescens* has been associated with numerous nosocomial infections and is also one of the leading causes of contact-lens associated red eye (CLARE). The efficacy with which *S. marcescens* can adhere to silicone hydrogel contact lenses, as well as its ability to survive in different brands of commercially available contact lens solutions was investigated. Using clinical keratitis isolates, greater than 90% of bacteria was found to adhere to silicone hydrogel contact lenses when left for 24 hours. However, survival rate of the isolates in contact lens solution did show some variability. Contact lens solution containing biguanide appeared to inhibit bacterial survival at a higher rate than those without this key ingredient. This data corroborates *S. marcescens* as a potential risk of contact lenses use which may be prevented with use of solutions containing biguanides and proper hygiene practices. Future studies will investigate if biguanide containing solutions will decrease rate of adherence of *S. marcescens* to silicone hydrogel contact lenses.