

## Publications

### 2006-present

1. Liu, Y., Black, M.A., Caron, L., and **T.A. Camesano**. Role of cranberry juice on molecular-scale surface characteristics and adhesion of *Escherichia coli*, *Biotechnology and Bioengineering*. 2006, 93, 297-305.
2. Emerson, R.J. and **T.A. Camesano**. On the importance of precise calibration techniques for an atomic force microscope, *Ultramicroscopy*. 2006, 106, 413-422 .
3. Abu-Lail, N.I. and **T.A. Camesano**. The effect of solvent polarity on the molecular surface properties and adhesion of *Escherichia coli*. *Colloids and Surfaces B: Biointerfaces*. 2006, 51, 62-70.
4. Abu-Lail, N.I. and **T.A. Camesano**. Specific and non-specific interaction forces between *Escherichia coli* and silicon nitride, determined by Poisson statistical analysis. *Langmuir*, 2006, 22, 7269-7301.
5. Rotureau, E., Léonard, M., Marie, E., Dellacherie, E., **Camesano, T.A.**, and A. Durand. From polymeric surfactants to colloidal systems (1): Amphiphilic dextrans for emulsion preparation. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*. 2006, 288, 131-137.
6. Rotureau, E., Marie, E., Léonard, M., Dellacherie, E., **Camesano, T.A.**, and A. Durand. From polymeric surfactants to colloidal systems (2): Preparation of colloidal dispersions. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*. 2006, 288, 62-70.
7. Emerson, R.J. IV, Bergstrom, T.S., Liu, Y., Soto, E.R., Brown, C.A., McGimpsey, W.G., and **T.A. Camesano**. A microscale correlation among surface chemistry, texture and the adhesive strength of *Staphylococcus epidermidis*. *Langmuir*. 2006, 22, 11311-11321.
8. Gallardo-Moreno, A.M., Liu, Y., González-Martin, M.L., and **T.A. Camesano**. Atomic force microscopy analysis of bacterial surface morphology before and after cell washing. *Journal of Scanning Probe Microscopy*. 2006, 1, 63-73.
9. **Camesano, T.A.**, Liu, Y., Datta, M. Measuring bacterial adhesion at environmental interfaces with single-cell and single-molecule techniques. (Invited review), *Advances in Water Resources*, 2007, 30, 1470-1491.
10. **Camesano, T.A.**, Liu, Y., and P.A. Pinzon-Arango. Cranberry prevents the adhesion of bacteria: an overview of relevant health benefits. *AgroFOOD industry hi-tech*, 2007, 18, 24-27.
11. Liu, Y., Strauss, J., and **T.A. Camesano**. Thermodynamic investigation of *Staphylococcus epidermidis* interactions with protein-coated substrata. *Langmuir*, 2007, 23, 7134-7142.

12. Abu-Lail, L.I., Liu, Y., Atabek, A., and **T.A. Camesano**. Quantifying the interactions between *Pseudomonas aeruginosa* and natural organic matter. *Environmental Science & Technology*. 2007, 41:8031-8037.
13. Atabek, A. and **T.A. Camesano**. An atomic force microscopy study of the effect of lipopolysaccharides and extrapolymeric substances on the adhesion of *Pseudomonas aeruginosa*. *Journal of Bacteriology*. 2007, 189:8503-8509.
14. Liu, Y., Gallardo-Moreno, A.M., Pinzon-Arango, P.A., Reynolds, Y., Rodriguez, G., and **T.A. Camesano**. Cranberry changes the physicochemical surface properties of *E. coli* and their adhesion with uroepithelial cells. *Colloids and Surfaces B: Biointerfaces*. 2008, 65:35-42.
15. Liu, Y., Strauss, J., and **T.A. Camesano**. Adhesion forces between *Staphylococcus epidermidis* and surfaces bearing self-assembled monolayers in the presence of model proteins. *Biomaterials*. 2008, 29:4374-4382.
16. Atabek, A., Liu, Y., Pinzón-Arango, P.A., and **T.A. Camesano**. Importance of LPS structure on protein interactions with *Pseudomonas aeruginosa*. *Colloids and Surfaces B: Biointerfaces*. 2008, 67:115-121.
17. Liu, Y., Pinzón-Arango, P.A. Strauss, J., and **T.A. Camesano**. Fundamentals of bacterial adhesion applied towards infection prevention: Focus on two case studies. *Pharmaceutical Engineering*, 2009, 29:56-66.
18. Pinzón-Arango, P.A. Liu, Y., and **T.A. Camesano**. Role of cranberry on bacterial adhesion forces and implications for *E. coli*-uroepithelial cell interactions. *Journal of Medicinal Food*, 2009, 12:259-270.
19. Pinzón-Arango, P.A., Scholl, G., Nagarajan, R., Mello, C.M., and **T.A. Camesano**. Atomic force microscopy study of germination and killing of *Bacillus atrophaeus* spores. *Journal of Molecular Recognition*, in press. Epub ahead of print available online as of March 3, 2009, DOI 10.1002/jmr.945
20. Strauss, J., Burnham, N.A., and **T.A. Camesano**. Probing role of LPS O-antigen on *E. coli* adhesion using atomic force microscopy. *Journal of Molecular Recognition*, Epub ahead of print available online as of April 28, 2009.
21. Strauss, J., Liu, Y., and **T.A. Camesano**. Bacterial adhesion to protein-coated surfaces: an AFM and QCM-D study, *JOM*, in press.
22. Strauss, J., Kadilak, A., Cronin, C., Mello, C.M, and **T. A. Camesano**. Binding, inactivation, and adhesion forces between antimicrobial peptide cecropin P1 and pathogenic *E. coli*, submitted for publication.

## 2001-2005

23. **Camesano, T.A.** and K.J. Wilkinson. Single molecule study of xanthan conformation using atomic force microscopy. *Biomacromolecules*. 2001, 2, 1184-1191.
24. Abu-Lail, N.I. and **T.A. Camesano**. Elasticity of *Pseudomonas putida* KT2442 biopolymers probed with single-molecule force microscopy. *Langmuir*, 2002, 18, 4071-4081.
25. **Camesano, T.A.** and N.I. Abu-Lail. Heterogeneity in bacterial surface polysaccharides, probed on a single-molecule basis. *Biomacromolecules*, 2002, 3, 661-667.
26. Abu-Lail, N.I., **Camesano, T.A.** Polysaccharide properties probed with atomic force microscopy (Invited review), *Journal of Microscopy*, 2003, 212, 217-238.
27. Abu-Lail, N.I. and **T.A. Camesano**. Role of lipopolysaccharides in the adhesion, retention, and transport of *Escherichia coli* JM109. *Environmental Science & Technology*, 2003, 37, 2173-2183.
28. Abu-Lail, N.I., **Camesano, T.A.** Role of ionic strength on the relationship of biopolymer conformation, DLVO contributions, and steric interactions to bioadhesion of *Pseudomonas putida* KT2442. *Biomacromolecules*, 2003, 4, 1000-1012.
29. Dupres, V., **Camesano, T.A.**, Langevin, D., Guenoun, P., Checco, A. Atomic force microscopy imaging of hair. Correlations between surface potential and wetting at the nanometer scale. *Journal of Colloid and Interface Science*, 2004, 269, 329-335.
30. Emerson, R.J. IV and **T.A. Camesano**. A nanoscale investigation of pathogenic microbial adhesion in biomaterial systems. *Applied and Environmental Microbiology*, 2004, 70, 6012-6022.
31. Eisenman, H.C., Nosanchuk, J.D., Webber, B.W., Emerson, R.J., **Camesano, T.A.**, Casadevall, A. The architecture of cell wall-associated melanin in the human pathogenic fungus *Cryptococcus neoformans*. *Biochemistry*. 2005, 44, 3683-3693.
32. Pouliot, J.M., Walton, I., Nolen-Parkhouse, Abu-Lail, L.I., and **T.A. Camesano**. Adhesion of *Aureobasidium pullulans* is controlled by uronic acid-based polymers and pullulan. *Biomacromolecules*. 2005, 6, 1122-1131.
33. Tong, M., **Camesano, T.A.**, and W.P. Johnson. Spatial variation in bacterial deposition rate coefficients under unfavorable deposition conditions resulting from non-electrostatic mechanisms. *Environmental Science & Technology*. 2005, 39, 3679-3687.
34. Bell, C.H., Arora, B.S., and **T.A. Camesano**. Adhesion of *Pseudomonas putida* KT2442 is mediated by surface polymers at the nano- and micro-scale. *Environmental Engineering Science*. 2005, 22, 629-641.

35. Bell, C.H. and **T.A. Camesano**. The effects of centrifugation and filtration as pre-treatments in bacterial retention studies. *Journal of Young Investigators*. 2005, 12, [www.jyi.org/research/re.php?id=240](http://www.jyi.org/research/re.php?id=240)

#### **1998-2000**

36. **Camesano, T.A.** and Logan, B.E. Influence of fluid velocity and cell concentration on the transport of motile and non-motile bacteria in porous media. *Environmental Science & Technology*. 1998, 32:1699-1708.
37. Logan, B.E., **Camesano, T.A.**, DeSantis, A.A., Unice, K.M., and J.C. Baygents. Comment on "A Method for calculating bacterial deposition coefficients using the fraction of bacteria recovered from laboratory columns". *Environmental Science & Technology*. 1999, 33:1316-1317.
38. **Camesano, T.A.**, Unice, K.M., and B.E. Logan. Blocking and ripening of colloids in porous media: Implications for bacterial transport. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*. 1999, 160:291-307.
39. **Camesano, T.A.** and R. Nagarajan. Micelle formation and CMC of gemini surfactants: A thermodynamic model. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*. 2000, 167: 165-177.
40. **Camesano, T.A.**, Natan, M.J., and Logan, B.E. Imaging modified bacterial cells using atomic force microscopy. *Langmuir*. 2000, 16:4563-4572.
41. **Camesano, T.A.** and B.E. Logan. Probing bacterial electrosteric interactions using atomic force microscopy. *Environmental Science & Technology*. 2000, 34:3354-3362.