

**Philip S. Stewart**  
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### **PROFESSIONAL PREPARATION**

<b>INSTITUTIONS</b>	<b>FIELD OF STUDY</b>	<b>DEGREE</b>	<b>YEARS</b>
Rice University	Chemical Engineering	BS	1982
Stanford University	Chemical Engineering	MS	1985
Stanford University	Chemical Engineering	PhD	1988
Institut Jacques Monod	Bacterial Genetics	Post-Doc	1989

### **APPOINTMENTS**

2000-	Professor	Department of Chemical and Biological Engineering, Montana State University
2005-2015	Director	Center for Biofilm Engineering, Montana State University
1996-2000	Associate Professor	Department of Chemical Engineering, Montana State University
1992-96	Assistant Professor	Department of Chemical Engineering, Montana State University
1991-92	Adjunct Assistant Professor	Department of Chemical Engineering, Montana State University
1990-91	Senior Chemical Engineer	Bechtel Environmental

### **PUBLICATIONS**

1. **Stewart, P. S.** (2015) Prospects for anti-biofilm pharmaceuticals. *Pharmaceuticals* **8**:504-511.
2. **Stewart, P. S.** (2015) Antimicrobial tolerance in biofilms. *Microbiol Spectrum* **3**:MB-0010-2014.
3. Corbin, A., Pitts, B., Parker, A., and **P. S. Stewart.** (2011) Antimicrobial penetration and efficacy in an in vitro oral biofilm model. *Antimicrob Agents Chemother* **55**:3338-3344.
4. Jones, W. L., Sutton, M. P., McKittrick, L., and **P. S. Stewart.** (2011) Chemical and antimicrobial treatments change the viscoelastic properties of bacterial biofilms. *Biofouling* **27**:207-215.
5. Davison, W. M., Pitts, B., and **P. S. Stewart.** (2010) Spatial and temporal patterns of biocide action against *Staphylococcus epidermidis* biofilms. *Antimicrob Agents Chemother* **54**:2920-2927.

### **OTHER SIGNIFICANT PUBLICATIONS**

6. Depas, W. H., Hufnagel, D. A., Lee, J. S., Blanco, L. P., Bernstein, H. C., Fisher, S. T., James, G. A., **Stewart, P. S.**, and M. R. Chapman. (2013) Iron induces bimodal population development by *Escherichia coli*. *Proc Natl Acad Sci USA* **110**:2629-2634.
7. **Stewart, P. S.**, and M. J. Franklin. (2008) Physiological heterogeneity in biofilms. *Nat Rev Microbiol* **6**:199-210.
8. Mah, T.-F., Pitts, B., Pellock, B., Walker, G. C., **Stewart, P. S.**, and G. A. O'Toole. (2003) A genetic basis for *Pseudomonas aeruginosa* biofilm antibiotic resistance. *Nature* **426**:306-310.
9. **Stewart, P. S.**, and J. W. Costerton. (2001) Antibiotic resistance of bacteria in biofilms. *Lancet* **358**:135-138.
10. Costerton, J. W., **Stewart, P. S.**, and E. P. Greenberg. (1999) Bacterial biofilms: A common cause of persistent infections. *Science* **284**:1318-1322.