

Curriculum Vitae

Research Area

Research in Dr. He's laboratory is focused on the understanding of microbial processes in natural and engineered environments and their applications in finding solutions to environmental problems, including technologies for biological waste treatment, bioremediation of recalcitrant contaminants, water and wastewater quality control, and renewable bio-energy production.

Education

Ph.D. Environmental Engineering / Environmental Microbiology (07/2003)

University of Illinois at Urbana-Champaign, Urbana, IL

M.S. Biological Engineering (07/2000)

Kansas State University, Manhattan, KS

B.S. Biochemical Engineering (07/1993)

East China University of Science and Technology, Shanghai, China

Selected Publications

Bender, K. S., H.-C. B. Yen, C. L. Hemme, Z. Yang, Z. He, **Q. He**, J. Zhou, K. H. Huang, E. J. Alm, T. C. Hazen, A. P. Arkin, and J. D. Wall. 2007. Analysis of a ferric uptake regulator (Fur) mutant of *Desulfovibrio vulgaris* Hildenborough. *Applied and Environmental Microbiology*: Accepted.

Mukhopadhyay, A., A. M. Redding, M. P. Joachimiak, A. P. Arkin, S. E. Borglin, P. S. Dehal, R. Chakraborty, J. T. Geller, T. C. Hazen, **Q. He**, D. C. Joyner, V. J. J. Martin, J. D. Wall, Z. K. Yang, J. Zhou, and J. D. Keasling. 2007. Cell wide responses to low oxygen exposure in *Desulfovibrio vulgaris* Hildenborough. *Journal of Bacteriology*: Accepted.

Butler, J. E., **Q. He**, K. P. Nevin, Z. He, J. Zhou, and D. R. Lovley. 2007. Genomic and microarray analysis of aromatics degradation in *Geobacter metallireducens* and comparison to a *Geobacter* isolate from a contaminated field site. *BMC Genomics* **8**: 180.

Clark, M. E., **Q. He**, Z. He, K. H. Huang, E. J. Alm, X.-F. Wan, T. C. Hazen, A. P. Arkin, J. D. Wall, J.-Z. Zhou, and M.W. Fields. 2006. Temporal transcriptomic analysis as *Desulfovibrio vulgaris* Hildenborough transitions into stationary phase during electron donor depletion. *Applied and Environmental Microbiology* **72(8)**: 5578-5588.

He, Q., K. H. Huang, Z. He, E. J. Alm, M. W. Fields, T. C. Hazen, A. P. Arkin, J. D. Wall, and J. Zhou. 2006. Energetic consequences of nitrite stress in *Desulfovibrio vulgaris* Hildenborough inferred from global transcriptional analysis. *Applied and Environmental Microbiology* **72(6)**: 4370-4381.

Mukhopadhyay, A., Z. He, E. J. Alm, A. P. Arkin, E. E. Baidoo, S. C. Borglin, W. Chen, T. C. Hazen, **Q. He**, H.-Y. Holman, K. H. Huang, R. Huang, D. C. Joyner, N. Katz, M. Keller, P. Oeller, A. Redding, J. Sun, J. D. Wall, J. Wei, Z. Yang, H.-C. Yen, J. Zhou, and J. D. Keasling. 2006. Salt

- stress in *Desulfovibrio vulgaris* Hildenborough: An integrated genomics approach. *Journal of Bacteriology* **188(11)**: 4068-4078.
- Chhabra, S. R., Q. He, K. H. Huang, S. P. Gaucher, E. J. Alm, Z. He, M. Z. Hadi, T. C. Hazen, J. D. Wall, J. Zhou, A. P. Arkin, and A. K. Singh. 2006. Global analysis of heat shock response in *Desulfovibrio vulgaris* Hildenborough. *Journal of Bacteriology* **188(5)**: 1817-1828.
- He, Q., and R. A. Sanford. 2004. Acetate threshold concentrations suggest varying energy requirements during anaerobic respiration by *Anaeromyxobacter dehalogenans*. *Applied and Environmental Microbiology* **70(11)**: 6940-6943.
- He, Q., and R. A. Sanford. 2004. The generation of high biomass from chlororespiring bacteria using a continuous fed-batch bioreactor. *Applied Microbiology and Biotechnology* **65(4)**: 377-382.
- He, Q., and R. A. Sanford. 2003. Characterization of Fe(III) reduction by halo-respiring *Anaeromyxobacter dehalogenans*. *Applied and Environmental Microbiology* **69(5)**: 2712-2718.
- He, Q., and K. R. Mankin. 2002. Assessing removal kinetics of organic matter in rock-plant filters. *Transactions of the American Society of Agricultural Engineers* **45(6)**: 1771-1778.
- He, Q., and K. R. Mankin. 2002. Performance variations of COD and nitrogen removal by vegetated submerged-bed wetlands. *Journal of the American Water Resources Association* **38(6)**: 1679-1689.
- He, Q., and R. A. Sanford. 2002. Induction characteristics of reductive dehalogenation in the *ortho*-halophenol-respiring bacterium, *Anaeromyxobacter dehalogenans*. *Biodegradation* **13(5)**: 307-316.
- He, Q., and K. R. Mankin. 2001. Seasonal variations in hydraulic performance of rock-plant filters. *Environmental Technology* **22(9)**: 991-999.