

James R. Yates

Curriculum Vitae

James R. Yates

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Education:

State University of New York at Albany
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Degree: Ph.D. Molecular Biology (12/88)

State University of New York at Albany
Albany, NY
Degree: M.S. Cell Biology (5/80)

State University of New York College at Oneonta
Oneonta, NY
Degree: B.S. Biology (8/77)

Employment History:

Associate Professor 1990 to present
USC Aiken
Aiken, SC

Staff Scientist 1982 to 1990
Research and Development Center
General Electric Co.
Schenectady, NY

Senior Laboratory Technician 1979 to 1982
New York State Dept. of Health
Division of Labs and Research
Albany, NY

Societies:

American Society for Microbiology (since 1980)
Sigma Xi (since 1993)
South Carolina Academy of Science (since 1994)

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PATENTS:

#4,668,584 (Egidijus Uzgiris and James Yates) Method of Forming 2-D Crystals of Proteins and Macromolecules.

PUBLICATIONS:

1. Yates, J.R. and C.S. Izzard. 1981. Cell to Substrate Contacts in an Adhesion- Defective Mutant of Balb/c 3T3 Cells. *J. Cell Sci.* **52**:183-196.
2. Yates, J.R. and D.S. Nuss. 1982. Time-dependent Increase in the Resistance of Mammalian Cell Protein Synthesis to Inhibition by Hypertonic Medium. *J. Biol. Chem.* **257**:3458-3461.
3. Yates, J.R. and D.S. Nuss. 1982. Resistance to Inhibitors of Mammalian Cell Protein Synthesis by Hypertonic Medium. *J. Biol. Chem.* **257**:15030-15034.
4. Holmes, D.S., Yates, J.R., Lobos, J.H. and M.V. Doyle. 1986. Genetic Engineering of Biomining Organisms. The World Biotech Report 1984, Vol. 2 USA. (p. A67-84).
5. Yates, J.R. and D.S. Holmes. 1986. The Use of Genetic Probes to Detect Microorganisms in Biomining Operations. *J. Ind. Microbiol.* **1**:129-135.
6. Holmes, D.S., Yates, J.R., Lobos, J.H. and M.V. Doyle. 1986. Strategy for the Establishment of a Genetic System for the Acidiphilic Heterotroph, *Acidiphilium organovorum*. *J. Appl. Biochem.* **8**:1-11.
7. Yates, J.R. and D.S. Holmes. 1986. Molecular Probes for the Identification and Quantitation of Microorganisms Found in Mines and Mine Tailings. *Biotechnol. Bioeng. Symp.* **16**:301-309.
8. Yates, J.R. and D.S. Holmes. 1986. Construction and Use of Molecular Probes to Identify and Quantitate Bioleaching Microorganisms. In Fundamental and Applied Biohydrometallurgy. R.W. Lawrence, R.M.R. Branion and H.G. Ebner (eds.). Elsevier Science Publishing. Amsterdam, The Netherlands. (p. 409-418).
9. Yates, J.R. and D.S. Holmes. 1987. Two Families of Repeated DNA Sequences in *Thiobacillus ferrooxidans*. *J. Bacteriol.* **169**:1861-1870.
10. Holmes, D.S., Yates, J.R., Schrader, J.A. and R.U. Haq. 1988. The Use of *Thiobacillus ferrooxidans* for Metal Recovery: Problems and Prospects. In Applications of Genetic Engineering Riazidan and Grossman (eds.), Lahore Press, Pakistan. (p. 19-26).
11. Holmes, D.S., Yates, J.R. and J.A. Schrader. 1988. Mobile Repetitive DNA Sequences in *Thiobacillus ferrooxidans* and Their Significance for Biomining. In Biohydrometallurgy, P.R. Norris and D.P. Kelly (eds.) Kew, England. (p. 153-160).
12. Yates, J.R., Cunningham, R.P and D.S. Holmes. 1988. IST2: An Insertion Sequence in *Thiobacillus ferrooxidans*. *Proc. Natl. Acad. Sci.* **85**:7284-7287.
13. Yates, J.R. and F.J. Mondello. 1989. Sequence Similarities in the Genes Encoding Polychlorinated Biphenyl Degradation by *Pseudomonas* strain LB400 and *Alcaligenes eutrophus* H850. *J. Bacteriol.* **171**:1733-1735.

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14. Mondello, F.J. and J. R. Yates. 1989. Development of Recombinant Bacteria for PCB Biodegradation. EPA Conf. On Land Disposal, Remedial Action, Incineration and Treatment of Hazardous Waste.
15. Holmes, D.S. and J.R. Yates. 1990. Basic Principles of Genetic manipulation of *Thiobacillus ferrooxidans* for Biohydrometallurgical Applications. In Microbial Mineral Recovery, H.L. Ehrlich and C.L. Brierly (eds.) McGraw-Hill Publishing Co. (p. 29-54).
16. Yates, J.R. 1990. The Potential of Biological Processes for Remediation of Contamination Produced by Industries in South Carolina.
17. Yates, J.R. and F.J. Mondello. 1993. Genetic Aspects of PCB Biodegradation. In Molecular Environmental Biology, S. Garte (ed.) CRC Press, Inc. Boca Raton, FL. (p. 65-82).

ABSTRACTS:

1. Yates, J.R., Norton, E. and C.S. Izzard. 1979. Cell-to-substrate Contacts in Balb/c 3T3 Cells and Their Adhesion-Defective Mutant AD6. *J. Cell Biol.* **83**:63a.
2. Norton, E., Yates, J.R. and C.S. Izzard. 1980. The Adhesion-defective Mutant of Balb/c 3T3 cells is Defective in Production of Focal and Close Contacts with the Substrate. *J. Cell Biol.* **87**:91a.
3. Unterman, R., Bedard, D., Brennan, M., Johnson, C. and J. Yates. 1984. Degradation of Polychlorinated Biphenyls by a *Corynebacterium* sp. *Ann. Meet. Am. Soc. Microbiol.* p. 212.
4. Yates, J.R. and D.S. Holmes. 1985. DNA Homology Studies of *Thiobacillus ferrooxidans*, *Thiobacillus acidophilus* and other acidophilic microorganisms. *Ann. Meet, Am. Soc. Microbiol.* p. 259.
5. Mondello, F.J. and J.R. Yates. 1988. Cloning Bacterial Genes for Polychlorinated Biphenyl Degradation. *Conference on Genetically Engineered or Adapted Microorganisms in Hazardous Waste Treatment.*
6. Yates, J.R. and F.J. Mondello. 1989. Genomic Instability in the Region Encoding PCB Degradation by *Pseudomonas* sp. LB400. *Pseudomonas, 89: Biotransformations, Pathogenesis and Evolving Technology.*
7. Smith, G.W., Yates, J.R. and L.C. Ducate. 1991. Seasonal Changes in Seagrass Bacterial Rhizoplane Populations Using Carbon Source Utilization Patterns. *International Marine Biotechnology Conference.* p. 88.
8. Ritchie, K.B. and J.R. Yates. 1992. Classification of a PCB Degrading Bacterium. *Bullitin of the South Carolina Academy of Science.* p. 92.
9. Smith, G.W. and J.R. Yates. 1992. Annual Fluctuations in the Structure of Seagrass Microbial Communities in San Salvador. *International Assoc. of Ecology, IV International Wetlands Conference.*
10. Ritchie, K.B., Mondello, F.J. and J.R. Yates. 1992. Phylogenetic Analysis of a Bacterium Capable of PCB Degradation. *Am. Soc. Microbiol. (SC Branch).*
11. Smith, G.W. and J.R. Yates. 1992. Studies on the Structure of Natural Microbial Communities. *Am. Soc. Microbiol. (SC Branch).*

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12. Hawkins, A. Tiffany, J. Dennis, J., Smith, G. and J. Yates. 1993. Characterization of Three Subsurface Microbial Communities from a Southeastern Coastal Plain. *Ann. Meet. Am. Soc. Microbiol.* p. 314.
13. Suire, E., Hawkins, A., Yates, J. and G. Smith. 1993. Characterization of Bacterial Communities from Resin-bearing Lysimeters. *Ann. Meet. Am. Soc. Microbiol.* p. 314.
14. Dennis, J., Miller, G. Schwalle, J. Wood, D. Smith, G. and J. Yates. 1993. Characterization of Bacterial Communities from a Site Contaminated with Trichloroethylene. *Am. Soc. Microbiol. (SC Branch)*.
15. Ritchie, K., Dennis, J. Mondello, F. and J. Yates. 1993. Sequence Comparisons of Biphenyl Dioxygenase Genes in PCB-degrading Bacteria. *Am. Soc. Microbiol. (SC Branch)*.
16. Ritchie, K., Dennis, J. and J. Yates. 1994. Molecular Genetic Analysis of PCB Degradation. *Bull. SC Acad. Sci.* p. 104.
17. Wehner, K., Yates, J. and G. Smith. 1994. Identification of the *phoA* Gene in a Bacterium Associated with *Halodule wrightii*. *Bull. SC Acad. Sci.* p. 119.
18. Wehner, K.A., Holley, R.A., Wood, D.P. and J.R. Yates. 1995. Investigation of the LB400 Family of *bph* Genes. *Ann. Meet. Am. Soc. Microbiol.* p. 506.
19. Wong, W.P., Sterling, J.E. and J.R. Yates. 1995. Instability of the *bph* Cluster of Polychlorinated Biphenyl Degrading Bacteria Related to *Pseudomonas* sp. LB400. *Ann. Meet. Am. Soc. Microbiol.* p. 506.
20. Wehner, K.A., Holley, R.A., Wood, D.P. and J.R. Yates. 1995. Sequence Comparisons of the *bphA* Variable Regions in S46B1A and 2A42. *Bull. SC Acad. Sci.* p. 156.
21. Wehner, K.A., Cospers, N.J. and J.R. Yates. 1996. Molecular Aspects of *bph* Cluster Deletions. *Bull. SC Acad. Sci.* p. 151.
22. McKinney, G. and J.R. Yates. 1996. Hydrocarbon-oxidizing Bacteria Isolated from Shale Samples. *Bull. SC Acad. Sci.* p. 121.
23. Holley, H.A., Yates, J., Klapper, J. and K. Wehner. 1998. Analysis of DNA Sequences Flanking the *bph* Cluster of LB400. *Bull. SC Acad. Sci.* p. 85.
24. Holley, H., Klapper, J. and J. Yates. 1998. Analysis of the DNA Sequences Flanking the *bph* Cluster in *Burkholderia* sp. LB400. *Am. Soc. Microbiol. (SC Branch)*.
25. C. Faith Zimmerman and J. Yates. 2000. Analysis of DNA sequences Adjacent to the LB400 *bph* Cluster. *Bull. SC Acad. Sci.* p.90.
26. C. Faith Zimmerman and J. Yates. 2000. Similarities Between IS1071 and the LB400 *bph* Cluster. *Am. Soc. Microbiol. (Regional Meeting)*.
27. James R. Yates. 2000. IS Elements Flanking the *bph* Cluster. *Am. Soc. Microbiol. (Regional Meeting)*.

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FUNDED RESEARCH:

- 1990 South Carolina Universities Research and Education Foundation Grant Program: Hazardous Waste Management Research Fund. (\$7,000 – 1yr)
- 1990 South Carolina Universities Research and Education Foundation: Westinghouse/DOE (\$32,244 – 1yr)
- 1991 General Electric Co. (\$32,380 – 1yr)
- 1991 South Carolina Universities Research and Education Foundation: Westinghouse/DOE (\$146,183 – 1.5yr)
- 1992 General Electric Co. (\$48,785 – 1yr)
- 1992 South Carolina Universities Research and Education Foundation: Westinghouse/DOE (\$232,000 – 1.5yr)
- 1993 General Electric Co. (\$42,000 – 1yr)
- 1993 General Electric Co. (\$37,000 – 1yr)
- 1994 University of South Carolina Research and Productive Scholarship Fund (\$4,400 – 1yr)
- 1995 Savannah River Regional Diversification Initiative Challenge Fund: Subcontract with Frisby technologies (\$25,304 – 1yr)
- 2001 National Institute of Environmental Health Science (NIH) (\$128,000 - 3 yrs.)