Paul Kenneth Wolber, Ph.D.
Publications

Invited Publications (peer-reviewed full papers)

1. Wolber, P. K., Collins, P. J., Lucas, A. B., De Witte, A. & Shannon, K. W. The Agilent *In Situ*-Synthesized Microarray Platform. Methods in Enzymology Vol. 410, Alan Kimmel & Brian Oliver, Eds. Elsevier, San Diego (2006).

2. External RNA Controls Consortium. Proposed methods for testing and selecting the ERCC external RNA controls." *BMC Genomics* **6**: 150 (2005).

3. Delenstarr, G., Cattell, H., Chen, C., Dorsel, A., Kincaid, R. H., Nguyen, K., Sampas, N. M., Schidel, S., Shannon, K. W., Tu, A. and Wolber, P. K. Estimation of the confidence limits of oligonucleotide-array-based measurements of differential expression. Michael L. Bittner; Yidong Chen; Andreas N. Dorsel; Edward R. Dougherty; Eds. *Proc. SPIE* **4266**, 120-131, 2001.

4. Wolber, P. K. *et al*. Transduction of *ina* genes for bacterial identification. Biological Ice Nucleation and Its Applications. Gusta, Lee and Warren, ed. American Phytopathological Society, St. Paul, MN (1995).

5. Fall, R., & Wolber, P. K. Biochemistry of bacterial ice nuclei. Biological Ice Nucleation and Its Applications. Gusta, Lee and Warren, ed. American Phytopathological Society, St. Paul, MN (1995).

6. Wolber, P. K. Bacterial ice nucleation. Advances in Microbial Physiology, Vol. 34. Rose, ed. Academic Press. New York (1993).

7. Wolber, P. K. and G. J. Warren. Evolutionary perspective on the ice nucleation gene-encoded membrane protein. Microbial Ecology of Leaves. Andrews and Hirano ed. Springer-Verlag. New York (1991).

8. Warren, G. and P. Wolber. Molecular aspects of microbial ice nucleation. *Mol. Microbiol.* **5**: 239-243, 1991.

9. Wolber, P. K. and R. L. Green. New rapid method for the detection of *Salmonella* in foods. *Tr. in Food Sci. Tech.* **1**: 80-82, 1990.

10. Wolber, P. K. and R. L. Green. Detection of bacteria by transduction of ice nucleation genes. *Tr. in Biotech.* **8**: 276-279, 1990.

11. Wolber, P. and G. Warren. Bacterial ice-nucleation proteins. *TIBS.* **14**: 179-182, 1989.

12. Warren, G. J. and P. K. Wolber. Heterogeneous ice nucleation by bacteria. *Cryo-Lett.* **8**: 204-215, 1987.

Peer-Reviewed Publications (full papers)

1. MAQC Participants. The MicroArray Quality Control (MAQC) project shows inter- and intra-platform reproducibility of gene expression measurements. *Nature Biotechnology* **24**: 1151-1161, 2006.

2. Shippy, R. *et al*. Using RNA sample titrations to assess microarray platform performance and normalization techniques. *Nature Biotechnology* **24**: 1123-1131, 2006.

3. Palmer, C., Bik, E. M., Eisen, M. B., Eckburg, P. B., Sana, T. R., Wolber, P. K., Relman, D. A., and P. O. Brown. Rapid quantitative profiling of complex microbial populations. *Nucleic Acids Res* **34**, e5, 2006.

4. Watanabe, N. M., M. W. Southworth, G. J. Warren and P. K. Wolber. Rates of assembly and degradation of bacterial ice nuclei. *Mol. Microbiol.* **4**: 1871-1879, 1990.

5. Mueller, G. M., P. K. Wolber and G. J. Warren. Clustering of ice nucleation protein correlates with ice nucleation activity. *Cryobiol.* **27**: 416-422, 1990.

6. Southworth, M. W., P. K. Wolber and G. J. Warren. Nonlinear relationship between concentration and activity of a bacterial ice nucleation protein. *J. Biol. Chem.* **263**: 15211-15216, 1988.

7. Deininger, C. A., G. M. Mueller and P. K. Wolber. Immunological characterization of ice nucleating proteins from *Pseudomonas syringae*, *Pseudomonas fluorescens*, and *Erwinia herbicola*. *J. Bacteriol.* **170**: 669-675, 1988.

8. Warren, G., P. Wolber and R. Green. "Functional significance of oligonucleotide repeats in a bacterial ice nucleation gene." Plant Pathogenic Bacteria. Civerolo, Collmer, Davis and Gillaspie ed. Martinus Nijhoff Publishers. Boston. 1987.

9. Wolber, P. K., M. Eilmann and K. E. Steinback. Mapping of the triazine binding site to a highly conserved region of the Q_B-protein. *Arch. Biochem. Biophys.* **248**: 224-233, 1986.

10. Corotto, L. V., P. K. Wolber and G. J. Warren. Ice nucleation activity of *Pseudomonas fluorescens*: Mutagenesis, complementation analysis and identification of a gene product. *EMBO J.* **5**: 231-236, 1986.

11. Warren, G., L. Corotto and P. Wolber. Conserved repeats in diverged ice nucleation structural genes from two species of *Pseudomonas*. *Nuc. Acids Res.* **14**: 8047-8060, 1986.

12. Wolber, P. K., C. A. Deininger, M. W. Southworth, J. Vandekerckhove, M. van Montagu and G. J. Warren. Identification and purification of a bacterial ice-nucleation protein. *Proc. Nat. Acad. Sci. USA.* **83**: 7256-7260, 1986.

13. Helgerson, S. L., M. K. Mathew, D. B. Biven, P. K. Wolber, E. Heinz and W. Stoeckenius. Coupling between the bacteriorhodopsin photocycle and the protonmotive force in *Halobacterium halobium* cell envelope vesicles III. Time-resolved increase in the transmembrane electric potential and modeling of the associated ion fluxes. *Biophys. J.* **48**: 709-719, 1985.

14. Wolber, P. K. and K. E. Steinback. Identification of the herbicide binding region of the Q_B-protein by photoaffinity labeling with azidoatrazine. *Z. Naturforsch.* **39c**: 425-429, 1984.

15. Groma, G. I., S. L. Helgerson, P. K. Wolber, D. Beece, Z. Dancsházy, L. Keszthelyi and W. Stoeckenius. Coupling between the bacteriorhodopsin photocycle and the protonmotive force in *Halobacterium halobium* cell envelope vesicles II. Quantitation and preliminary modeling of the M→bR reactions. *Biophys. J.* **45**: 985-992, 1984.

16. Wolber, P. K. and W. Stoeckenius. Retinal migration during dark reduction of bacteriorhodopsin. *Proc. Nat. Acad. Sci. USA.* **81**: 2303-2307, 1984.

17. Wolber, P. K. and B. S. Hudson. Bilayer acyl chain dynamics and lipid-protein interaction: the effect of the M13 bacteriophage coat protein on the decay of the fluorescence anisotropy of parinaric acid. *Biophys. J.* **37**: 253-262, 1982.

18. Wolber, P. K. and B. S. Hudson. Fluorescence lifetime and time-resolved polarization anisotropy studies of acyl chain order and dynamics in lipid bilayers. *Biochem.* **20**: 2800-2810, 1981.

19. Katre, N. V., P. K. Wolber, W. Stoeckenius and R. M. Stroud. Attachment site(s) of retinal in bacteriorhodopsin. *Proc. Nat. Acad. Sci. USA.* **78**: 4068-4072, 1981.

20. Morgan, C. G., B. Hudson and P. K. Wolber. Photochemical dimerization of parinaric acid in lipid bilayers. *Proc. Nat. Acad. Sci. USA.* **77**: 26-30, 1980.

21. Kimelman, D., E. S. Tecoma, P. K. Wolber, B. S. Hudson, W. T. Wickner and R. D. Simoni. Protein-lipid interactions. Studies of the M13 coat protein in dimyristoylphosphatidylcholine vesicles using parinaric acid. *Biochem.* **18**: 5874-5880, 1979.

22. Wolber, P. K. and B. S. Hudson. An analytic solution to the Förster energy transfer problem in two dimensions. *Biophys. J.* **28**: 197-210, 1979.

23. Curtis, M. D. and P. Wolber. Facile synthesis of germanium dibromide, hexabromodigermane, and tribromomethyltribromogermane. *Inorg. Chem.* **11**: 431-433, 1972.

Speculative Fiction

1. Wolber, P. K. "Address to the 40th Annual Convention of the U. N. A. A. S." *Science*, **286**: 2106-2108 (1999). This essay was one of 12 winners of Science Magazine's "Visions of the Future" competition.