

Vita

James Paul Allen

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Education:

Saint Joseph's University Philadelphia PA	1977 B. S. Physics
University of Illinois, Urbana	1979 M. S. Physics
University of Illinois, Urbana	1982 Ph. D. Physics

Professional Experience:

Arizona State University, Associate Chair	2006 - 2010
Arizona State University, Professor	1999 - present
Associate Professor	1995 - 1999
Assistant Professor	1989 - 1995
University of California, San Diego, Asst. Research Physicist	1985 - 1989
University of California, San Diego, Postdoctoral Fellow	1982 - 1985
University of Illinois, Urbana, Research and Teaching Asst.	1977 - 1982
Saint Joseph's University Philadelphia PA, Laboratory Asst.	1973 - 1977

Memberships, Honors and Service:

American Crystallographic Association
American Chemical Society
Biophysical Society
NASA Protein Crystal Growth Panel 1994
US Dept. of Energy Structural Biology Program Panel 1994
James A Shannon Director's Award, National Institutes of Health 1997
NASA Microgravity Glovebox Science Panel 1999
Burroughs Wellcome Research Award 1999
Who's Who Among America's Teachers 2000
Chair, Ninth Western Photosynthesis Conference, Asilomar CA, 2000
National Institutes of Health Biophysics Study Section 2000-2001
National Institutes of Health Biophysics Fellowship Panel 2000-2003
Chair, Structures of Photosynthetic Complexes Session, Biophysical Society, 48th Annual Meeting, Baltimore MD, 2004
Biophysical Society, Bioenergetics Committee Member 2003-2007
Editor, Special issues on Structural Biology of Proteins in Photosynthetic Organisms in Photosynthesis Research 2003-2005
Grand Awards Judge, Intel International Science and Engineering Fair 2005
National Institutes of Health Membrane Protein Roadmap Panel 2005
National Institutes of Health Minority Biomedical Research Support Panel 2006
Chair, Structural Biology of Membrane Proteins Session, Biophysical Society, 51st Annual Meeting, Baltimore MD, 2007
National Institutes of Health X-ray Instrumentation Panel, 2007; 2010
National Institutes of Health Biophysics Fellowship Panel 2008-2016
National Science Foundation Shared Instrumentation Panel 2009
DOE Solar Photochemistry Review Panel, 2010

Chair, Photosynthetic Complexes Session, 14th International Congress of Photosynthesis, St. Louis MO, 2013.

Chair, Photosystems Session, 23rd Western Photosynthesis Conference, Asilomar CA, January 2-5, 2014.

National Institutes of Health Biomedical Technology Research Resource Panel 2014

Co-organizer, West Coast Crystallization Workshop, Monterey CA, March 15-18, 2015

Co-organizer, Symposium for George Feher, La Jolla CA, October 5, 2018

Books:

J. P. Allen (2008) *Biophysical Chemistry*, Wiley/Blackwell Publishing.

Publications:

1. H. J. Stapleton, J. P. Allen, C. P. Flynn, D. G. Stinson, and S. R. Kurtz (1980) "Fractal form of proteins" *Phys. Rev. Lett.* 45, 1456-1459.
2. J. P. Allen, J. T. Colvin, D. G. Stinson, C. P. Flynn, and H. J. Stapleton (1982) "Protein conformation from electron spin relaxation data" *Biophys. J.* 38, 299-310.
3. J. P. Allen and G. Feher (1984) "Crystallization of reaction center from *Rhodospseudomonas sphaeroides*: Preliminary characterization" *Proc. Natl. Acad. Sci. USA* 81, 4795-4799.
4. G. Feher and J. P. Allen (1985) "Crystallization of reaction centers from *Rhodospseudomonas sphaeroides*: Their preliminary characterization and a general discussion of the crystallization process of proteins" In *Molecular Biology of the Photosynthetic Apparatus*, Cold Spring Harbor Laboratory, New York, 163-172.
5. G. C. Wagner, J. T. Colvin, J. P. Allen, and H. J. Stapleton (1985) "Fractal models of protein structure, dynamics, and magnetic relaxation" *J. Am. Chem. Soc.* 107, 5589-5594.
6. J. P. Allen, R. Theiler, and G. Feher (1985) "Crystallization and linear dichroism measurements of the B800-850 antenna pigment-protein complex from *Rhodospseudomonas sphaeroides* 2.4.1" In *Antennas and Reaction Centers of Photosynthetic Bacteria*, Ed. M. E. Michel-Beyerle, Springer Verlag Berlin, 82-84.
7. J. P. Allen (1986) "A model for the specific heat of amorphous polymers" *J. Chem. Phys.* 84, 4680-4683.
8. J. P. Allen, G. Feher, T. O. Yeates, D. C. Rees, J. Deisenhofer, H. Michel, and R. Huber (1986) "Structure homology of reaction centers from *Rhodospseudomonas sphaeroides* and *Rhodospseudomonas viridis* as determined by x-ray diffraction" *Proc. Natl. Acad. Sci. USA* 83, 8589-8593.
9. J. P. Allen, G. Feher, T. O. Yeates, and D. C. Rees (1987) "Structure analysis of the reaction center from *Rhodospseudomonas sphaeroides*: Electron density map at 3.5 Å resolution" In *Progress in Photosynthesis Research*, Ed. J. Biggins, Martinus Nijhoff Boston, Vol I, 4.375-4.378.
10. J. P. Allen, G. Feher, T. O. Yeates, H. Komiya, and D. C. Rees (1987) "Structure of the reaction center from *Rhodobacter sphaeroides* R-26: The cofactors" *Proc. Natl. Acad. Sci. USA* 84, 5730-5734.
11. J. P. Allen, G. Feher, T. O. Yeates, H. Komiya, and D. C. Rees (1987) "Structure of the reaction center from *Rhodobacter sphaeroides* R-26: The protein subunits" *Proc. Natl. Acad. Sci. USA* 84, 6162-6166.

12. T. O. Yeates, H. Komiya, D. C. Rees, J. P. Allen, and G. Feher (1987) "Structure of the reaction center from *Rhodobacter sphaeroides* R-26: Membrane-protein interactions" Proc. Natl. Acad. Sci. USA 84, 6438-6442.
13. J. P. Allen, G. Feher, T. O. Yeates, H. Komiya, and D. C. Rees (1988) "Structure of the reaction center from *Rhodobacter sphaeroides* R-26 and 2.4.1" In The Photosynthetic Bacterial Reaction Center Eds. J. Breton and A. Vermeglio, Plenum Press New York, 5-11.
14. T. O. Yeates, H. Komiya, A. Chirino, D. C. Rees, J. P. Allen, and G. Feher (1988) "Structure of the reaction center from *Rhodobacter sphaeroides* R-26 and 2.4.1: Protein-cofactor interactions (bacteriochlorophyll, bacteriopheophytin, and carotenoid) interactions" Proc. Natl Acad. Sci. USA 85, 7993-7997.
15. J. P. Allen, G. Feher, T. O. Yeates, H. Komiya, A. Chirino, and D. C. Rees (1988) "Structure of the reaction center from *Rhodobacter sphaeroides* R-26: Protein-cofactor interactions (quinone and Fe²⁺) interactions" Proc. Natl Acad. Sci. USA 85, 7993-7997.
16. H. Komiya, T. O. Yeates, D. C. Rees, J. P. Allen, and G. Feher (1988) "Structure of the reaction center from *Rhodobacter sphaeroides* R-26: Symmetry relations and sequence comparisons between different species" Proc. Natl. Acad. Sci. USA 85, 9012-9016.
17. J. P. Allen (1988) "Crystallization and preliminary X-ray diffraction of cytochrome *c*₂ from *Rhodobacter sphaeroides*" J. Mol. Biol. 204, 495-496.
18. J. P. Allen (1988) "Crystallization and structure of the reaction center from *Rhodobacter sphaeroides* "In Light Energy Transduction in Photosynthesis, The Amer. Soc. of Plant Phys. 155-162.
19. G. Feher, J. P. Allen, M. Y. Okamura, and D. C. Rees (1989) "Structure and function of bacterial reaction centers" Nature 339, 111-116.
20. D. C. Rees, H. Komiya, T. O. Yeates, J. P. Allen, and G. Feher (1989) "The bacterial reaction center as a model for membrane proteins" Ann. Rev. Biochem. 58, 607-633.
21. J. P. Allen, E. J. Lous, G. Feher, A. Chirino, H. Komiya, and D. C. Rees (1990) "Structure of the reaction center from *Rhodobacter sphaeroides* : Further refinement of the R-26 and 2.4.1 structures and interactions between the reaction center and herbicides" In Current Research in Photosynthesis, Proceedings of the VIIIth International Photosynthesis Meeting, Ed. M. Baltscheffsky, Kluwer Academic Publishers, Dordrecht, Vol. I, 61-64.
22. M. Plato, K. Mobius, W. Lubitz, J. P. Allen, and G. Feher (1990) "Magnetic resonance and molecular orbital studies of the primary donor states in bacterial reaction centers" In Perspectives in Photosynthesis, Eds. J. Jortner and B. Pullman, Kluwer Academic Publishers, Dordrecht, Vol. 22, 423- 434.
23. J. P. Allen and G. Feher (1991) "Crystallization of the reaction center from *Rhodobacter sphaeroides* " In Crystallization of Membrane Proteins, Ed. H. Michel, CRC Press Boca Raton, Florida, 137-153.
24. J. C. Williams, R. G. Alden, H. A. Murchison, J. M. Peloquin, N. W. Woodbury, and J. P. Allen (1992) "Effects of mutations near the bacteriochlorophylls in reaction centers from *Rhodobacter sphaeroides*" Biochemistry 31, 11029-11037.
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IXth International Photosynthesis Meeting, Ed. N. Murata, Kluwer Academic Publishers, Dordrecht, 377-380.

26. S. Wang, J. C. Williams, and J. P. Allen (1992) "Mutational investigations of the carboxyl terminus of the M subunit of bacterial reaction centers" Proceedings of the IXth International Photosynthesis Meeting, Ed. N. Murata, Kluwer Academic Publishers, Dordrecht, 381-384.
27. J. C. Williams, N. W. Woodbury, A. K. W. Taguchi, J. M. Peloquin, H. A. Murchison, R. G. Alden, and J. P. Allen (1992) "Mutations that affect the donor midpoint potential in reaction centers from *Rhodobacter sphaeroides*" In The Photosynthetic Bacterial Reaction Center II, Ed. J. Breton, Plenum, N. Y., 25-31.
28. J. Rautter, Ch. Geßner, F. Lenzian, W. Lubitz, J. C. Williams, H. A. Murchison, S. Wang, N. W. Woodbury, and J. P. Allen (1992) "EPR and ENDOR studies of the primary donor cation radical in native and genetically modified bacterial reaction centers" In The Photosynthetic Bacterial Reaction Center II, Ed. J. Breton, Plenum, N. Y., 99-108.
29. E. Nabedryk, J. Breton, J. Allen, H. Murchison, A. Taguchi, J. Williams, and N. Woodbury (1992) "FTIR characterization of Leu M160 to His, Leu L131 to His, and His L168 to Phe mutations near the primary electron donor in *Rb. sphaeroides* reaction centers" In The Photosynthetic Bacterial Reaction Center II, Ed. J. Breton, Plenum, N. Y., 147-153.
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33. A. C. Chirino, E. J. Lous, M. Huber, J. P. Allen, C. C. Schenck, G. Feher, and D. C. Rees, (1994) "Crystallographic analyses of site directed mutants of the photosynthetic reaction center from *Rhodobacter sphaeroides*" *Biochemistry* 33, 4584-4593.
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37. J. Rautter, F. Lenzian, W. Lubitz, S. Wang, and J. P. Allen (1994) "Comparative study of reaction centers from photosynthetic purple bacteria: Electron paramagnetic resonance and electron nuclear double resonance spectroscopy" *Biochemistry* 33, 12077-12084.

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43. S. Wang, S. Lin, X. Lin, N. W. Woodbury, and J. P. Allen (1994) "Comparative study of reaction centers from purple bacteria: Isolation and optical spectroscopy" Photosynthesis Research 42, 203-215.
44. N. Woodbury and J. P. Allen (1995) "The pathways, kinetics, and thermodynamics of electron transfer in the reaction centers of purple nonsulfur bacteria" in Anoxygenic Photosynthetic Bacteria, Eds. R. E. Blankenship, M. T. Madigan, and C. E. Bauer, Kluwer Academic Publishing, Netherlands, 527-557.
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46. J. P. Allen and J. C. Williams (1995) "Relationship between the oxidation potential of the bacteriochlorophyll dimer and electron transfer in photosynthetic reaction centers" J. Bioenergetics and Biomembranes 27, 275-283.
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53. J. Rautter, F. Lenzian, X. Lin, J. C. Williams, J. P. Allen, and W. Lubitz (1995) "Effect of orbital asymmetry in P⁺ on electron transfer in reactions centers of *Rb. sphaeroides*" In *The Reaction Centers of Photosynthetic Bacteria, Structure and Dynamics*, Ed. M. E. Michel-Beyerle, Springer Verlag N. Y., 37-50.
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56. A. Freiberg, J. P. Allen, J. C. Williams, and N. W. Woodbury (1996) "Energy trapping in wild type and mutant reaction centers from purple nonsulfur bacteria" *Photosynthesis Research*, 48, 309-319.
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