BIOGRAPHICAL SKETCH

NAME Philip D. Laible	POSITION TITLE Biophysicist
eRA COMMONS USER NAME Laible	

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
University of Illinois, Urbana, IL	B.S.	1990	Agricultural Science
Cornell University, Ithaca, NY	Ph.D.	1995	Plant Biology/Biophysics
Argonne National Laboratory	Postdoc	1995-1997	Biology/Chemistry

A. Positions and Honors

Positions and Employment

2003-present Biophysicist, Argonne National Laboratory
1998-2003 Assistant Biophysicist, Argonne National Laboratory
1997-1998 Argonne Scholar, Argonne National Laboratory
1995-1997 Alexander Hollaender Distinguished Postdoctoral Fellow, DOE, Argonne National Laboratory
1992-1995 National Institutes of Health Biophysics Predoctoral Trainee, Cornell University
1990-1992 Andrew D. White Predoctoral Fellow, Cornell University
1989 Plant Pathology Intern, Walt Disney World's EPCOT attraction "The Land" in cooperation with NASA at the Kennedy Space Center
1988 Summer Research Project Leader, Dept. of Agronomy & Campus Honors Program, University of Illinois, Urbana, IL
1987 Summer Contract Student and Research Assistant, Waterways Experiment Station, Vicksburg, MS

Honors

1995-1997 Alexander Hollaender Distinguished Department of Energy Post-Doctoral Fellowship, Argonne National Laboratory
1994 & 1995 Section of Plant Biology Knudson Award, Cornell University
1994 Best Poster Presentation, Midwest Photosynthesis Conference
1992-1995 National Institute of Health Biophysics Trainee, Cornell University
1990-1993 Andrew D. White Fellow, Cornell University
1990 Bronze Tablet, University of Illinois, College of Agriculture
1987 Hugh P. Morrison Scholarship, University of Illinois, College of Agriculture

B. Selected peer-reviewed publications:

1. Kee HL, **PD Laible**, JA Bautista, DK Hanson, D Holten, C Kirmaier. 2006. Determination of the rate and yield of B-side quinone reduction in *Rhodobacter capsulatus* reaction centers. Biochemistry 45: 7314-7322.
2. Kirmaier C, JA Bautista, **PD Laible**, DK Hanson, D Holten. 2005. Probing the contribution of electronic coupling to the directionality of electron transfer in photosynthetic reaction centers. J Phys Chem B 109: 24160-24172.
3. Pokkuluri PR, DK Hanson, **PD Laible**, SL Ginell, G Johnson, M Schiffer. Structural description of compensatory mutations that restore proton transfer pathways to the L212Ala-L213Ala mutant bacterial reaction center. In *Photosynthesis: Fundamental Aspects to Global Perspectives*. (A van der Est and D Bruce, eds.), International Society of Photosynthesis, pp. 272-273 (2005).

4. **Laible PD**, AN Hata, AE Crawford, DK Hanson. Incorporation of selenomethionine into induced intracytoplasmic membrane proteins of *Rhodobacter* species. Structural and Functional Genomics 570:171-174 (2005).
5. **Laible PD**, DL Mielke, DK Hanson. Membrane protein production: A bacterial "factory" in *Rhodobacter*. Screening 02/2005: 30-32 (2005).
6. Kirmaier C**, PD Laible**, DK Hanson, D Holten. B-side electron transfer to form $P^+H_B^-$ in reaction centers from the F(L181)Y/Y(M208)F mutant of *Rhodobacter capsulatus*. J Phys Chem B 108: 11827-11832 (2004).
7. Pokkuluri PR, **PD Laible**, AE Crawford, JF Mayfield, MA Yousef, SL Ginell, DK Hanson, M Schiffer. Temperature and cryoprotectant influence secondary quinone binding position in bacterial reaction centers. FEBS Lett 570: 171-174 (2004).
8. **Laible PD**, HN Scott, L Henry, DK Hanson. Towards higher-throughput membrane protein production for structural genomics initiatives. J Structural and Functional Genomics 5: 167-174 (2004).
9. Kirmaier C, PD Laible, E Hindin, DK Hanson, D Holten. Detergent effects on primary charge separation in wild-type and mutant *Rhodobacter capsulatus* reaction centers. Chem Phys 294: 305-318 (2003).
10. Morris ZS, DK Hanson, PR Pokkuluri, DG Mets, AN Hata, OG Poluektov, MC Thurnauer, M Schiffer, **PD Laible.** Lysine substitutions near photoactive cofactors in the bacterial photosynthetic reaction center have opposite effects on the rate of triplet energy transfer. Chem Phys 294: 329-346 (2003).
11. **Laible PD**, ZS Morris, MC Thurnauer, M Schiffer, DK Hanson. Inter- and intraspecific variation in excited-state triplet energy transfer rates in reaction centers of photosynthetic bacteria. Photochem Photobiol 78: 114-123 (2003).
12. Kirmaier,C, **PD Laible**, DK Hanson, D Holten. B-side charge separation in reaction centers from *Rb. capsulatus*: Nanosecond-timescale electron transfer from H_B^- to Q_B. Biochemistry 42: 2016-2024 (2003).
13. **Laible PD**, C Kirmaier, CSM Udawatte, SJ Hofman, D Holten, DK Hanson. Quinone reduction via secondary B-branch electron transfer in mutant bacterial reaction centers. Biochemistry 42: 1718-1730 (2003).
14. Pokkuluri PR, **PD Laible**, Y-L Deng, TN Wong, DK Hanson, M Schiffer. The structure of a mutant photosynthetic reaction center shows unexpected changes in main chain orientations and quinone position. Biochemistry 41: 5998-6007 (2002).
15. Kirmaier C, **PD Laible**, K Czarnecki, AN Hata, DK Hanson, DF Bocian, D Holten. Comparison of M-side electron transfer in *Rb. sphaeroides* and *Rb. capsulatus* reaction centers. J Phys Chem B 106: 1799-1808 (2002).
16. **Laible PD**, DK Hanson, MC Thurnauer, M Schiffer. The protein's role in triplet energy transfer in bacterial reaction centers. In *Photosynthesis: Mechanisms and Effects*. (G. Garab, ed.), Kluwer, Dordrecht, pp. 779-782 (1998).
17. **Laible PD**, C Kirmaier, D Holten, DM Tiede, M Schiffer, DK Hanson. Formation of $P^+Q_B^-$ via B-branch electron transfer in mutant reaction centers. In *Photosynthesis: Mechanisms and Effects*. (G. Garab, ed.), Kluwer, Dordrecht, pp. 849-852 (1998).
18. **Laible PD**, V Chynwat, MC Thurnauer, M Schiffer, DK Hanson, HA Frank. Protein modifications affecting triplet energy transfer efficiency to the carotenoid in bacterial photosynthetic reaction centers. Biophys J 74, 2623-2637 (1998).
19. DiMagno TJ, **PD Laible**, NR Reddy, GJ Small, JR Norris, M Schiffer, DK Hanson. Protein-chromophore interactions: spectral shifts report the consequences of mutations in the bacterial photosynthetic reaction center. Spectrochimica Acta A 54, 1247-1267 (1998).
20. **Laible PD**, SR Greenfield, MR Wasielewski, DK Hanson, RM Pearlstein. Antenna excited state decay kinetics establish primary electron transfer in reaction centers as heterogeneous. Biochemistry 36, 8677-8685 (1997).
21. **Laible PD**, Y Zhang, AL Morris, SW Snyder, C Ainsworth, SR Greenfield, MR Wasielewski, P Parot, B Schoepp, M Schiffer, DK Hanson, MC Thurnauer. Spectroscopic characterization of quinone-site mutants of the bacterial photosynthetic reaction center. Photosyn Res 52, 93-103 (1997).
22. Utschig LM, SR Greenfield, J LTang, **PD Laible**, MC Thurnauer. Influence of iron-removal procedures on sequential electron transfer in photosynthetic bacterial reaction centers studied by transient EPR spectroscopy. Biochemistry 36: 8548-8558 (1997).