

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel in the order listed for Form Page 2.
Follow the sample format on preceding page for each person. **DO NOT EXCEED FOUR PAGES.**

NAME		POSITION TITLE	
Richard P. Swenson, Ph.D.		Professor and Chair	
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Gustavus Adolphus College, St. Peter, MN	B.A.	1971	Chemistry
University of Minnesota, Minneapolis, MN	Ph.D.	1979	Biochemistry
University of Michigan, Ann Arbor, MI	Postdoc	1979-82	Flavoenzymes

A. Positions and Honors:

Research Assistant	Dept. of Endocrinology	The Mayo Clinic/Fdn	1971-74
Assistant Professor	Dept. of Biol. Chemistry	University of Michigan	1983-84
Assistant Professor	Dept. of Biochemistry	Ohio State University	1984-89
Associate Professor	Dept. of Biochemistry	Ohio State University	1989-99
Professor	Dept. of Biochemistry	Ohio State University	1999-present
Chair	Dept. of Biochemistry	Ohio State University	2000-present

National Institutes of Health Predoctoral Fellow	1975-78
University of Minnesota Graduate School Dissertation Fellowship	1978-79
Phi Kappa Phi Honor Society	1978-present
Bacaner Basic Science Research Award, Minnesota Medical Fdn	1980
Sigma Xi Society	1987-present

B. Selected Publications (from a total of 61) (chronologically from most recent):

Murray, T.A. and Swenson, R. P. (2003) "Mechanism of Flavin Mononucleotide Cofactor Binding to the *Desulfovibrio vulgaris* Flavodoxin: I. Kinetic Evidence for Allosteric Effects Associated with the Binding of Inorganic Phosphate and the 5'-Phosphate Moiety of the Cofactor.", *Biochemistry* **42**, 2307-2316.

Murray, T.A., Foster, M. P., and Swenson, R. P. (2003) "Mechanism of Flavin Mononucleotide Cofactor Binding to the *Desulfovibrio vulgaris* Flavodoxin: II. Evidence for Cooperative Conformational Changes Involving Tryptophan 60 in the Interaction between the Phosphate- and Ring-binding Subsites.", *Biochemistry* **42**, 2317-2327.

Kasim, M. and Swenson, R. P. (2001) "Alanine-Scanning of the 50's Loop in the *Clostridium beijerinckii* Flavodoxin: Evaluation of Additivity and the Importance of Interactions Provided by the Main Chain in the Modulation of the Oxidation-Reduction Potentials", *Biochemistry* **40**, 13548-13555.

Bradley, L. H. and Swenson, R. P. (2001) "Role of Hydrogen Bonding Interactions to N(3)H of the Flavin Mononucleotide Cofactor in the Modulation of the Redox Potentials of the *Clostridium beijerinckii* Flavodoxin", *Biochemistry* **40**, 8686-8695.

Chang, F.C., Bradley, L. H. and Swenson, R. P. (2001) "Evaluation of the Hydrogen Bonding Interactions and Their Effects on the Oxidation-Reduction Potentials for the Riboflavin Complex of the *Desulfovibrio vulgaris* Flavodoxin", *Biochimica et Biophysica Acta*, **1504**, 319-328.

Kasim, M. and Swenson, R. P. (2000) "Conformational Energetics of a Reverse Turn in the *Clostridium beijerinckii* Flavodoxin is Directly Coupled to the Modulation of its Oxidation-Reduction Potentials", *Biochemistry* **39**, 15322-15332.

Bradley, L. H. and Swenson, R. P. (1999) "Role of Glutamate-59 Hydrogen Bonded to N(3)H of the Flavin Mononucleotide Cofactor in the Modulation of the Redox Potentials of the *Clostridium beijerinckii* Flavodoxin. Glutamate-59 is not Responsible for the pH Dependency but Contributes to the Stabilization of the Flavin Semiquinone", *Biochemistry* **38**, 12377-12386.

Chang, F. C. and Swenson, R. P. (1999) "The Midpoint Potentials for the Oxidized-Semiquinone Couple for Gly57 Mutants of the *Clostridium beijerinckii* Flavodoxin Correlate with Changes in the Hydrogen Bonding Interaction with the Proton on N(5) of the Reduced Flavin Mononucleotide Cofactor as Measured by NMR Chemical Shift Temperature Dependencies", *Biochemistry* **38**, 7168-7176.

Druhan, L. and Swenson, R. P. (1998) "Role of Methionine 56 in the Control of the Oxidation-Reduction Potentials of the *Clostridium beijerinckii* Flavodoxin: Effects of Substitutions by Aliphatic Amino Acids and Evidence for a Role of Sulfur-Flavin Interactions", *Biochemistry* **37**, 9668-9678.

Feng, Y., and Swenson, R. P. (1997) "Evaluation of the Role of Specific Acidic Amino Acid Residues in Electron Transfer between the Flavodoxin and Cytochrome c3 from *Desulfovibrio vulgaris* [Hildenborough]", *Biochemistry* **36**, 13617-13628.

Chang, F. C. and Swenson, R. P. (1997) "Regulation of Oxidation-Reduction Potentials Through Redox-Linked Ionization in the Y98H Mutant of the *Desulfovibrio vulgaris* [Hildenborough] Flavodoxin: Direct ¹H NMR Evidence for the Redox-Dependent Shift in the pKa of Histidine-98", *Biochemistry* **36**, 9013-9021.

Ludwig, M. L., Patridge, K. A., Metzger, A. L., Dixon, M. M., Eren, M., Feng, Y., and Swenson, R. P. (1997) "Control of Oxidation-Reduction Properties in Flavodoxin from *Clostridium beijerinckii*: The Role of Conformation Changes", *Biochemistry* **36**, 1259-1280.

Zhou, Z. and Swenson, R. P. (1996) "The Cumulative Electrostatic Effect of Aromatic Interactions and the Negative Electrostatic Environment of the Flavin Mononucleotide Binding Site is a Major Determinant of the Reduction Potentials for the Flavodoxin from *Desulfovibrio vulgaris* [Hildenborough]", *Biochemistry* **35**, 15980-15988.

Zhou, Z. and Swenson, R. P. (1996) "Evaluation of the Electrostatic Effect of the 5'-Phosphate of the Flavin Mononucleotide Cofactor on the Oxidation-Reduction Potentials of the Flavodoxin from *Desulfovibrio vulgaris* [Hildenborough]", *Biochemistry* **35**, 12443-12454.

Pollock, J. R., Swenson, R. P., and Stockman, B. J. (1996), "¹H and ¹⁵N NMR Resonance Assignments and Solution Secondary Structure of Oxidized *Desulfovibrio desulfuricans* Flavodoxin", *J. Biomolecular NMR* **7**, 225-235.