

Mechanisms of Enzymatic Reactions: Stereochemistry

*Proceedings of the Fifteenth Steenbock Symposium
held June 30th through July 3rd, 1985
at the University of Wisconsin-Madison, U.S.A.*

Editor

Perry A. Frey, Ph.D.

Professor, Institute for Enzyme Research
Graduate School

Department of Biochemistry

College of Agricultural and Life Sciences

University of Wisconsin-Madison, U.S.A.



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Preface

The Fifteenth Steenbock Symposium was held at the University of Wisconsin-Madison June 30-July 3, 1985. The symposium, entitled "Stereochemistry of Enzymatic Reactions," was attended by over 160 participants of whom 24 presented lectures on recent research dealing with the interrelations between stereochemistry and reaction mechanisms in enzymatic processes. The speaking program was supported by 36 posters in which the participants presented recent research findings from their laboratories. The proceedings of this symposium have been brought together for publication in this volume.

Stereochemical analysis has traditionally provided fundamental information about transition states and intermediates in enzymatic as well as nonenzymatic reactions. In enzymatic reactions, stereochemical analysis generates information about both the chemical reaction mechanisms and specific binding interactions between substrates or inhibitors and enzymic binding sites. This information complements mechanistic information obtained in kinetic, spectroscopic, inhibition, and other studies, bringing the reaction mechanisms into clearer focus. Stereochemical findings often define mechanistic issues, stimulate interest, and provide impetus for further experimentation to unravel the mysteries of enzymatic catalysis. In recent years stereochemical analysis has been brought to bear upon mechanistic issues in enzymatic phosphotransfer reactions. Stereochemical results have also signaled the involvement of stereochemically unstable reaction intermediates such as transiently formed free radicals in rearrangement and redox reactions. The articles published herein deal with these issues.

The Steenbock Symposium series honors the memory of Harry Steenbock, a distinguished Professor of Biochemistry at the University of Wisconsin, and is supported by funds provided by Dr. Evelyn Steenbock (Mrs. Harry Steenbock) to the Department of Biochemistry, College of Agricultural and Life Sciences of the University of Wisconsin-Madison. The Fifteenth Steenbock Symposium and the publication of this volume were made possible by the organizational support and dedicated service of Ms. Karen Davis, to whom I am grateful. I also thank those who chaired sessions, W. W. Cleland, J. Stubbe, M. H. O'Leary, R. Kluger, and D. Dunaway-Mariano, and all of the contributors to this volume.

Perry A. Frey
Madison, Wisconsin

Registrants

D. John Aberhart
Worcester Foundation for
Experimental Biology
222 Maple Avenue
Shrewsbury, MA 01545

Scott Acheson
Department of Chemistry
University of Iowa
Iowa City, IA 52242

Duilio Arigoni
Eidgenossische Technische
Hochschule
Zurich, SWITZERLAND

Richard N. Armstrong
Department of Chemistry
and Biochemistry
University of Maryland
College Park, MD 20910

Gary Ashley
Department of Biochemistry
University of Wisconsin-Madison
Madison, WI 53706

Paul Barlow
Department of Chemistry
University of Iowa
Iowa City, IA 52242

Robert Barry
Department of Chemistry, Box 115
University of Maryland
College Park, MD 20742

Stephen J. Benkovic
Department of Chemistry
The Pennsylvania State University
University Park, PA 16802

Steven A. Benner
Department of Chemistry
Harvard University
12 Oxford Street
Cambridge, MA 02138

Juris Bocek
6908 S. Artesian Avenue
Chicago, IL 60629

John A. Bohn
Department of Chemistry
and Biochemistry
Southern Illinois University
Carbondale, IL 62901

Edward J. Brush
Department of Chemistry, Box 103
University of Maryland
College Park, MD 20742

Theresa Brush
Department of Chemistry
University of Maryland
College Park, MD 20742

John W. Burgner II
Department of Biological
Sciences
Purdue University
West Lafayette, IN 47907

Pedro F. Canellas
Department of Biochemistry
University of Wisconsin-Madison
Madison, WI 53706

Mary Carpen
Chemistry Department
University of Maryland
College Park, MD 20742

Eliahu Caspi
Worcester Foundation for
Experimental Biology
222 Maple Avenue
Shrewsbury, MA 01545

Ravi Chari
Department of Chemistry
University of Maryland
College Park, MD 20742

Kam Sing Cheung
Department of Chemistry
University of Chicago
5735 S. Ellis Avenue
Chicago, IL 60637

W. W. Cleland
Department of Biochemistry
University of Wisconsin-Madison
Madison, WI 53706

Paul F. Cook
Department of Biochemistry
North Texas State University
Texas College of Osteopathic
Medicine
P.O. Box 13948
Denton, TX 76203

Osvaldo Cori
Facultad de Ciencias
Departamento de Quimica
Universidad de Chile
Casilla 233
Santiago 1, CHILE

Peter David
Department of Chemistry
Harvard University
12 Oxford Street
Cambridge, MA 02138

Leodis Davis
Department of Chemistry
University of Iowa
Iowa City, IA 52242

Debra Dunaway-Mariano
Department of Chemistry
University of Maryland
College Park, MD 20742

Marcel K. Eberle
Sandoz Research Institute
East Hanover, NJ 07936

Fritz Eckstein
Max Planck Institute for
Experimental Medicine
Hermann-Rein Str. 3
D-3400 Gottingen, WEST GERMANY

Mark Emptage
E.I. du Pont de Nemours & Company
Central Research & Development
Department, E328
Wilmington, DE 19898

Christopher Falzone
Department of Chemistry
The University of Akron
Akron, OH 44325

Matthew A. Fisher
Department of Chemistry
University of Wisconsin-Madison
1101 University Avenue
Madison, WI 53706

George Flentke
Department of Biochemistry
and Institute for Enzyme Research
University of Wisconsin-Madison
1710 University Avenue
Madison, WI 53705

Heinz G. Floss
Department of Chemistry
The Ohio State University
140 West 18th Avenue
Columbus, OH 43210-1173

Perry A. Frey
Department of Biochemistry and
Institute for Enzyme Research
University of Wisconsin-Madison
1710 University Avenue
Madison, WI 53705

Suzanne E. Frey
Department of Biochemistry, A-312 CNW
University of Illinois Medical Center
1835 West Polk
Chicago, IL 60612

David Furlano
NIADDK-Laboratory of Chemistry
Bldg. 4, Room 234
National Institutes of Health
Bethesda, MD 20205

Norbert C. Furumo
749 E. Wilbeth Rd.
Akron, OH 44306

Cynthia A. Gates
School of Pharmacy
University of Wisconsin-Madison
425 N. Charter Street
Madison, WI 53706

John A. Gerlt
Department of Chemistry
and Biochemistry
University of Maryland
College Park, MD 20742

Gerald Gish
Lash Miller Chemical Laboratory
80 St. George
University of Toronto
Toronto, Ontario, CANADA

Mario Gonzalez-de-la-Parra
School of Pharmacy
University of Wisconsin-Madison
4340 Chamberlin Hall
Madison, WI 53706

Charles E. Grimshaw
Scripps Clinic and Research Foundation
Division of Biochemistry BCR7
10666 N. Torrey Pines Rd.
LaJolla, CA 92037

Charles M. Grisham
Department of Chemistry
University of Virginia
Charlottesville, VA 22901

Charles B. Grissom
Department of Biochemistry
University of Wisconsin-Madison
Madison, WI 53706

Kenneth J. Gruys
Institute for Enzyme Research
University of Wisconsin-Madison
1710 University Avenue
Madison, WI 53705

Paul Haake
Department of Chemistry
Wesleyan University
Middletown, CT 06457

Joseph Hajdu
Department of Chemistry
California State University
at Northridge
Northridge, CA 91330

Christopher Halkides
Department of Biochemistry and
Institute for Enzyme Research
University of Wisconsin-Madison
1710 University Avenue
Madison, WI 53705

Tuli Haromy
Department of Biochemistry
University of Wisconsin-Madison
Madison, WI 53706

Timothy W. Hepburn
Department of Chemistry
University of Maryland
College Park, MD 10742

Jeffrey D. Hermes
Department of Chemistry
Harvard University
12 Oxford Street
Cambridge, MA 02138

Gene Hiegel
Department of Chemistry
California State University
Fullerton, CA 92634

Yee-Kin Ho
Department of Biological Chemistry
University of Illinois
Health Sciences Center
1853 W. Polk Street
Chicago, IL 60612

Akihiko Hohji
96 Allen House
2130 University Avenue
Madison, WI 53705

Lynn Hosie
Department of Chemistry
Botany Building
University of Iowa
Iowa City, IA 52242

Charles F. Huebner
CIBA-GEIGY Corporation
Pharmaceutical Division
Summit, NJ 07901

C. Richard Hutchinson
School of Pharmacy
University of Wisconsin-Madison
4332 Chamberlin Hall
Madison, WI 53706

Radha Iyengar
Institute for Enzyme Research
University of Wisconsin-Madison
1710 University Avenue
Madison, WI 53705

W. Terry Jenkins
Department of Chemistry
Indiana University
Bloomington, IN 47405

Michael A. Johnston
Department of Chemistry
University of Chicago
5735 S. Ellis Avenue
Chicago, IL 60637

J. Bryan Jones
Department of Chemistry
University of Toronto
80 St. George Street
Toronto, Ontario M5S 1A1
CANADA

Thomas I. Kalman
Department of Medicinal Chemistry
State University of New York
457 Cooke Hall
Buffalo, NY 14260

William Karsten
4888 Massillon Rd.
N. Canton, OH 44720

George L. Kenyon
Department of Pharmaceutical
Chemistry
University of California
San Francisco, CA 94143

Jack Kessler
202 W. Newell Avenue
Rutherford, NJ 07070

David E. Kleiner
5715 S. Drexel, Apt. 516
Chicago, IL 60637

Ronald H. Kluger
Department of Chemistry
University of Toronto
Toronto, Ontario M5S 1A1
CANADA

Wilson B. Knight
Department of Biochemistry
University of Wisconsin-Madison
Madison, WI 53711

Jeremy R. Knowles
Department of Chemistry
Harvard University
12 Oxford Street
Cambridge, MA 02138

James Kofron
Department of Biochemistry
and Biophysics
A606 Richards Bldg./G4
University of Pennsylvania
Philadelphia, PA 19104

John Konopka
Department of Biochemistry and
Institute for Enzyme Research
University of Wisconsin-Madison
1710 University Avenue
Madison, WI 53705

John Kozarich
Department of Chemistry
University of Maryland
College Park, MD 20742

Kang-Man Lee
2385-3 Bishop St.
Ann Arbor, MI 48105

Dennis A. Lewis
Department of Chemistry
Rose-Hulman Institute of
Technology
Terre Haute, IN 47803

Ae-Ning Irene Lin
Department of Chemistry, Box 233
University of Maryland
College Park, MD 20742

William M. Loffredo
Department of Chemistry
The Ohio State University
140 West 18th Avenue
Columbus, OH 43210

Bruce Lotz
Department of Chemistry
University of Chicago
5735 S. Ellis Avenue
Chicago, IL 60637

Gordon Lowe
Dyson Perrins Laboratory
Oxford University
South Parks Road
Oxford OX1 3QY, ENGLAND

John L. Markley
Department of Biochemistry
University of Wisconsin-Madison
Madison, WI 53706

Donald B. McCormick
Department of Biochemistry, 102 WMB
Emory University
School of Medicine
Atlanta, GA 30322

Scott McKee
Department of Biochemistry
University of Illinois
Health Sciences Center
835 S. Wolcott Ave.
Chicago, IL 60612

Alan J. McNally
Roche Diagnostic Systems
304 Kingsland Street, Bldg. 58-TR
Nutley, NJ 07110

Magdalena R. Mejillano
Department of Biochemistry
University of Kansas
426 Haworth Hall
Lawrence, KS 66045

Sybil K. Miller
Department of Chemical
and Physical Sciences
University of North Carolina
at Wilmington
601 S. College Rd.
Wilmington, NC 28403-3297

Henry M. Mizioro
Department of Biochemistry
Medical College of Wisconsin
8701 Watertown Plank Road
Milwaukee, WI 53226

Shahriar Mobashery
Department of Chemistry
University of Chicago
5735 S. Ellis Avenue
Chicago, IL 60615

Jonathan M. Moore
Department of Biochemistry
and Biophysics
University of Pennsylvania
School of Medicine
37th & Hamilton Walk
Philadelphia, PA 19104

J. Emory Morris
Department of Chemistry
SUNY College at Brockport
Brockport, NY 14420

Dennis Murphy
Department of Chemistry
University of Wisconsin-Madison
Madison, WI 53706

Robert Myers
Department of Chemistry
and Biochemistry
Southern Illinois University
at Carbondale
Carbondale, IL 62901

Ronald L. Niece
U.W. Biotechnology Center
University of Wisconsin-Madison
1710 University Avenue
Madison, WI 53705

Bruce E. Norcross
Department of Chemistry
SUNY of Binghamton
Binghamton, NY 13901

Thomas Nowak
Department of Chemistry
University of Notre Dame
Notre Dame, IN 46556

Marion O'Leary
Department of Chemistry
University of Wisconsin-Madison
Madison, WI 53706

David B. Olsen
Department of Chemistry
University of Maryland
College Park, MD 20742

Norman J. Oppenheimer
Department of Pharmaceutical
Chemistry
University of California
San Francisco, CA 94143

Mark Orme
Department of Chemistry
University of Chicago
5735 S. Ellis Avenue
Chicago, IL 60637

David Pan
Department of Genetics
University of Wisconsin-Madison
Madison, WI 53706

Jeffrey S. Patrick
Department of Chemistry
Indiana University
Bloomington, IN 47405

Vincent L. Pecoraro
Department of Chemistry
University of Michigan
Ann Arbor, MI 48109

Robert S. Phillips
Bldg. 4, Room 205
National Institutes of Health
Bethesda, MD 20205

Bryce V. Plapp
Department of Biochemistry
University of Iowa
Iowa City, IA 52242

Diana Pliura
Syntex Inc.
2100 Syntex Ct.
Mississauga, Ontario L5N 3X4
CANADA

Carol Post
Department of Chemistry
Purdue University
West Lafayette, IN 47907

David Post
Department of Biochemistry
University of Wisconsin-Madison
Madison, WI 53706

Daniel M. Quinn
Department of Chemistry
University of Iowa
Iowa City, IA 52242

Lois Rabow
Department of Biochemistry
University of Wisconsin-Madison
Madison, WI 53706

Frank Raushel
Department of Chemistry
Texas A & M University
College Station, TX 77843

William J. Ray, Jr.
Department of Biological Sciences
Purdue University
West Lafayette, IN 47907

George H. Reed
Department of Biochemistry
and Biophysics
University of Pennsylvania
School of Medicine
Philadelphia, PA 19104

Gregory D. Reinhart
Department of Chemistry
The University of Oklahoma
620 Parrington Oval
Norman, OK 73019

Janos Retez
Lehrstuhl für Biochemie Institut
für Organische Chemie
Universität Karlsruhe
D-7500 Karlsruhe, WEST GERMANY

Oscar R. Rodig
Department of Chemistry
University of Virginia
McCormick Road
Charlottesville, VA 22901

Chrissl Roeske
Department of Agricultural
Biochemistry
University of Nebraska
Lincoln, NE 68583-0718

Theresa Rosario-Jansen
Department of Chemistry
The Ohio State University
140 West 18th Avenue
Columbus, OH 43210

S. J. Salamone
Roche diagnostic Systems
Hoffmann-La Roche, Bldg. 58
340 Kingsland Street
Nutley, NJ 07070

Scott Salowe
Department of Biochemistry
University of Wisconsin-Madison
Madison, WI 53706

Charles Sanders
Department of Chemistry
The Ohio State University
140 W. 18th Avenue
Columbus, OH 43210

Enzo Santaniello
Dipartimento di Chimica
Biochimica Medica
Università di Milano
Via Saldini, 50
20133 Milano, ITALY

Fred Schendel
Department of Biochemistry
University of Wisconsin-Madison
Madison, WI 53706

John V. Schloss
Central Research & Development
Department
E.I. du Pont de Nemours & Company
Experimental Station, E328
Wilmington, DE 19898

Jeffrey L. Schrimsher
Department of Biochemistry
University of Wisconsin-Madison
Madison, WI 53706

Barbara T. Schroeder
Department of Chemistry
Moorhead State University
Moorhead, MN 56560

Mary M. Sherman
Department of Chemistry
University of Utah
Salt Lake City, UT 84112

Andrew Lee Shorter
Department of Chemistry
University of Maryland
College Park, MD 20742

Yuen-Juno Shyy
Department of Chemistry
The Ohio State University
140 West 18th Avenue
Columbus, OH 43210

Kevin Sikkema
Department of Chemistry
University of Wisconsin-Madison
Madison, WI 53706

Michael L. Sinnott
School of Chemistry
University of Bristol
Cantock's Close
Bristol BS8 1TS, ENGLAND

Mark Skoog
Merrell Dow Research Institute
2110 E. Galbraith Rd.
Cincinnati, OH 45215

Geoffrey W. Smithers
Department of Biochemistry and
Biophysics, Richards Bldg./G4
University of Pennsylvania
37th & Hamilton Walk
Philadelphia, PA 19104

David Speckhard
Chemistry Department
Loras College
Dubuque, IA 52001

Victoria Squire
818 E. 58th Street
Chicago, IL 60637

D. K. Srivastava
Institute of Molecular Biology
University of Oregon
Eugene, OR 97403-1229

W. Nick Strickland
U.W. Biotechnology Center
University of Wisconsin-Madison
1710 University Avenue
Madison, WI 53705

JoAnne Stubbe
Department of Biochemistry
University of Wisconsin-Madison
Madison, WI 53706

M. Sundaralingam
Department of Biochemistry
University of Wisconsin-Madison
Madison, WI 53706

Larry D. Sutton
311G Chemistry Department
University of Iowa
Iowa City, IA 52242

Richard P. Swenson
Department of Biochemistry
776 Biological Sciences Building
The Ohio State University
484 West 12th Avenue
Columbus, OH 43210

Gregory R. L. Thatcher
Lash Miller Chemical Laboratory
University of Toronto
80 St. George Street
Toronto, Ontario M5S 1A1
CANADA

Gaochao Tian
Department of Chemistry
The Ohio State University
140 W. 18th Avenue
Columbus, OH 43210

R. L. Tolman
Merck, Sharp & Dohme Research
Laboratories
Box 2000
Rahway, NJ 07065

Susan Hanley Trawick
Department of Chemistry
University of Maryland
College Park, MD 20742

Lin Tsai
Laboratory of Biochemistry
National Heart, Lung &
Blood Institute
Bldg. 3, Room 110
National Institutes of Health
Bethesda, MD 20205

Ming-Daw Tsai
Department of Chemistry
The Ohio State University
140 W. 18th Avenue
Columbus, OH 43210

Eldon Ulrich
Department of Biochemistry
University of Wisconsin-Madison
Madison, WI 53706

Jean E. Van Pelt
Institute for Enzyme Research
University of Wisconsin-Madison
1710 University Avenue
Madison, WI 53705

Sara Vasan
Anatrace, Inc.
P.O. Box 2911
Toledo, OH 43606

Joseph J. Villafranca
Department of Chemistry
152 Davey Lab
The Pennsylvania State University
University Park, PA 16802

Dan Vogt
Department of Chemistry
Ohio Wesleyan University
Delaware, OH 43015

Hsuei-Chin Wang
Department of Chemistry
University of Maryland
College Park, MD 10742

Wieslaw Waszkuc
Department of Chemistry
The Ohio State University
140 W. 18th Avenue
Columbus, OH 43210

Paul M. Weiss
Department of Biochemistry
University of Wisconsin-Madison
Madison, WI 53706

Frank H. Westheimer
Department of Chemistry
Harvard University
12 Oxford Street
Cambridge, MA 02138

Lynne D. Zydowsky
Department of Chemistry
The Ohio State University
140 West 18th Avenue
Columbus, OH 43210

Thomas M. Zydowsky
Department of Chemistry
The Ohio State University
140 West 18th Avenue
Columbus, OH 43210

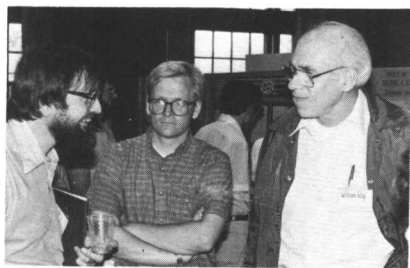
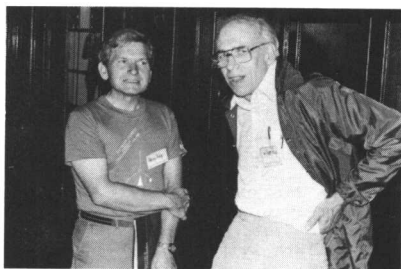
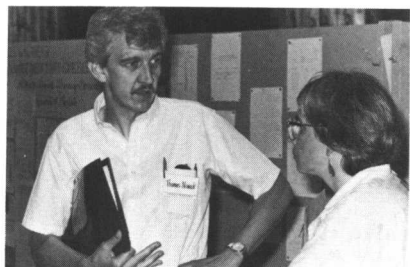
Christopher Whitman
Department of Chemistry, Box 365
University of Maryland
College Park, MD 20742

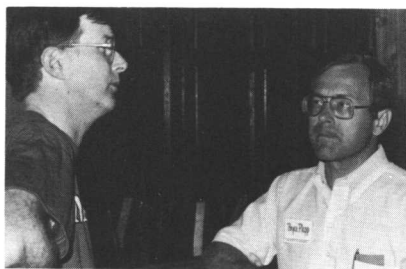
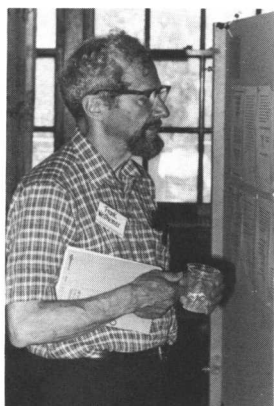
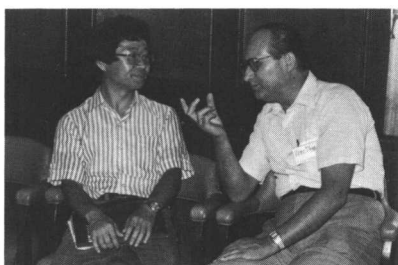
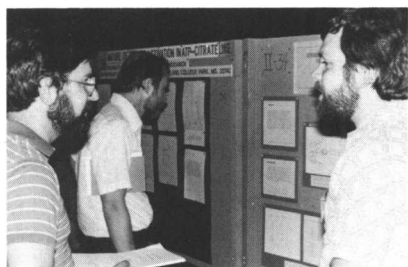
Daniel Wisner
Department of Chemistry
The Ohio State University
140 W. 18th Avenue
Columbus, OH 43210

Thomas Wood
Department of Chemistry, Box 383
University of Maryland
College Park, MD 20742

Yuh-Shyong Yang
Institute for Enzyme Research
University of Wisconsin-Madison
1710 University Avenue
Madison, WI 53705

Charles W. Young
4701 Sheboygan Avenue, Apt. 209
Madison, WI 53705





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by Raymond E. Smith

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