

UNIVERSITY OF MISSOURI
AGRICULTURAL EXPERIMENT STATION

STADLER GENETICS SYMPOSIA

Volume 5

Edited by
Gordon Kimber and G.P. Rédei

Columbia, Missouri 1973

**UNIVERSITY OF MISSOURI
AGRICULTURAL EXPERIMENT STATION**

STADLER GENETICS SYMPOSIA

Volume 5

Edited by
Gordon Kimber and G.P. Rédei

Columbia, Missouri 1973

VOLUME 5 OF THE STADLER SYMPOSIA IS DEDICATED TO

PROFESSOR ALBERT E. LONGLEY

ON HIS 80TH BIRTHDAY

BY

THE ORGANIZING COMMITTEE OF THE SYMPOSIA

A. EISENSTARK, C. S. GOWANS, G. KIMBER, R. L. LARSON,
H. A. MCQUADE, M. G. NEUFFER, G. P. RÉDEI,
E. R. SEARS AND A. F. YANDERS

PREFACE

The Fifth Stadler Genetics Symposium had an attendance of over 171; 85 of the out-of-town guests represented 19 states.

The First Stadler Symposium took place five years ago when the continuation of this program was in serious doubt. The Symposia are firmly established now thanks to the world-wide interest of geneticists in this program. We are happy having been able to make available these proceedings at the original modest price and we are gratified by the number of orders received from individuals, libraries and book sellers from all parts of the world. At several schools the material became a text or supplement to advanced instruction in genetics.

If there is sufficient interest, the Independent Study Department of the University of Missouri will offer these lectures for credit through correspondence to all qualified off-campus students too under the title "Genetics in Progress." Inquiries can be sent to Prof. G. P. Rédei, 117 Curtis Hall, University of Missouri, Columbia, Missouri, 65201.

The 6th Symposium is tentatively scheduled for April 19-20, 1974. We plan to distribute the detailed program by the end of the year. The journal GENETICS will also make an announcement. We are glad to inform you that Drs. Peter Carlson (Brookhaven), Rowland Davis (Ann Arbor), Barbara Hamkalo (Oak Ridge), Wesley McBride (Bethesda), Theodore Puck (Denver) and Georges Ungar (Houston) accepted our invitation to be the speakers.

It is a pleasant duty to acknowledge the sponsorship of the Symposium by the Graduate School, the College of Agriculture, the Division of the Biological Sciences, the School of Medicine and the Extension Division of the University of Missouri. Special gratitude is due to the Deans of the Graduate School, Dr. Lloyd E. Berry and Dr. Andrew C. Minor, for their support to genetics in many other ways.

Thanks are deserved by the graduate student who helped Professor W. Q. Loegering in the organization of the program.

We are much indebted to Dr. Richard L. Hills, Director of the Woodwind Quintet and to Judy Anderson (flute), Mary Burroughs (French horn), Ann Noellsch (clarinet), Debra Osman (oboe) and Richard Sharp (bassoon) for the outstanding entertainment at the Saturday night banquet, and to Professor Leon Snyder's students in the microenvironment course for the delightful table arrangements.

The photographs praise the skills of Mr. Blake Scott.

Thanks are due to Mr. John Brandis who was the Conference Coordinator, to the University Stenographic Services for typing, and to the Technical Education Services of the University for the printing of these Proceedings.

G. P. R.

J41826

PROGRAM OF THE FIFTH STADLER GENETICS SYMPOSIUM 1973

Friday, April 13, 1973

- 12:30 P.M. REGISTRATION: CURTIS HALL
- 1:00 OPEN HOUSE: CURTIS HALL AND TUCKER HALL
J.B. Beckett, R.V. Brown, A.B. Burdick, E.H. Coe, G.G. Doyle,
G. Kimber, R.L. Larson, M.G. Neuffer, G.P. Rédei, E.R. and
L.M.S. Sears, M.S. Zuber
J. David, D. Dunn, A. Eisenstark, L. Glatzer, F. Landa, D. Miles,
W.H. Sheridan, L. Sherman, R. Wang
- 2:00 DISCUSSION GROUPS
Coordinator: W.Q. Loefering
RECOMBINATION
Hosts: A. Eisenstark, J. David, R.D. Hotchkiss, H.L. Roman
TRANSFORMATION
Hosts: J. Grunau, A. Harrison, A. Tomasz
IMMUNOGENETICS
Hosts: R. Breitenbach, L. Hood, G. Sharp
SUBCELLULAR GENETICS
Hosts: W.R. Fleming, R.P. Levine, D. Miles
SOCIAL ASPECTS OF GENETICS
Hosts: E.A. Carlson, E. Siegel, W. Sheridan
- 4:00 COFFEE: ROOM 1, TUCKER HALL
- 4:30 Chairman: M. Strickberger, Room 18, Tucker Hall
ELOF A. CARLSON (STATE UNIVERSITY OF NEW YORK)
"EUGENICS REVISITED: THE CASE OF GERMINAL CHOICE"
- 6:00 DINNER Available in Memorial Union Cafeteria
- 7:00 SMOKER Alumni Lounge, Memorial Union

Saturday, April 14, 1973

- 7:30 A.M. LATE REGISTRATION: MEMORIAL UNION
LECTURES: MEMORIAL UNION AUDITORIUM
- 8:15 Convener: H.A. McQuade
Welcome: Andrew C. Minor, Assoc. Dean of the Graduate School
- 8:30 Chairman: G.Y. Kikudome
A. EISENSTARK (UNIVERSITY OF MISSOURI-COLUMBIA)
"TRYPTOPHAN PHOTOPRODUCT AS A GENETIC PROBE: EFFECTS ON
BACTERIA"
- 9:15 Chairman: R. Wang
LEE HOOD (CALIFORNIA INSTITUTE OF TECHNOLOGY)
"THE GENETICS, EVOLUTION AND EXPRESSION OF ANTIBODY MOLECULES"
- 10:00 COFFEE
- 10:30 Chairman: Linda Chapman
A. TOMASZ (ROCKEFELLER UNIVERSITY)
"UPTAKE OF DNA BY BACTERIA AND EUKARYOTES"
- 11:15 DISCUSSION
- 12:00 LUNCH (Available in Memorial Union)
- 1:30 Convener: R.L. Larson
Chairman: E.R. Sears
H.L. ROMAN (UNIVERSITY OF WASHINGTON)
"STUDIES OF RECOMBINATION IN YEAST"
- 2:15 Chairman: E.H. Coe, Jr.
R.D. HOTCHKISS (ROCKEFELLER UNIVERSITY)
"GENETIC UNITY AND BIOCHEMICAL DIVERSITY IN GENETIC RECOMBINATION
MECHANISMS"
- 3:00 TEA
- 3:30 Chairman: C.S. Gowans
R.P. LEVINE (HARVARD UNIVERSITY)
"MEMBRANES AND MUTATIONS IN CHLAMYDOMONAS REINHARDI"
- 4:15 DISCUSSION
- 6:30 BANQUET: RAMADA INN
MASTER OF CEREMONIES: A.F. YANDERS
SPEAKER: R.L. HODGES, PROFESSOR OF FORENSIC MEDICINE
"JUDGES, GENES AND MAN"
ENTERTAINMENT: THE UNIVERSITY WOODWIND QUINTET UNDER THE
DIRECTION OF PROFESSOR RICHARD L. HILLS

C O N T E N T S

PREFACE	3
PROGRAM	4
CONTENTS	5
LIST OF PARTICIPANTS	6
PHOTOGRAPH OF THE SPEAKERS AND PARTICIPANTS	8
M. M. RHOADES:	
A PORTRAIT OF E. G. ANDERSON 1891-1973	9
ELOF A. CARLSON:	
EUGENICS REVISITED: THE CASE FOR GERMINAL CHOICE	13
H. ROMAN:	
STUDIES OF RECOMBINATION IN YEAST	35
A. EISENSTARK:	
TRYPTOPHAN PHOTOPRODUCT AS A GENETIC PROBE: EFFECTS ON BACTERIA	49
R. P. LEVINE:	
MEMBRANES AND MUTATIONS IN CHLAMYDOMONAS REINHARDI	61
LEE HOOD:	
THE GENETICS, EVOLUTION AND EXPRESSION OF ANTIBODY MOLECULES	73
R. D. HOTCHKISS:	
GENETIC UNITY AND BIOCHEMICAL DIVERSITY IN GENETIC RECOMBINATION MECHANISMS	145
A. TOMASZ	
DNA UPTAKE BY BACTERIA AND EUCARYOTIC CELLS	161
R. H. HODGES:	
JUDGES, GENES AND MAN	179

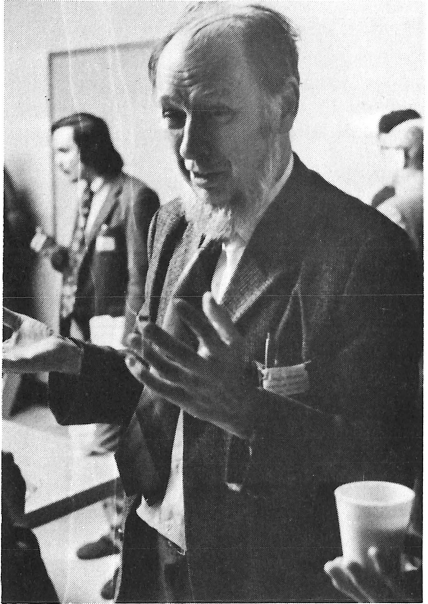
PARTICIPANTS AT THE FIFTH STADLER GENETICS SYMPOSIUM

Mrs. G.N. Acedo, Columbia, Missouri 65201
 Stephen Allgeyer, 7849 Delhi Dr., St. Louis, Missouri 63137
 H. N. Anasthasiou, 12 Charles Street, Columbia, Missouri 65201
 Mrs. Florence Anderson, 910 W. Broadway, Columbia, Missouri 65201
 Michael E. Ashley, 2740 Pythian, Springfield, Missouri 65802
 Janet Ashman, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 Alan G. Atherly, Iowa State University, 10 Curtiss Hall, Ames, Iowa 50010
 Mary V. Bail, 404A Milam Ave., College Station, Texas 77840
 Zeno E. Bailey, Eastern Illinois University, R.R. 1, Charleston, Illinois 61920
 Grace L. Baker, Columbia College, 1006 S. Glenwood Ave., Columbia, Missouri 65201
 Mrs. Dorothy Beckett, Columbia, Missouri 65201
 Jack B. Beckett, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 Charles J. Biggers, Memphis State University, 2473 Lynnfield, Memphis, Tennessee 38138
 Dean S. Bishop, Kansas State College, 1127 S. Rouse, Pittsburg, Kansas 66762
 Vernon C. Bode, Kansas State University, 1906 Bluestem Terrace, Manhattan, Kansas 66502
 Charles E. Bokcage, Kansas State University, 1530 College Ave. A5, Manhattan, Kansas 66502
 Paul Bolen, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 Mona Bolingbroke, 200 Manor Drive, Columbia, Missouri 65201
 Blaine S. Bradshaw, University of Kansas, 11th & Missouri, #11, Lawrence, Kansas 66044
 John Brandis, Univ. of Missouri, Columbia, Missouri 65201
 Robert P. Breitenbach, Lefevre Hall, Univ. of Missouri, Columbia, Missouri 65201
 R. V. Brown, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 A. B. Burdick, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 Mary Burroughs, Univ. of Missouri, Columbia, Missouri 65201
 J. Bussard, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 E. H. Carlson, New York State University, Stony Brook, New York 11790
 Wayne R. Carlson, University of Iowa, 608 Green Acres, Solon, Iowa
 John H. Caster, Southern Illinois University, 304 E. Stoker #6, Carbondale, Illinois 62901
 Linda Chapman, Tucker Hall, Univ. of Missouri, Columbia, Missouri 65201
 Shu-Mei Hsu Chen, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 Mrs. S. C. Chung, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 Frank Cloninger, Waters Hall, Univ. of Missouri, Columbia, Missouri 65201
 Edward H. Coe, Jr., Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 Mrs. Mary Coe, Columbia, Missouri 65201
 Terry R. Colbert, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 J. David, Tucker Hall, Univ. of Missouri, Columbia, Missouri 65201
 Gregory G. Doyle, 1006 W. Rollins Rd., Columbia, Missouri 65201
 Mrs. Mary Kay Doyle, Columbia, Missouri 65201
 Edna Dudgeon, Southeast Missouri State University, 1502 Dunklin, Cape Girardeau, Missouri
 D. Dunn, Tucker Hall, Univ. of Missouri, Columbia, Missouri 65201
 Alan DuMontier, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 Mary Edwards, Washburn University, Department of Biology, Topeka, Kansas
 A. Eisenstark, Tucker Hall, Univ. of Missouri, Columbia, Missouri 65201
 Mrs. A. Eisenstark, Columbia, Missouri 65201
 DuWayne C. Englert, Southern Illinois University, Dept. of Zoology, Carbondale, Illinois
 Richard F. Evans, Rt. 1, Rocheport, Missouri 65279
 Tony Evans, Drake University, 3012 Kingman, Des Moines, Iowa 50311
 Cheng Jin Fan, Morgan State College, 1005 Arcola Ave., Silver Spring, Maryland 20902
 Shawy A. Farag, 301 Sanford Ave., Columbia, Missouri 65201
 Jerry S. Farris, 605 W. Freeman, Carbondale, Illinois 62901
 R. A. Gilmore, Southern Illinois University, 1608 W. Taylor Dr., Carbondale, Illinois 62901
 Thomas Gilroy, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 Louis Glatzer, 808 Red Oak Lane, Columbia, Missouri 65201
 S. L. Goldman, University of Toledo, Department of Biology, Toledo, Ohio 43606
 Charles S. Gowans, 1609 University Ave., Columbia, Missouri 65201
 Richard Grossberg, Illinois Benedictine College, 1649 S. Michigan, Villa Park, Illinois
 J. A. Grunau, Tucker Hall, Univ. of Missouri, Columbia, Missouri 65201
 Stephen D. Haid, 1788 Rosado Dr., St. Louis, Missouri 63138
 R. Richard L. Hills, Univ. of Missouri, Columbia, Missouri 65201
 R. L. Hodges, Clark Hall, Univ. of Missouri, Columbia, Missouri 65201
 Lee Hood, Biology Division, California Institute of Technology, Pasadena, California 91109
 Rollin D. Hotchkiss, Rockefeller University, 66th & New York Ave., New York, New York 10021
 John. P. Huchabay, Southeast Missouri State University, Cape Girardeau, Missouri 63701
 LaDonna L. Imken, 7333 Murdoch, St. Louis, Missouri 63119
 Manjit S. Kang, Southern Illinois University, 5 Hogbair Ct., R. 2, Carbondale, Illinois 62901
 Brenda Keith, Southwestern State College, Weatherford, Oklahoma 73096
 Phil Kelley, Tucker Hall, Univ. of Missouri, Columbia, Missouri 65201
 Gary Y. Kikudome, Tucker Hall, Univ. of Missouri, Columbia, Missouri 65201
 G. Kimber, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 Mrs. Yvonne Kimber, Columbia, Missouri 65201
 Paul F. Kopeck, Drake University, 1114 58th St., Des Moines, Iowa 50311
 Fred Landa, Tucker Hall, Univ. of Missouri, Columbia, Missouri 65201
 Becky J. Langan, Kansas University, 12607 Cherokee Lane, Leawood, Kansas 66509
 Mrs. Peggy Larson, Columbia, Missouri 65201
 Russell L. Larson, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 R. P. Levine, Biology Laboratories, Harvard University, 16 Divinity Ave., Cambridge, Mass.
 Glen A. Lindsay, 1335 So. Ave. F, Portales, New Mexico
 W. Q. Loegering, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 Albert E. Longley, 2304 Missouri Ct., Columbia, Missouri 65201

Mrs. A. Longley, Columbia, Missouri 65201
 A. C. McBride, Hope College, Holland, Michigan
 Judy C. McBride, Hope College, Holland, Michigan
 H. A. McQuade, N202 Medical Center, Univ. of Missouri, Columbia, Missouri 65201
 James R. Marzolf, 408 Maupin Rd., Columbia, Missouri 65201
 D. Miles, Tucker Hall, Univ. of Missouri, Columbia, Missouri 65201
 Mrs. Judith Miles, Columbia, Missouri 65201
 Lynn Miller, Hampshire College, 477 S. Pleasant St., Amherst, Massachusetts 01002
 Bonnie K. Mills, 1276 Danvens, St. Louis, Missouri 63141
 Andrew C. Minor, Jesse Hall, Univ. of Missouri, Columbia, Missouri 65201
 A. H. Mohamed, 6740 Roe, Prairie Village, Kansas
 Murloch K. Morrison, R#1, Box 41, Olsburg, Kansas 66520
 John Morrow, Dept. of Physiology, University of Kansas, Lawrence, Kansas
 Mary Rengo Murnik, Western Illinois University, Dept. of Biological Sciences, Macomb, Illinois
 Marion Murray, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 Michael E. Myszerski, 3116 Victoria Dr., Des Moines, Iowa 60310
 Don Nallick, 220 Lefevre Hall, Columbia, Missouri 65201
 M. G. Neuffer, Curtis Hall, Columbia, Missouri 65201
 Mrs. Margaret Neuffer, Columbia, Missouri 65201
 Shirley Nitzel, Dept. of Biological Sciences, SW State College, Weatherford, Oklahoma 73096
 Ann Noellsch, Univ. of Missouri, Columbia, Missouri 65201
 William D. Noteboom, 605 Maplewood, Columbia, Missouri 65201
 Rupert Nowlin, Dept. of Biological Sciences, SW State College, Weatherford, Oklahoma 73096
 Tim O'Loughlin, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 Barbara Osburn, Microbiology Department, Southern Illinois University, Carbondale, Illinois
 Don Osburn, Dept. of Microbiology, Southern Illinois University, Carbondale, Illinois 62901
 Debra Osman, Univ. of Missouri, Columbia, Missouri 65201
 Jim Ottman, Dept. of Biological Sciences, SW State College, Weatherford, Oklahoma 73096
 George W. Parchman, 500 W. Goodlett, Memphis, Tennessee 38117
 Robert Paul Parks, Kansas Hall, University of Kansas, Lawrence, Kansas
 E. Edward Peoples, 1208 N. Illinois, Weatherford, Oklahoma 73096
 Larry R. Peterson, 615 Douglas, Apt. C-4, Holbud, Michigan 19423
 William F. Phares, 211 Hitt St., Apt. 205, Columbia, Missouri 65201
 David Phillips, 718 North St., Cape Girardeau, Missouri 63701
 Thad Pittenger, Manhattan, Kansas 66502
 J. M. Poehlman, 1819 Ridgemont, Columbia, Missouri 65201
 Barbara L. Raffail, Tucker Hall, Univ. of Missouri, Columbia, Missouri 65201
 William S. Raffail, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 Mary Rardin, Washburn University, Department of Biology, Topeka, Kansas 66621
 George P. Rédei, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 Mrs. Magdolna Rédei, Columbia, Missouri 65201
 Charles A. Rehwaltdt, St. Cloud State College, 913 6th Ave. S, St. Cloud, Minnesota 56301
 Marcus M. Rhoades, 1809 E. Hillside Dr., Bloomington, Indiana 47401
 Ralph Riches, 704 W. 8th, Pittsburg, Kansas 66762
 Herschel L. Roman, University of Washington, Genetics Department, Seattle, Washington 98105
 Betty Rose, Biology Department, Kansas State College, Pittsburg, Kansas 66762
 Jim Rubenstein, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 James Saver, Dept. of Biological Sciences, SW State College, Weatherford, Oklahoma 73096
 Paul Schaefer, Dept. of Biological Sciences, SW State College, Weatherford, Oklahoma 73096
 David Schlessinger, Microbiology Department, Washington University, St. Louis, Missouri
 Mrs. D. Schlessinger, St. Louis, Missouri
 Blake Scott, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 E. R. Sears, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 L. M. S. Sears, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 W. H. Sheridan, Tucker Hall, Univ. of Missouri, Columbia, Missouri 65201
 Louis A. Sherman, 2210 Ridgefield, Columbia, Missouri 65201
 Aleem Siddiqui, Microbiology Dept., Kansas University Medical Center, Kansas City, Kansas
 Ronald W. Skadsen, 1508 Windsor St., Columbia, Missouri 65201
 R. S. Slesinski, Division of Biology, Kansas State University, Manhattan, Kansas 66506
 Mrs. Jo Lynn Smith, 106 N. Lark Lane, Carbondale, Illinois 62901
 Mark E. Sorrells, Raymond, Illinois 62560
 Probodh K. Srivastava, Dept. of Pathology, Univ. of Missouri, Columbia, Missouri 65201
 Joan K. Stadler, Curtis Hall, Iowa State University, Ames, Iowa 50010
 Joyce D. Stone, 3161 Flint, Memphis, Tennessee 38118
 M. Strickberger, Biology Department, Univ. of Missouri-St. Louis, St. Louis, Missouri
 Gayle B. Templeton, 12 S. Diana, Memphis, Tennessee, 38104
 Bill Thorp, Dept. of Biological Sciences, SW State College, Weatherford, Oklahoma 73096
 A. Tomasz, Genetics Lab., Rockefeller University, 66th & New York Ave., New York, New York
 Chester G. Twitchell, 2801 Bloomfield, Cape Girardeau, Missouri 63701
 David J. Uhlik, 5813 W. Michigan, Wauwatosa, Wisconsin 63213
 George Valenta, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 R. Wang, Tucker Hall, Univ. of Missouri, Columbia, Missouri 65201
 Clint Weil, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 John A. Weir, 1319 Spencer Dr., Lawrence, Kansas 66044
 Jon. G. West, #600 2401 W. Broadway, Columbia, Missouri 65201
 Richard H. Whalen, Botany Dept., South Dakota State University, Brookings, South Dakota
 Larry G. Williams, Division of Biology, Manhattan, Kansas 66506
 Sheila Williamson, Biology Department, Kansas State College, Pittsburg, Kansas 66762
 H. Glenn Wolfe, 1513 Crescent Rd., Lawrence, Kansas 66044
 Thomas M. Wolf, Washburn University, Dept. of Biology, Topeka, Kansas 66621
 A. F. Yanders, Jesse Hall, Univ. of Missouri, Columbia, Missouri 65201
 Mrs. A. Yanders, Columbia, Missouri 65201
 Thomas E. Zettle, Box 2400, Illinois Central College, East Peoria, Illinois 61611
 Pasquale Zinzi, Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 M. S. Zuber, 109 Curtis Hall, Univ. of Missouri, Columbia, Missouri 65201
 Mrs. M. S. Zuber, Columbia, Missouri 65201
 Judy Zyskind, Iowa State University, Dept. of Genetics, Ames, Iowa 50010



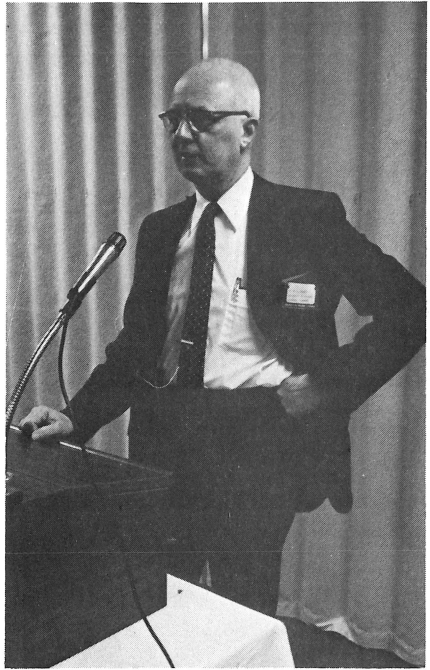
The speakers of the Fifth Stadler Symposium and a group of the participants. Foreground from left to right: Lee Hood, A. Eisenstark, R.D. Hotchkiss, R.P. Levine, H.L. Roman, E.A. Carlson and A. Tomasz.



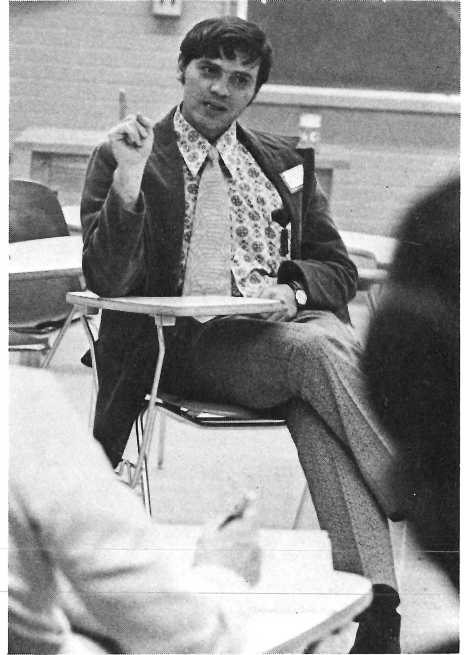
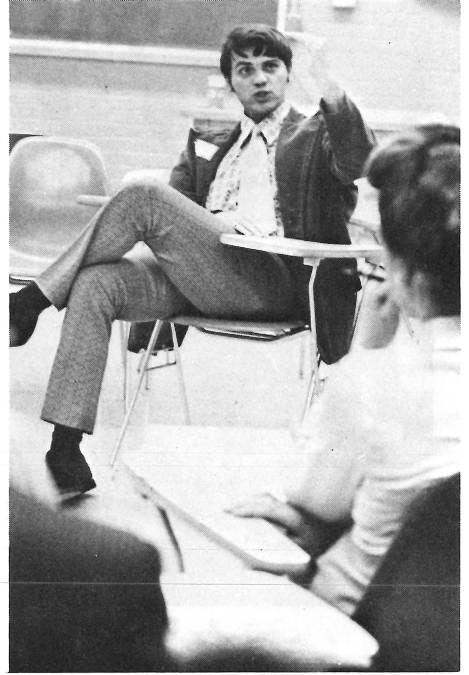
R. D. Hotchkiss at the Symposium



C. S. Gowans

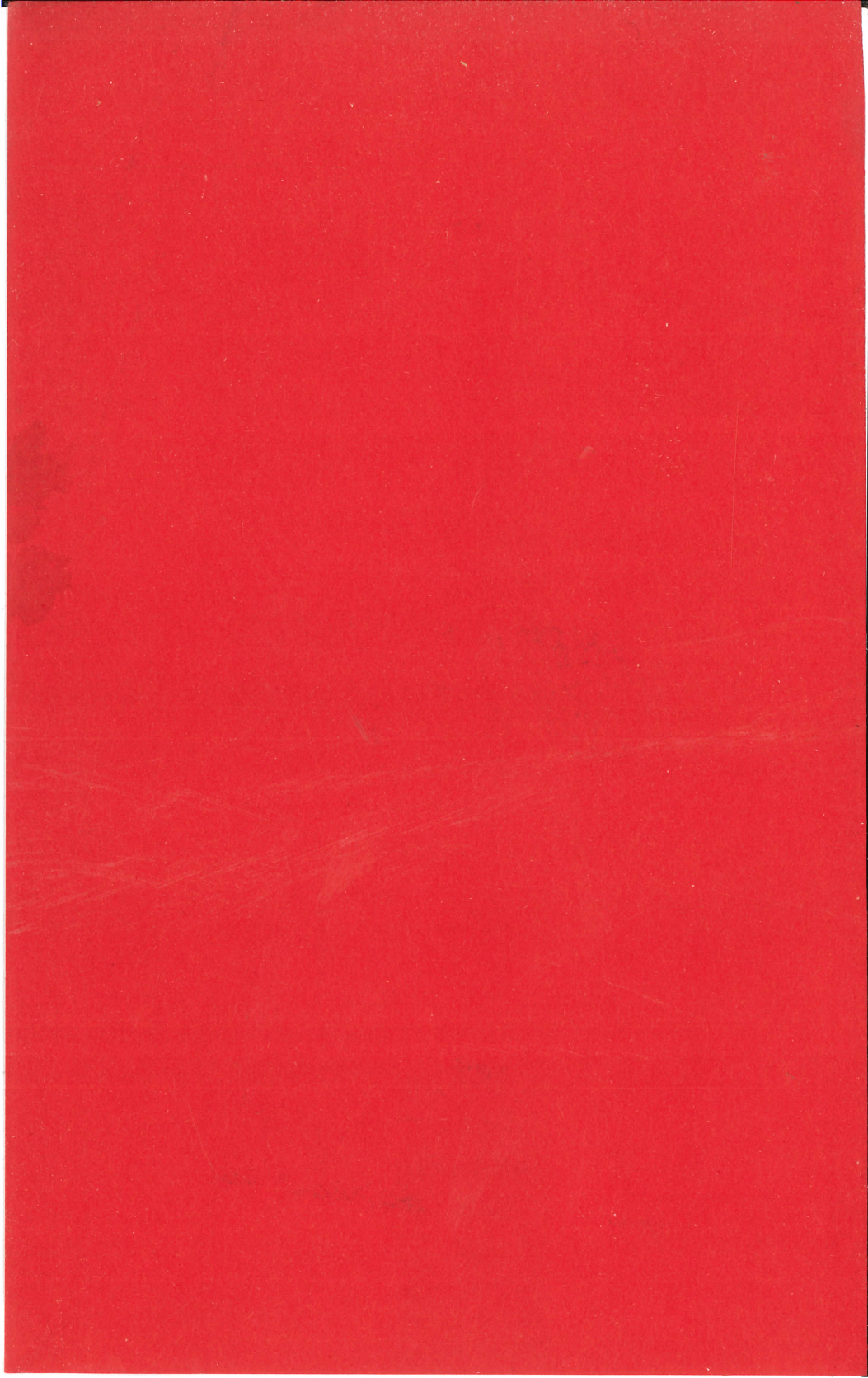


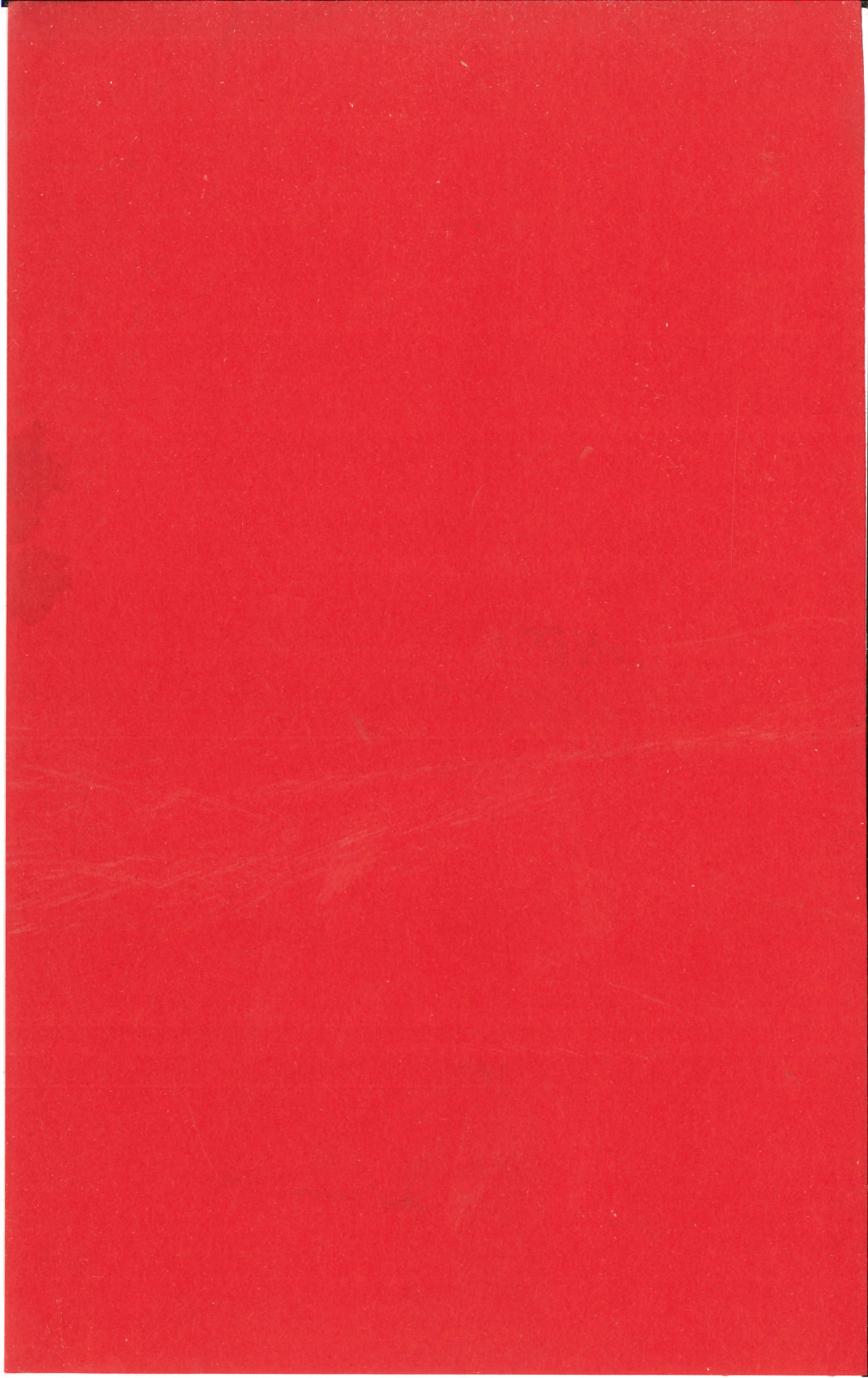
R. L. Hodges



Dr. Lee Hood explaining problems in immunogenetics

DUE	RETURNED
INTERLIBRARY LOAN JUL 18 1975	JUL 24 1975
INTERLIBRARY LOAN DEC 5 1975	DEC 5 1975
INTERLIBRARY LOAN JUN 11 1976	FEB 9 1976
INTERBRANCH LOAN SUBJECT TO RECALL	APR 23 1976
INTERLIBRARY LOAN DEC 2 1977	OCT 28 1977





UNIVERSITY OF MISSOURI - COLUMBIA

ELL

QH431 .S692 (1973) v.5



010-009723310

QH
431
.S692
5
J41826



REYNOLDS
BINDERY, IN
Addtl 107