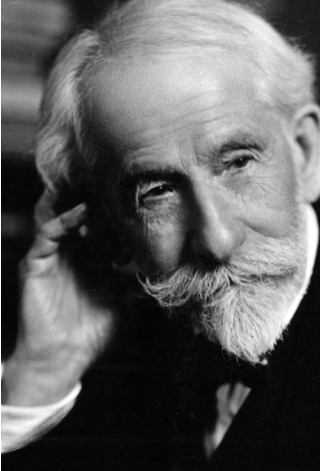


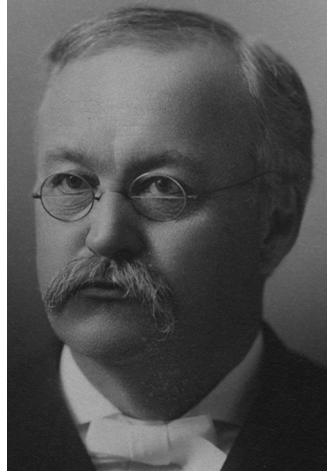
APPENDICES

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Appendix A.
UNIVERSITY OF MINNESOTA PRESIDENTS



William Watts Folwell
1869-1884



Cyrus Northrup
1884-1911



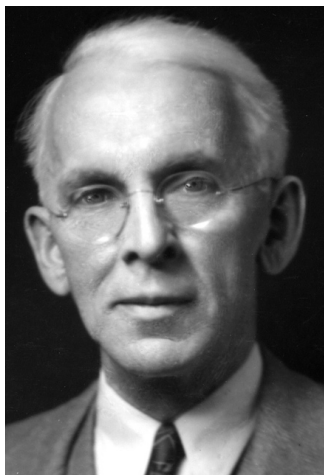
George E. Vincent
1911-1917



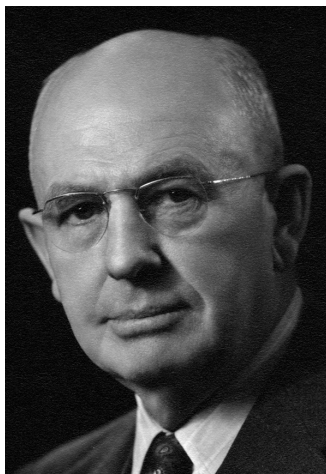
Marion L. Burton
1917-1920



Lotus D. Coffman
1920-1938



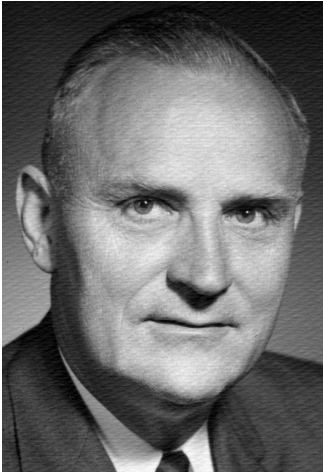
Guy Stanton Ford
1938-1941



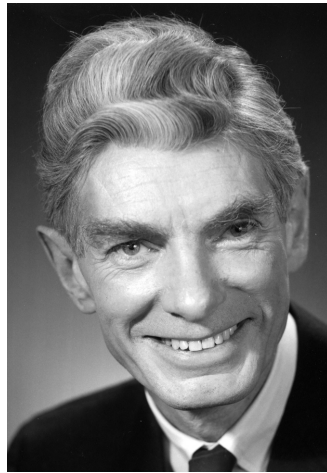
Walter C. Coffey
1941-1945



James Lewis Morrill
1945-1960



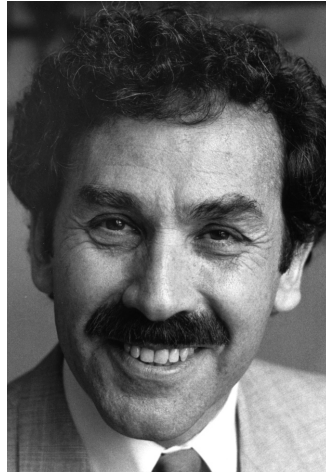
O. Meredith Wilson
1960-1967



Malcolm Moos
1967-1974



C. Peter McGrath
1974-1984



Kenneth H. Keller
1985-1988



Nils Hasselmo
1989-1997



Mark G. Yudof
1997-2002

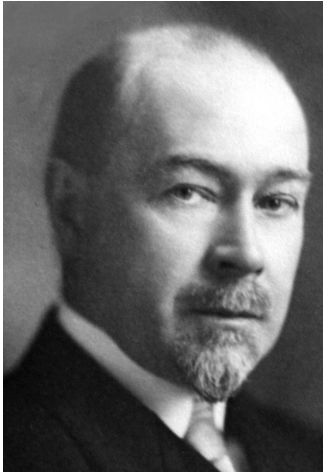


Robert H. Bruininks
2003-2011



Eric W. Kaler
2011-present

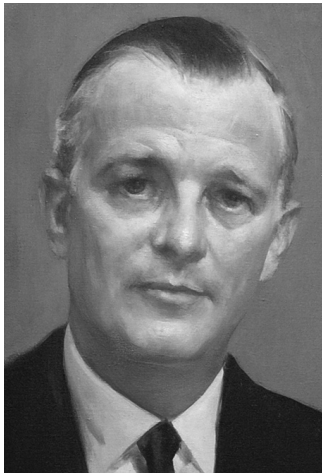
Appendix B. COLLEGE OF PHARMACY DEANS



Frederick J. Wulling
1892-1936



Charles H. Rogers
1936-1956



George P. Hager
1957-1966



Lawrence C. Weaver
1966-1984



Gilbert S. Banker
1985-1992

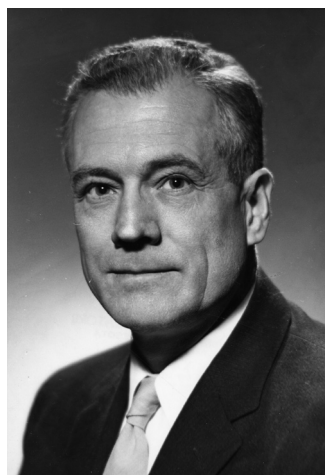


Marilyn K. Speedie
1996-present

Appendix C.
MEDICINAL CHEMISTRY DEPARTMENT HEADS



Glenn L. Jenkins
1936-1941



Ole Gisvold
1941-1969



Taito Soine
1969-1974



Mahmoud M. Abdel-Monem
1983-1984



Yusuf J. Abul-Hajj
1984-1992; 1996-2005



Rodney L. Johnson
Interim, 1994-1996; 2005-
2006



Gunda I. Georg
2007-present

Appendix D. OUTSTANDING ACHIEVEMENT AWARDS

The Outstanding Achievement Award is the University of Minnesota's highest award to an alumnus. It is conferred upon former students of the University who have attained distinction in their chosen fields or professions or in public service, and who have demonstrated outstanding achievement and leadership on a community, state, national, or international level.



George E. Crossen

B.S. 1933, M.S. 1939, Ph.D. 1940, University of Minnesota.

Assistant Professor, University of Minnesota, 1940-43

Dean of Pharmacy, Drake University, 1943-45

Dean of Pharmacy, Oregon State University, 1945-58

Crossen was awarded the OAA in 1951 in recognition as an eminent author and administrator in pharmaceutical education. He was deemed to be worthy of special commendation for outstanding achievement.



Coy Webster Waller

B.S. 1937, University of North Carolina

M.S. 1939, University of Buffalo

Ph.D. 1942, University of Minnesota.

Instructor, State College of Washington, 1942-44

Head, Natural Products Chemistry, American Cyanamid, 1944-57

Director of Chemical Research, Mead Johnson and Company, 1957-66.

Waller was awarded the OAA in 1959 for his outstanding achievements in natural products research and was recognized for his success in the proof of structure and synthesis of folic acid, aureomycin, puromycin, and netropsin.



Charles Herbert Rogers

B.S. 1913, M.S. 1915, University of Michigan
Sc.D. 1918, University of Minnesota.
Instructor, 1913-14, University of Minnesota
Associate Professor & Head of Department of
Pharmacy, University of West Virginia, 1914-17
Professor and Head of Pharmaceutical Chemistry,
1917-36; Dean of Pharmacy, 1936-56; University of
Minnesota

Rogers was awarded the OAA in 1959 for his devotion to pharmaceutical education and the art and science of pharmacy. In his role as teacher, author, administrator, and researcher, he made many notable and lasting contributions to the instruction of students at both the graduate and undergraduate levels, to the practice of pharmacy as a vocation indispensable for the health of the public and the art of science of the apothecary in an era of “wonder drugs” and for his outstanding contributions as the second dean of the College of Pharmacy at the University of Minnesota.



James H. Boothe

B.S. 1939, Washington State College
Ph.D. 1943, University of Minnesota
Senior Research Scientist, Department of Medicinal
Chemistry at Lederle Laboratories Division, American
Cyanamid Company, 1943.

Boothe was awarded the OAA in 1962 for his outstanding work in medicinal chemistry and the chemistry of natural products. His initial contributions were on the synthesis of folic acid and its degradation of products as well as the first total synthesis of pteropterin. He is renowned for his work on the structural elucidation of aueromycin, the structure activity relationship between aueromycin and tetracycline as well as the first total synthesis of chlorotetracycline analogs.



Chauncey I. Cooper

B.S. 1934, M.S. 1935, Ph.D. 1938, University of Minnesota
 Instructor, 1935-38; Associate Professor and Acting
 Dean, 1938-41; Associate Professor and Dean, 1941-51;
 Professor and Dean, 1951-72; Howard University

Cooper was awarded the OAA in 1964 in recognition of his energetic pursuit of higher educational standards for African Americans and greater opportunities for African Americans in pharmaceutical education and for his significant activities that led to the founding of the National Pharmaceutical Association.



Olav Johan Braenden

B.S. 1942, University of Oslo, Norway
 Ph.D. 1950, University of Minnesota,
 Social Affairs Officer, United Nations, New York,
 1951-55
 Chief, United Nations Narcotics Laboratory, Geneva,
 1955-68
 Chief, Scientific and Technical Section, Division of
 Narcotic Drugs, United Nations, Geneva, 1968-76

Braenden was awarded the OAA in 1974 for his outstanding contributions to the control of drug abuse internationally and for his training of numerous scientists from all over the world in methods pertinent to drug abuse.



Michael J. Martell

B.S. 1954, Ph.D. 1958, University of Minnesota
 Research Chemist, Lederle Laboratories, 1960-69
 Manager for Product Development, American
 Cyanamid, 1969-75
 Director, Medical Products and Process Chemistry,
 American Cyanamid, 1975-85

Martell was awarded the OAA in 1976 for his outstanding contributions to the tetracycline antibiotic, minocycline, which proved to be useful for the treatment of a broad spectrum of diseases.



Aubin Heyndrixcks

B.S. 1948, University of Ghent
M.S. 1952, University of Minnesota
Ph.D. 1953, University of Ghent
Professor and Director, 1958-70; Dean of
Pharmaceutical Sciences, 1970-85; University of
Ghent
Project Director, United Nations Industrial
Development Organization.

Heyndrixcks was awarded the OAA in 1980 in recognition of being a gifted scholar who improved the teaching and research of the department and made its laboratory one of the best in the country. He is a worldwide advisor on toxicology, drug abuse, and poison control centers and is an internationally recognized expert in toxicology and forensic science.



Jack R. Cole

B.S. 1953, University of Arizona
Ph.D. 1957, University of Minnesota
Assistant Professor, 1957-58; Associate Professor,
1958-62; Professor, 1962-87; Head, Department of
Pharmaceutical Sciences, 1975-79; Dean, 1977-87;
College of Pharmacy, University of Arizona

Cole was awarded the OAA in 1983 in recognition of his superb administrative skills of attracting quality faculty and improving curriculum and obtaining a new building for pharmacy at the University of Arizona. He is recognized as an expert in the field of medicinal chemistry involved in the isolation and structural elucidations of pharmacologically useful agents from plants.



Allen I. White

B.S. 1937, M.S. 1938, Ph.D. 1940, University of Minnesota
Assistant Professor, 1943-45; Associate Professor,
1945-48; Professor, 1948-79; Dean of Pharmacy,
1960-79; Washington State University

White was awarded the OAA in 1985 for his contribution and innovative leadership in the pharmacy practice and education and for implementing a clinical pharmacy program that became a model for other schools. He was also recognized for his leadership as Dean of Pharmacy at WSU and as president of the American Association of Colleges of Pharmacy.



Raymond Ernest Counsell

B.S.P. 1953, University of British Columbia

Ph.D. 1957, University of Minnesota

Senior Research Chemist, G. D. Searle and Company, 1957-64

Associate Professor, 1964-69; Professor, 1969-72;

Professor of Pharmacology and Medicinal Chemistry, 1976-99; University of Michigan

Counsell was awarded the OAA in 1989 for his outstanding contributions in medicinal chemistry, especially in the area of tumor-imaging agents and inhibitors of steroidogenesis. One of his compounds is licensed to Cellectar and is in early clinical trials for cancer therapy. He is a fellow of AAAS and has received several awards including the Horner Gold Medal in Pharmacy, American Cancer Society Research Associate Award, the Eleanor Roosevelt International Cancer Fellowship, the Fogarty Senior International Fellowship, and the Genia Czerniak Prize in Nuclear Medicine and Radiopharmacology.



Kuo-Hsiung Lee

B.S. 1961, Medical College of Taiwan

M.S. 1965, Kyoto University, Japan

Ph.D. 1968, University of Minnesota

Assistant Professor, 1970-74; Associate Professor,

1974-77; Professor, 1977-present; Chair of Medicinal

Chemistry and Natural Products Division, 1998-2008;

Director of Natural Products Laboratory,

1983-present; Keenan Professor of Medicinal

Chemistry, 1992-present; University of North Carolina

Lee was awarded the OAA in 1999 for his outstanding contributions as an international leader in medicinal and natural products chemistry and was recognized for his discovery of more than 1,000 new compounds, including several to treat cancer and HIV. As of 2010, Lee has discovered more than 3,000 novel bioactive natural products and synthetic analogs.



Mahmoud M. Abdel-Monem

B.Sc. 1959, Cairo University

Ph.D. 1966, University of Minnesota

Assistant Professor 1970-71, University of Illinois

Assistant Professor 1971-75, University of Minnesota

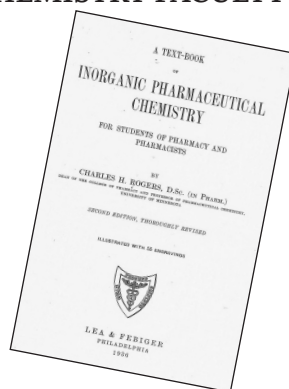
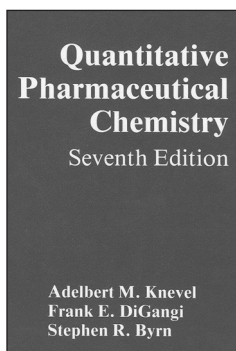
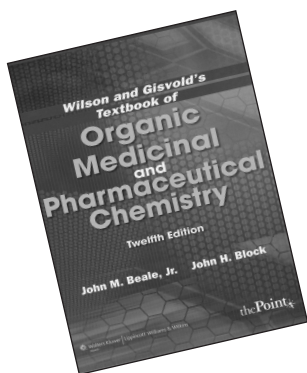
Associate Professor 1975-80; Professor 1980-87; Head
of Medicinal Chemistry 1983-84; University of
Minnesota

Dean of Pharmacy, 1987-98; Washington State
University

Abdel-Monem was awarded the OAA in 1999 for his overall accomplishments in teaching, research, and service. He performed admirably as an administrator at Minnesota while serving as Department Head, Interim Dean, and Associate Dean. His administrative experience helped him tremendously when he became Dean of Pharmacy at WSU.

Appendix E.

BOOKS AUTHORED BY MEDICINAL CHEMISTRY FACULTY

**Frederick J. Wulling**

The Evolution of Botany (Evolution Series)
1891

Frederick J. Wulling

Inorganic and Pharmaceutical Chemistry
Wiley & Sons, 1894

Frederick J. Wulling

Pharmacy Forward
Sumac Press, Lacrosse, WI, 1948

Charles H. Rogers

Textbook of Inorganic Pharmaceutical Chemistry, 1st-7th Editions,
Lea & Febiger, 1932-1961

George E. Crossen and Charles H. Rogers

Laboratory Manual of Inorganic Pharmaceutical Chemistry
Burgess Publishing Co., 1946

Charles H. Rogers and Taito O. Soine

Laboratory Manual of Inorganic Pharmaceutical Chemistry
Burgess Publishing Co., 1948

Ole Gisvold and Charles H. Rogers

The Chemistry of Plant Constituents
Burgess Publishing Co., 1938

Charles O. Wilson and Ole Gisvold

Organic Chemistry in Pharmacy
Lippincott, 1949

Charles O. Wilson and Ole Gisvold

Textbook of Organic Medicinal and Pharmaceutical Chemistry, 1st Edition
Lippincott, 1949
Currently in its 12th Edition

Taito O. Soine and Charles O. Wilson

Roger's Inorganic Pharmaceutical Chemistry, 8th Edition
Lea & Febiger, 1974

John H. Block, E. Roche, Taito O. Soine and Charles O. Wilson

Inorganic Medicinal and Pharmaceutical Chemistry
Lea & Febiger, 1974

Albert K. Knevel, Frank E. DiGangi and Stephen R. Byrn

Quantitative Pharmaceutical Chemistry, 7th Edition
McGraw Hill, 1977

Mahmoud M. Abdel-Monem and James G. Henkel

Essentials of Drug Product Quality: Concepts and Methodology
Mosby, 1978

W. Thomas Shier and D. Mebs

Handbook of Toxinology
Marcel Dekker, 1990

W. Thomas Shier

Mammalian Cell Culture on \$5 a Day, A Laboratory Manual of Low Cost Material
University of The Phillipines, Los Ballos, 1991

Yusuf J. Abul-Hajj and Richard Broderick

From Digitalis to Ziagen, The University of Minnesota's Department of Medicinal Chemistry
University of Minnesota, Minneapolis, 2012.

Appendix F.
GRADUATES OF THE DEPARTMENT OF MEDICINAL CHEMISTRY

Master's and Doctorate Degrees in Pharmaceutical Chemistry

1929		1941	
Mayrand, Louis Philippe	MS	Jack, Laurine Davison	PhD
		Lloyd, William Reese	PhD
1932		Urist, Harold	PhD
Goldner, Karl John	MS	Waldon, Curtis Henry	PhD
		Dennard, Turner Harrison	MS
1934		Janecek, William Leonard	MS
Betts, Loel Howard	MS		
Brecht, Edward Armnd	MS	1942	
		Hadley, Willard Jesse	PhD
1935		Voigt, Ralph Ferdinand	PhD
Cooper, Chauncey Ira	MS	Waller, Coy Webster	PhD
Fostvedt, Gerald Anderson	MS		
Souch, John Kennedy	MS	1943	
		Boothe, James Howard	PhD
1937		Buelow, Donald William	PhD
Brewster, Phyllis May	MS	Horn, Gertrude Mary	PhD
Crossen, George Edward	MS	Soine, Taito Olaf	PhD
Jack, Laurine Davison	MS	Benica, William Steinhart	MS
Voigt, Ralph Ferdinand	MS	Carlson, Edward Henry	MS
Waldon, Curtis Henry	MS	Klug, Silas Aloys	MS
		Small, Laverne Doreyn	MS
1938			
Goldner, Karl John	PhD	1945	
White, Allen Ingolf	MS	Small, Laverne Doreyn	PhD
		Asano, Akira	MS
1939			
Brecht, Edward Armond	PhD	1947	
Buelow, Donald William	MS	Almin, Ragnar	MS
Fredell, Walter George	MS	Bay, Gail	MS
Hansen, Harriet Eleanor	MS		
Keyes, Winifred Alice	MS	1948	
Soine, Taito Olaf	MS	Asano, Akira	PhD
		Benica, William Steinhart	PhD
1940		Bope, Frank Willis	PhD
Crossen, George Edward	PhD	DiGangi, Frank Edward	PhD
Fischer, Earl Britzius	PhD	King, Robert Edward	PhD
Netz, Charles Vail	PhD	Chang, Yu-Chung	MS
White, Allen Ingolf	PhD	Kuhlen, Lois Marie	MS
Hadley, Willard Jesse	MS		

1949

Doerge, Robert Fred PhD
 Kleber, John William PhD
 Schermerhorn, John Watson PhD

1950

Braeden, Olav Johan PhD
 Chow, Alfred Wen-Jen PhD
 Hopponen, Raymond Ellwood PhD
 Murty, Gollakota Gopala K PhD

1951

Abu-Shady, Hamed A PhD
 Buchdahl, Myron Robert PhD
 Chiang, Li-Chin PhD
 Patel, Ramanbhai Kishorbhai MS
 Zagelow, Leonard Paul MS

1952

Hamor, Glenn Herbert PhD
 Miller, Robert Herman PhD
 Putney, Blake Fuqua PhD
 Rost, William Joseph PhD

1953

Appel, Robert Martin PhD
 Boblitt, Robert Leroy PhD
 Gregg, David Henry PhD
 Rhodes, Harold Jesse PhD
 Heyndrick, AubinMarie Achille MS
 Ramarao, Maddury VenkataMS

1954

Bay, Paul G PhD

1955

Petersen, Robert Virgil PhD

1956

Ecanow, Bernard PhD

Schwartz, Samuel Meyer PhD
 Fiedler, Klaus Reiner MS

1957

Cole, Jack Robert PhD
 Counsell, Raymond Ernest PhD
 Batra, Karam Vir MS
 Yun, Tuk Sik MS

1958

Kelly, Clark Andrew PhD
 Kier, Lemont Burwell PhD
 Martell, Michael Joseph PhD

1961

Liebman, Arnold Alvin PhD
 Patel, Ramanbhai Kishorbhai MS
 Rao, Padukone Krishna MS

1962

Takebe, Yoshiko Higoshi MS

1963

Issacson, Eugene Ivan PhD

1964

Maulding, Hawkins Valliant Jr. PhD
 Prasad, Vadlamani Kali PhD
 Jawad, Fuad Hasan MS

1965

Gupta, Prem Kumar PhD
 Kriesel, Douglas Clare PhD
 Stubbins, James Fiske PhD

1966

Abdel-Monem, Mahmoud PhD
 Mikhall, Adel Ayad PhD
 Zoglio, Michael Anthony PhD

2004

Guo, Zhijun
 Jorvig, Erik C
 Kalyanaraman, Natarajan

2005

Carlson, Jonathan C T
 Fisher, Abigail Louise
 Li, Xingnan
 Rao, Priyanka Arvind
 Tang, Ye
 Wang, Haiqing
 Wong, Hansen L

2006

Argikar, Upendra Arvind
 Chou, Tsui-Fen
 Daniels, David John
 Kane, Brian Edmund
 Lao, Yanbin
 Goodell, John Robert
 Raghavan, Bhooma
 Steele, Terry William Joseph
 Vartak, Ashish
 Giraldes, John W

2007

Lu, Ding
 More, Swati Sudhakar

2008

PhD Balasubramanian, Ranganathan
 PhD Doshi, Jignesh Mahesh
 MS Loeber, Rachel Lea
 Kending, Cory Shawn
 Addo, Sadiya Noor
 PhD Johnson, Thomas Edwin
 PhD Norton, Jolanna Alikeh
 PhD Steele, Jaeson Charles
 MS

2009

PhD Bhagwanth, Swapna
 PhD Goggin, Melissa Mary
 Liu, Li
 Liu, Xiaodan
 PhD White, Brian Richard
 PhD Zhang, Siyi
 PhD Meng, Lei
 PhD Pietsch, Kathryn E
 MS

2010

PhD Bardaweel, Sanaa Khaled
 PhD Zhou, Jin
 PhD Zhou, Xin
 MS Michaelson-Richie, Erin Denise
 MS Aliwarga, Theresa

2011

PhD Das, Sonia Goutam Kumar
 PhD Ming, Xun
 MS

Appendix G. WORKS CITED

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- College of Pharmacy. "A Century of Challenge and Change." Pharmacy Record. University of Minnesota, Minneapolis, Spring 1992.
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- Dosa, Peter. Personal notes, 22 November 2010.
- Eccles, R. C. Education of a Pharmacist. [Pamphlet.] American Pharmaceutical Association, Philadelphia, PA, 1885.
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Kier, Lemont. Telephone interview by Richard Broderick, 17 December 2009.

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- Speedie, Marilyn. Interview by Richard Broderick, Minneapolis, MN, 7 October 2010.
- Tretyakova, Natalia. Interview by Richard Broderick, Minneapolis, MN, 12 August 2009.
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