

Dr. Connie M. Westhoff, SBB, Ph.D., graduated summa cum laude from Northern in 1973 with a Bachelor of Science degree in Medical Laboratory Science. The second oldest from a Salem, S.D. farm family of nine children, she financed her education with grants and work-study in the Northern Admissions and Records Office.

Her interest in Medical Sciences was inspired and fostered by mentors in the biology and chemistry departments at Northern, where she was a teaching assistant for numerous classes. Northern nurtured her interest in the process of scientific discovery and was the foundation of her successful career in the field of research.

Connie started her career by working in hospital laboratories in Aberdeen, St. Louis, and Lincoln, NE and received a specialist degree in blood banking and transfusion medicine. After her children reached school age, she returned to school and received a Ph.D. in molecular genetics from the University of Nebraska. This was during the time the human genome project was just beginning and much of her research involved discovery of the Rh blood group genes, well known as the “Rh factor” that is important in blood transfusion and pregnancy.

Dr. Westhoff did post-doctoral research in autoimmune disease, and in 1998 received a National Institutes of Health Fellowship in Transfusion Medicine at the University of Pennsylvania. During her research there, she was the first to demonstrate that in addition the role of Rh in blood transfusion, the biological function is to transport ammonia. She was also recognized as an expert in the genetics of blood groups. In 2006 she established the first laboratory for blood typing by DNA methods for the American Red Cross. In 2010 she assumed her present position as Executive Director of Immunohematology and Genomics at the New York Blood Center.

Dr. Westhoff's laboratory is unique in performing in-depth DNA analysis of blood types. Her expertise contributed to solving a high-profile, cold murder case in Los Angeles. Both the suspect and victim had the same rare blood type type, but Dr. Westhoff's laboratory was able to distinguish the difference from the blood of the victim from that of the accused by using DNA blood typing. Although DNA analysis is used routinely in forensics, this case represented the first time in US history that it was used to differentiate ABO blood types in evidence from a crime scene.

Her current research focus is on improved matching of patients with blood donors for blood transfusion, especially for minority patients with sickle cell disease. For this work she received a Doris Duke Innovations in Clinical Research Award. She also leads an initiative to develop a new web-based system to provide electronic access to rare blood types for patients in need, funded by the Foundation for American Blood Centers. Her laboratory is also funded by National Institutes of Health (NIH) to grow red blood cells in the laboratory as test reagents, with the eventual goal to scale up production to produce life-saving rare red blood cells in the laboratory for transfusion to patients for whom there are no compatible blood donors.

Connie lectures nationally and internationally and has served on many professional committees, including the Board of Directors of the American Association of Blood Banks (AABB), Chair of their Scientific Section, Chair of the grants review committee for the National Blood Foundation, and on numerous corporate scientific advisory boards. She is also a member of the American Association of Hematology, and the International Society of Blood Transfusion. She maintains a faculty position at the University of Pennsylvania.

She has published more than 90 scientific papers and has authored numerous book chapters. She is an associate editor for the journal *Transfusion*, an editor of the AABB technical manual, and a reviewer for numerous journals and abstracts for U.S. and international meetings in hematology and transfusion medicine. Her awards include National Blood Foundation Scholars award, John Elliott Memorial Award from AABB, and Katherine Beattie Award from the Michigan Association of Blood Banks.

Connie is excited to have the opportunity to spend more time back in the Midwest as the New York Blood Center recently merged with Community Blood Center of Kansas City and Innovative Blood Resources located in St. Paul Minnesota and Lincoln Nebraska. She leads the effort by these partners to establish a National Center for Blood Group Genomics located in Kansas City. With a grand opening target of April 2017, the focus of this new laboratory and research center is national in scope, with a mission to apply precision medicine through the use of genomics for the treatment of hematological malignancies, inherited and acquired anemias, autoimmune diseases and bone marrow transplantation when selecting products for transfusion.

Connie lives in Manhattan, New York with her husband, Dwane Wylie, and between them they have four children and four grandchildren.

#### PROFESSIONAL BACKGROUND:

Certified Medical Technologist (CMT) and Specialist in Blood Banking (SBB)  
Blood Bank/Transfusion Service Technologist, Dakota Midland Hospital, Aberdeen, SD, 1973-1975

Transfusion Service Supervisor, Christian Hospitals, St. Louis, MO, 1975-1978

Supervisor of the Transfusion Service Reference Laboratory, Nichols Laboratory, Midwest Division, Lincoln, NE, 1978-1988,

Post-Doctoral Fellow, School of Biological Sciences, University of Nebraska, Lincoln, NE, 1994-1998

Transfusion Medicine Fellow, University of Pennsylvania School of Medicine, Department of Pathology and Transfusion Medicine, Philadelphia, PA, 1998-2000

Research Associate, University of Pennsylvania School of Medicine, Department of Pathology and Transfusion Medicine, Philadelphia, PA, 2000-2004

Adjunct Assistant Professor, University of Pennsylvania School of Medicine, Department of Pathology and Transfusion Medicine, Philadelphia, PA, 2004-present

Scientific Director, Molecular Blood Group and Platelet Antigen Testing Laboratory, American Red Cross, Philadelphia, PA, 2004-2010

Executive Director, Immunohematology and Genomics, New York Blood Center, New York, NY, 2010-present

**HONORS OR ACCOMPLISHMENTS IN CHOSEN FIELD:**

Inspector, Donor Centers and Transfusion Services for American Association of Blood Banks and the American Society of Clinical Pathologists, 1980-1998

Biotechnology Fellowship, University of Nebraska, Lincoln, NE, 1990 and 1992

K01 Research Award, National Institutes of Health, 1999-2001

National Blood Foundation Research Award, 1998 and 2001

Member, Scientific Section Coordinating Committee, American Association of Blood Banks, 1999-present

Chair, Scientific Section Coordinating Committee, American Association of Blood Banks, 2002-2006

Member, Board of Directors, American Association of Blood Banks, 2002-2006

Member, Grant Review Committee, National Blood Foundation, 1998, 2004, 2005

Chair, Grant Review Committee, National Blood Foundation, 2007-2011

Member, Scientific Advisory Board, PhenoTech, Inc., Philadelphia, PA, 2006-2009

Member, Scientific Advisory Board, Immucor, Inc., Norcross, GA, 2006-present

Member, International Society for Blood Transfusion Committee on Blood Group Nomenclature, 2006-present

Member, Editorial Board of the journal Transfusion, 2005-2010

Associate Editor of the journal Transfusion, 2010-present

Co-editor of the journal Immunohematology, 2005-2010

North American Representative to the Consortium for Blood Group Genotyping, 2004-present

Manuscript Reviewer for the scientific journals American Journal of Physiology, Vox Sanguinis, Immunohematology, and Transfusion Medicine

Reviewer of abstracts for the annual meetings of the American Association of Blood Banks and the American Society of Hematology

Doris Duke Foundation Research Grant Award, 2012

American Blood Centers Research Grant Award, 2013

NIH grant funded research 2015-present

**HONORS OR ACCOMPLISHMENTS FROM ORGANIZATION:**

John Elliott Memorial Award, American Association of Blood Banks, 2009

Katherine Beattie Award, Michigan Association of Blood Banks, 2002

**ADDITIONAL INFORMATION:**

First investigator to directly demonstrate the physiological function of the Rh blood group antigens

Widely recognized as leading expert in the area of molecular genetics of blood cell antigens

Conducts basic and translational research on the function of the Rh blood group proteins and the development of molecular blood group genotyping

Specializes in blood transfusion for patients with Sickle Cell Disease

Teaches section on Blood Group Antigens to Residents, Fellows, and 1st and 2nd year medical students at the University of Pennsylvania School of Medicine

Has published 90 peer-reviewed original research papers and reviews in scientific journals

Has authored 12 chapters on blood group antigens in leading reference books on Immunohematology and Transfusion Medicine