

CURRICULUM VITAE

Paula E. North MD, PhD

**Professor
Department of Pathology
Division of Pediatric Pathology**

OFFICE ADDRESS:

Children's Wisconsin - Milwaukee Hospital
8915 W Connell Court
Milwaukee, WI 53226

EDUCATION:

09/1972 - 05/1974 B.A., Biology (High Distinction), University of Virginia, Charlottesville, VA
01/1975 - 05/1982 Ph.D., Molecular Biology, Vanderbilt University, Nashville, TN
07/1988 - 05/1992 M.D., University of Arkansas for Medical Sciences, Little Rock, AR

POSTGRADUATE TRAINING AND FELLOWSHIP APPOINTMENTS:

1982 - 1984 RESEARCH: Postdoctoral Fellow, Physiology Vanderbilt University School of Medicine, Nashville, TN
1992 - 1995 CLINICAL: Resident in Pathology (Anatomic and Clinical), University of Arkansas for Medical Sciences, School of Medicine, Little Rock, AR

FACULTY APPOINTMENTS:

01/1981 - 05/1991 Lecturer in Molecular Biology, Vanderbilt University, Nashville, TN
07/1995 - 06/2001 Assistant Professor of Pathology, University of Arkansas for Medical Sciences, School of Medicine, Little Rock, AR
07/2001 - 06/2005 Associate Professor of Pathology with Tenure University of Arkansas for Medical Sciences, School of Medicine, Little Rock, AR
07/2005 - 09/2005 Professor of Pathology with Tenure, University of Arkansas for Medical Sciences, School of Medicine, Little Rock, AR
09/2005 - Present Professor of Pathology with Tenure, Traditional Pathway, Medical College of Wisconsin, Milwaukee, WI
04/2009 - Present Adjunct faculty, University of Wisconsin, Milwaukee, WI
07/2013 - Present Professor, Institute for Health and Society, Medical College of Wisconsin, Milwaukee, WI

ADMINISTRATIVE APPOINTMENTS:

07/2001 - 09/2005 Vice-Chief, Pediatric Pathology, University of Arkansas for Medical Sciences
09/2005 - Present Chief, Department of Pathology and Laboratory Medicine, Children's Hospital of Wisconsin Medical and Dental Staff
09/2005 - 12/2014 Specialty Practice Unit Leader, Pathology, Children's Specialty Group, Medical College of Wisconsin
09/2005 - 12/2014 Chief, Pediatric Pathology, Medical College of Wisconsin
11/2018 - Present Chief Laboratory Officer, TAI Diagnostics, Inc.

EDUCATIONAL ADMINISTRATIVE APPOINTMENTS:

09/1995 - 05/2001 Section Leader, Gastrointestinal Pathology, Sophomore Pathophysiology Course, University of Arkansas for Medical Sciences, Medical School
07/1998 - 06/2003 Director, Pediatric Clinical Pathology Resident Rotation, University of Arkansas for Medical Sciences, Medical School
07/1999 - 06/2002 Director, Pediatric Molecular Pathology Rotation, University of Arkansas for Medical

Sciences

09/2005 - 2008 Residency Director, Pediatric Pathology, Children's Hospital of Wisconsin
07/2012 - Present Global Health Pathway Mentor, Medical College of Wisconsin
09/2012 - 05/2015 Fellowship Director, Pediatric Pathology, Children's Hospital of Wisconsin

HOSPITAL AND CLINICAL ADMINISTRATIVE APPOINTMENTS:

09/1995 - 01/2005 Director of Clinical Pathology, Arkansas Children's Hospital
09/1995 - 07/2000 Director, Hematology Division, Arkansas Children's Hospital Clinical Laboratory
09/1995 - 08/2005 Director, Clinical Chemistry Division, Arkansas Children's Hospital Clinical Laboratory
09/1995 - 10/1996 Director, Blood Bank, Arkansas Children's Hospital (Interim Director 2001-2003)
10/1996 - 08/2005 Medical Director (and Founder), Molecular Diagnostics Laboratory, Arkansas Children's Hospital
01/1998 - 04/2004 Co-Director, Vascular Anomalies Center, Arkansas Children's Hospital
07/2003 - 06/2005 Secretary-Treasurer, Medical Staff, Arkansas Children's Hospital
07/2005 - 09/2005 Vice-Chief of Staff, Arkansas Children's Hospital
09/2005 - Present Executive Committee, Vascular Anomalies Center, Children's Hospital of Wisconsin
09/2005 - 12/2014 Medical Director, Pathology and Laboratory Medicine, Children's Hospital of Wisconsin
08/2008 - 12/2014 Medical Director, CHW New Berlin Laboratory, Children's Hospital of Wisconsin
07/2015 - Present Medical Director, TAI Diagnostics, Inc., Wauwatosa, WI

RESEARCH ADMINISTRATIVE APPOINTMENTS:

01/1998 - 09/2005 Research Director, Vascular Anomalies Center, Arkansas Children's Hospital, Little Rock
09/2005 - 12/2014 Founding Director, CRI Imaging Core Research Laboratory, Children's Health and Hospital System, Milwaukee
09/2005 - Present Founding Director, CRI Histology Core Research Laboratory, Children's Health and Hospital System, Milwaukee
02/2008 - 07/2014 Founding Director, Pediatric BioBank and Tissue Analytical Core, Children's Health and Hospital System, Milwaukee
07/2012 - Present Deputy Director, NIH/NIEHS Children's Environmental Health Sciences Core Center, Milwaukee
11/2018 - Present Clinical Trials Director, TAI Diagnostics, Inc., Milwaukee

HOSPITAL STAFF PRIVILEGES:

08/1995 - 2005 John L. McClellan Memorial Veteran's Hospital, Little Rock, AR
08/1995 - 2005 University Hospital, Little Rock, AR
08/1995 - 2007 Arkansas Children's Hospital, Little Rock, AR
09/2005 - Present Children's Hospital of Wisconsin, Milwaukee, WI
06/2008 - Present Froedtert Hospital, Milwaukee

SPECIALTY BOARDS AND CERTIFICATION:

| <u>Board Certified</u> | <u>Issue Date</u> | <u>Expiration</u> |
|--------------------------------------------------------------------|-------------------|-------------------|
| American Board of Pathology: Anatomic and Clinical Pathology | 11/13/1996 | None |
| American Board of Pathology: Pediatric Pathology | 08/20/1999 | None |

| <u>Licensure</u> | <u>Number</u> | <u>Issue Date</u> | <u>Expiration</u> |
|------------------|---------------|-------------------|-------------------|
| Arkansas | | 08/10/1992 | 07/31/2011 |
| Wisconsin | | 06/30/2005 | 10/2018 |

AWARDS AND HONORS:

1974 - Present Graduation with High Distinction, University of Virginia
1975 - Present Vanderbilt University Scholar

1978 - Present Ethel Mae Wilson Special Award for Dissertation Research, Vanderbilt University
1979 - Present Vanderbilt University Scholar
1989 - Present Buchanan Key, University of Arkansas for Medical Sciences
1989 - Present Neuroscience Award, University of Arkansas for Medical Sciences
1989 - Present Frank Williams Scholarship, University of Arkansas for Medical Sciences
1990 - Present Hans G. Schlumberger Award in Pathology, University of Arkansas for Medical Sciences
1990 - Present Barton Scholarship, University of Arkansas for Medical Sciences
1990 - Present American Society of Clinical Pathologists Award for Academic Excellence
1992 - Present Richard J. Webber Research Award, University of Arkansas for Medical Sciences
1992 - Present American Medical Women's Association Scholarship Achievement Citation
1992 - Present Faculty Gold Key, University of Arkansas for Medical Sciences, School of Medicine
2000 - Present Lucien J. Rubenstein Award, Second Place, American Association of Neuropathologists
2000 - Present John Mulliken Award for Research, International Society for the Study of Vascular Anomalies, Montreal, Canada
2008 - 2017 Best Doctors in America
2012 - Present Top Doctors, US News & World Report
2015 - Present Physician of the Year, Vascular Birthmarks Foundation

MEMBERSHIPS IN HONORARY AND PROFESSIONAL SOCIETIES:

Phi Sigma Honorary Scientific Society
Sigma Xi Honorary Scientific Society
Alpha Omega Alpha Honorary Medical Society
United States and Canadian Academy of Pathology
College of American Pathology (Fellow)
Association for Molecular Pathology
Society for Pediatric Pathology
International Society for Heart & Lung Transplantation (ISHLT)
Patient-Centered Laboratory Utilization Guidance Services Network
Vascular Birthmarks Foundation
Sturge-Weber Foundation
International Society for the Study of Vascular Anomalies (ISSVA)

NATIONAL ELECTED/APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:

2001 - Present Scientific Review Panel, ad hoc, National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), National Institutes of Health (P01 review)
2001 - Present Committee on Interferons: Biological Mechanisms and Disease Treatments II (Judah Folkman and Ernest Borden, organizers) Cold Spring Harbor Laboratory, New York, September 9-11, 2001.
2002 - Present Rare Tumor Group, World Health Organization Committee, Coordinating Center Milan, Italy.
2002 - Present Scientific Review Panel, ad hoc, National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), National Institutes of Health (P01 review).
2002 - Present Ad-hoc Reviewer, National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) Study Section, National Institutes of Health (R21 review).
2003 - Present Scientific Review Panel, ad hoc, National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), NIH (P01 review).
2004 - Present Special Emphasis Panel, ad hoc, National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), NIH, Feb 2004 (S11 review).
2004 - Present Scientific Review Panel, ad hoc, National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), NIH (P01 review).
2004 - Present Organizing Committee, NIH-sponsored Hemangioma Research Workshop, Bethesda, Maryland, April 7-9, 2005.
2004 - Present Special Emphasis Panel, ad hoc, National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), NIH, July 2004 (S11 review).
2005 - Present Special Emphasis Panel, ad hoc, National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), NIH, Sept 2005 (S11 review).
2006 - Present Medical and Scientific Advisor, National Organization for Vascular Anomalies.
2008 - 2014 Scientific Committee, International Society for the Study of Vascular Anomalies.
2008 - Present Medical Advisory Council, Lymphangiomatosis & Gorham's Disease Alliance, Boca Raton,

FL.

2009 - Present Inspection Team Leader and Molecular Inspector, College of American Pathologists.

2009 - Present Internal Advisory Committee, Children's Environmental Health Science Center (NIH/NIEHS).

2011 - Present Consensus Committee, Lymphangiomatosis & Gorham's Disease Alliance.

06/24/2015 - Present Scientific Reviewer, FY15 Peer Reviewed Medical Research Program (Department of Defense) Pre-Application Vascular Malformations Focused Program Award Panel.

12/18/2015 - Present Chairman, FY15 Peer Reviewed Medical Research Program (Department of Defense) Vascular Malformations Focused Program Award Panel.

2015 - Present Chair, Tissue Repository Committee, Sturge-Weber Foundation.

12/21/2016 - Present Chairman, FY16 Peer Reviewed Medical Research Program (Department of Defense) Vascular Malformations Focused Program Award Panel.

09/2017 - Present Ad hoc Committee, Harvard University Promotions

12/20/2017 - Present Chairman, FY17 Peer Reviewed Medical Research Program (Department of Defense) Vascular Malformations Focused Program Award Panel.

2019 - Present Medical Co-Director, Vascular Birthmarks Foundation (International)

RESEARCH GRANTS/AWARDS/CONTRACTS/PROJECTS:

Active

Peer Review

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|----------------|-----------------------------------------------------------------------------------|
| Title: | Lymphatic vessel abnormalities in CM-AVM |
| Source: | NIH 14-PAF07499 (R01) |
| Role & Effort: | Consortium PI - MCW |
| PI: | King, Philip (Univ. Michigan) |
| Dates: | 04/01/15 - 03/31/20 |
| Title: | Roles of Nogo-B receptor in maintaining the structural integrity of blood vessels |
| Source: | NIH/NHLBI R01FP000124728 |
| Role & Effort: | Co-Investigator |
| PI: | Miao, Q |
| Dates: | 08/01/18 - 07/31/22 |
| Title: | Role of endothelial Twist1 in vascular remodeling in pulmonary hypertension |
| Source: | NIH/NHLBI 1R01HL139638 |
| Role & Effort: | Co-Investigator |
| PI: | Mammoto, A |
| Dates: | 12/01/18 - 11/30/22 |
| Title: | Delta like-4 long non-coding RNA function in angiogenesis and vascular anomalies |
| Source: | NIH/NHLBI R01HL123338 |
| Role & Effort: | Co-Investigator |
| PI: | Ramani Ramchandran |
| Dates: | 07/01/2015 - 06/30/2019 |

Prior

Peer Review

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|----------------|-------------------------------------------------------------------------|
| Title: | Establishment of a Pediatric Tissue Bank |
| Source: | Children's Research Institute/Midwest Athletes Against Childhood Cancer |
| Role & Effort: | Principal Investigator (Tissue Bank) |
| Dates: | 07/01/8 - 06/30/13 |

Title: Induction of Cardiovascular Cells from hESCs by Embryonic Clues
Source: NIH-NHLBI PPG P01 HL089471-01A1
Role & Effort: Principal Investigator, Histology and Imaging - Core D
PI: Lough, John W (Overall PPG)
Dates: 08/01/9 - 05/31/14

Title: The Heart of OSPC is a Borrelia Burgdorferi Adhesin
Source: NIH-NIAID 1R21AI082147-01A1
Role & Effort: Collaborator
PI: Coburn, Jenifer L
Dates: 03/01/10 - 02/28/12

Title: Establishment of a Clinical Laboratory in the Alto Mayo Rain-Forest of Northern Peru
Source: College of American Pathologists Humanitarian Grant
Role & Effort: Principal Investigator
Dates: 04/01/10 - 03/30/11

Title: Imaging Vascular Phosphatidylethanolamine
Source: NIH/NIHLB 1R01HL102085-01
Role & Effort: Collaborator
PI: Zhao, Ming
Dates: 04/07/10 - 03/31/15

Title: Role of SGLT3 in Diabetes-Mediated Increased Renal
Source: NIH/NIDDK 1R01 DK085031-01A1
Role & Effort: Co-Investigator
PI: Tabatabai, Niloofar
Dates: 06/15/10 - 05/31/15

Title: Roles of Nogo-B and NgBR in tumor angiogenesis
Source: American Cancer Society National
Role & Effort: Collaborator
PI: Miao, Q
Dates: 04/01/11 - 03/31/13

Title: Children's Environmental Health Sciences Core Center
Source: NIH/NIEHS 2P30ES004184-25
Role & Effort: Deputy Director and MCW subcontract PI
PI: Petering, Dave (Univ. of Wisconsin - Milwaukee)
Dates: 08/01/12 - 03/31/16

Title: Exploratory Planning for a Proposed GEO Health Hub in the Alto Mayo Region of Peru

Source: Fogarty/NIH/NIEHS
1R24TW009550-01
Role & Effort: Principal Investigator
Dates: 09/01/12 - 08/31/15

Title: Pharmacogenetic Analysis in Sudden
Infant Death Syndrome
Source: Advancing a Healthier Wisconsin
Role & Effort: Consultant
PI: Sander, Tara
Dates: 01/01/15 - 12/31/16

Title: Interaction of the Vanadyl Ion with
(Na,K)ATPase
Source: American Heart Association (Tennessee
Affiliate)
Role & Effort: Postdoctoral Fellow
Dates: 1982 - 1984

Title: Effect of Ethanol on GABA-ergic
Synaptic Function
Source: Veterans Administration
Role & Effort: Co-Investigator
PI: Mrak, R
Dates: 1985 - 1986

Title: Ethanol Effects on Synaptosomal and SR
Membrane Transport
Source: NIH (R01)
Role & Effort: Co-Investigator
PI: Mrak, R
Dates: 1986 - 1990

Title: Characterization of Tumor-infiltrating
Lymphocytes in Malignant Melanoma
Source: The Cancer Research Institute (Ludwig
Cancer Institute)
Role & Effort: Co-Investigator; subcontract PI
PI: Mihm, MC (Harvard Univ.)
Dates: 2001 - 2005

Title: Nano-Selenium for the Mitigation of
Radiation Injury
Source: NIH/CMCRT (pilot project)
Role & Effort: Co-Investigator
PI: Sieber, F
Dates: 2006 - 2008

Title: Mitigation of Radiation Injury in Brain
Tumor Patients
Source: CTSI Small Pilot Project
Role & Effort: Co-Investigator
PI: Sieber, F
Dates: 2010 - Present

Title: Pilot Study of Genetic Newborn Hearing
Screening

Source: American Hearing Research Foundation
Role & Effort: Co-Investigator
PI: Runge, Christina
Dates: 01/01/2013 - 12/31/2014

Title: Potential Toxicity of Plant Sterols in
Infants Receiving Intravenous Nutrition
Source: Gerber Foundation
Role & Effort: Consultant
Dates: 07/03/2013 - 07/02/2015

Title: Effect of Torque on Asymmetric
Remodeling of the Vertebral Growth
Plate
Source: Scoliosis Research Society
Role & Effort: Co-Investigator
PI: Liu, XueCheng
Dates: 10/01/2013 - 09/30/2015

Title: High Dose Glucose as a Risk Factor
Driving the Onset of Sporadic Cerebral
Cavernous Malformation
Source: Children's Research Institute Pilot Grant
Role & Effort: Co-Investigator
PI: Miao, Q.
Dates: 01/01/2017 - 12/31/2017

Non-Peer Review

Title: Pyrethroid Binding to Pediatric Plasma
Proteins
Source: Consumer Specialty Products
Association
Role & Effort: Co-Investigator
PI: Hines, Ronald
Dates: 09/01/12 - 11/30/12

Title: Molecular Genetic Analysis of Port-
Wine Stains in Sturge-Weber Syndrome
Source: The Sturge-Weber Foundation
Role & Effort: Co-Investigator
PI: Marchuk, D (Duke Univ.)
Dates: 2001 - 2002

Title: Chemotherapy Alliance for Neutropenics
and the Control of Emerging Resistance
Source: Wyeth-Ayerst
Role & Effort: Principal Investigator
Dates: 2001 - 2002

Title: Mechanisms of Pathogenesis
Source: Arkansas Children's Hospital Foundation
Role & Effort: Principal Investigator
Dates: 2001 - 2005

Title: Evaluation of the BioStar RSV OIA
Assay as an Aid in the Diagnosis
Source: BioStar Diagnostics

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| Role & Effort: | Principal Investigator |
| Dates: | 2002 - Present |
| Title: | Vascular Anomalies Genetic Analyzer (equipment grant) |
| Source: | Children's Hospital of Wisconsin Research Foundation |
| Role & Effort: | Principal Investigator |
| Dates: | 2006 - Present |
| Title: | Development of an Institutional Histology and Imaging Core Facility |
| Source: | Children's Research Institute, Milwaukee, WI (equipment grant) |
| Role & Effort: | Principal Investigator |
| Dates: | 2007 - Present |

INVITED LECTURES/WORKSHOPS/PRESENTATIONS:

International

Invited Symposium Speaker (2 lectures), 1) Histopathology of Vascular Birthmarks, 2) Frontiers of Research in Vascular Anomalies. American Academy of Dermatology Symposium, 58th Annual Meeting, Vascular Birthmarks: Diagnosis and Management for the Millennium, San Francisco, California, 03/11/2000

Invited Speaker, 13th International Workshop on Vascular Anomalies, "New Immunohistochemical Findings in Juvenile Hemangioma: GLUT1 and Beyond.", Intl Society for the Study of Vascular Anomalies, Montreal Canada, 05/11/2000

Guest Lecturer, Department of Genetics, "The Role of Pathology in Translational Research", Duke University, Durham, NC, 05/31/2000

"Hemangiogenesis: New Targets for Therapy, 06/05/2000

Invited International Speaker (2 lectures), "Histopathological Diagnosis of Vascular Anomalies of Childhood" and "New Insights into the Pathogenesis of Infantile Hemangioma." Center for Study and Treatment of Vascular Anomalies, Hutt Hospital, Wellington, New Zealand, 04/03/2001

Guest Faculty, Second Annual CME Course on Vascular Anomalies (Speaker), "Unique Immunophenotypic Features of Juvenile Hemangioma: Implications for Pathogenesis." New York University, 05/18/2001

Grand Rounds Lecturer, "The Pathogenesis of Infantile Hemangioma." Massachusetts General Hospital, Department of Pathology, Boston, Massachusetts, 05/30/2001

Co-chair, Kasabach Merritt Syndrome Symposium, IXth International Congress of Pediatric Dermatology, Cancun, Mexico, 10/22/2001

Co-chair, Clinicopathological Correlations, IXth International Congress of Pediatric Dermatology, Cancun, Mexico, 10/24/2001

Symposium Speaker, IXth International Congress of Pediatric Dermatology, "Vascular Tumors and KMP Past and Present: the Pathologist's Point of View." Symposium entitled: KasabachMerritt Syndrome, " Cancun, Mexico, 10/2001

Symposium speaker, IXth International Congress of Pediatric Dermatology, "The Histopathology of Hemangiomas" Symposium entitled: Vascular Anomalies. What's New? Cancun, Mexico, 10/2001

Moderator, Basic Science Session, International Society for the Study of Vascular Anomalies, 14th annual Workshop, Nijmegen, the Netherlands, 06/2002

Mega-Rounds Speaker, Department of Dermatology, Harvard University (Brigham and Women's Hospital), "Infantile Hemangioma: A Link to the Placenta", 02/06/2003

Symposium Speaker, American Academy of Dermatology, 61st Annual Meeting, Vascular Birthmarks Symposium, San Francisco, California, "The Histopathology of Vascular Birthmarks: Basic Criteria, Problem Areas, and Recent Advances, 03/22/2003

Workshop (CME) Director and Speaker (with Dr. Harry Kozakewich), Society for Pediatric Pathology, "Vascular Tumors and Malformations in Children", Washington, D.C., 03/23/2003

Invited Speaker, 2003 Port Wine Stain Conference, sponsored by the Vascular Birthmarks Foundation and the Skin Surgery Center of New York, "Port Wine Stains: Through the Looking Glass, New York

University, New York, NY, 10/18/2003

Faculty, 6th Annual UAMS Anatomic Pathology Conference (CME), "Vascular Tumors and Malformations of Childhood: New Diagnostic Criteria," Peabody Hotel, Little Rock, AR, 10/19/2003

Grand Rounds Speaker, Department of Pathology, University of California at Davis, Sacramento, CA, 12/11/2003

Grand Rounds Speaker, Department of Pathology, Stanford University, Palo Alto, California, 01/28/2004

Moderator, International Society for the Study of Vascular Anomalies, 15th Annual Workshop, Wellington, New Zealand, 02/24/2004

Workshop (CME) Director and Speaker (with Dr. Harry Kozakewich), Society for Pediatric Pathology, "Vascular Tumors and Malformations in Children", Vancouver, BC, 03/06/2004

Keynote Speaker, Tenth World Congress of Pediatric Dermatology, Angiomas: Pathological Findings and Clinical Consequences", Rome, Italy, 07/09/2004

Short Course Speaker, International Academy of Pathology, Sun-Induced Diseases, "Photosensitive Genodermatoses," Brisbane, Australia, Brisbane, Australia., 10/12/2004

Short Course Speaker, International Academy of Pathology, Vascular Pathology (Drs Henry Tazelaar and Edwina Duhig, chairs), "Vascular Neoplasia," Brisbane, Australia, 10/12/2004

Invited Speaker, "Vascular Tumors and Malformations - A View through the Looking Glass", Skåne University Hospital, Malmo, Sweden, 10/22/2004

International Guest Lecturer, Nordic Vascular Tumor Day, Malmo, Sweden, 10/22/2004

Workshop (CME) Director and Speaker (with Dr. Harry Kozakewich), Society for Pediatric Pathology, "Vascular Tumors and Malformations in Children", San Antonio, TX, 02/27/2005

Plenary Session Lecturer, NIH-sponsored Hemangioma Research Workshop, "Histopathology and Molecular Phenotype", Bethesda, Maryland, 04/08/2005

Co-Chair and Speaker, Basic/Translational Research break-out session, NIH-sponsored Hemangioma Research Workshop, Bethesda, Maryland, 04/09/2005

Guest Faculty, Fourth Annual CME Course on Vascular Anomalies, New York University, "Evidence for Immune Tolerance in the Development of Infantile Hemangioma, New York, NY, 05/14/2005

Invited Speaker, "Unraveling the Mystery of Infantile Hemangioma - Recent Advances in Diagnosis and Research", American Society of Pediatric Otolaryngology Annual Meeting, 05/30/2005

Invited Short Course Speaker, "Vascular Tumors", European Academy of Pathology Annual Meeting, Paris, France, 09/05/2005

Visiting Professor, Department of Pathology, Indiana University, 10/05/2005

Visiting Professor, Department of Cell Biology, Harvard Medical School, Boston, MA, 11/14/2005

Invited Speaker, Editor's Choice Pediatric Conference, sponsored by Children's Hospital of Wisconsin, Pfister Hotel, 06/01/2006 - 06/02/2006

Invited Round Table Discussion Leader, "Controversies in Vascular Malformations", International Society for the Study of Vascular Anomalies, Milan, Italy, 06/2006

Visiting Professor, Department of Pathology, Children's Hospital of Philadelphia, Philadelphia, PA, 01/09/2007 - 01/10/2007

Visiting Professor, Department of Pathology, University of Texas Southwestern Medical Center, Dallas, TX, 01/23/2007 - 01/24/2007

Invited Speaker, Best Practices in Pediatrics - Winter 2007 Conference, Wilderness Resort, Wisconsin, 03/03/2007

Keynote Speaker, "Understanding Infantile Hemangioma: a Story of Discovery and Hope", Vascular Anomalies CME Course, New York University, New York, NY, 04/27/2007

Invited Speaker, Point-Counterpoint - Vascular Anomalies, New York University, New York, NY, 04/2007

Invited Speaker, "Vascular Tumors Associated with Coagulopathy", Haemangioma Vascular Malformations Center, Clinical & Integration Offsite Retreat, Cincinnati, OH, 12/14/2007

Invited Speaker, Vascular Anomalies Panel, American Society for Pediatric Otolaryngology Annual Meeting, Orlando, FL, 05/03/2008

Invited Speaker, "Vascular Malformations of the Head and Neck: a Biological Approach to Classification", American Society for Pediatric Otolaryngology Annual Meeting, Orlando, FL, 05/04/2008

Chair, Difficult Case Panel, International Society for the Study of Vascular Anomalies, 17th Annual Workshop, Boston, MA, 06/23/2008

Keynote Speaker, International Society for the Study of Vascular Anomalies, 17th Annual Workshop, Boston, MA "New Insights into Vascular Anomalies: a Pictorial Essay", 06/24/2008

Invited Speaker, "Molecular Mechanisms in the Pathogenesis of Venous Malformations", American Society

for Pediatric Otolaryngology Annual Meeting, Seattle, WA, 05/22/2009

Invited Speaker, XIX ENT World Congress IFOS 2009 Brazil, Sao Paulo, Brazil, 06/02/2009

Invited Speaker, "The Life of an Endothelial Cell in Infantile Hemangioma", Children's Hospital of Philadelphia, Philadelphia, 07/2009

Invited Speaker, International Vascular Anomalies Symposium, University of Arkansas for Medical Sciences, 10/09/2009

Invited Moderator and Panelist, Pediatric Pathology Specialty Conference (CME) on Vascular Pathology, USCAP, 03/2010

Invited Speaker, Pathology Grand Rounds, University Hospitals Case Medical Center, Cleveland, OH, 04/14/2010

Invited Speaker, North Carolina Dermatological Society, University of North Carolina Hospitals, Asheville, NC, 08/07/2010

Invited Grand Rounds Speaker, Children's Memorial Hospital, Chicago, IL, 08/18/2010

Invited Speaker, Departamento de Patología, Instituto Nacional de Enfermedades Neoplásicas, Surgery, Lima, Peru, 09/15/2010 - 09/16/2010

Virginia H. and Russell McFarland Annual Lecturer in Pediatric Pathology, Texas Children's Hospital, Houston, TX, 01/21/2011

Invited participant and speaker, Lymphatic Malformations Consensus Meeting, Children's Hospital Boston, 02/05/2011

Invited Speaker, Society for Pediatric Pathology Fall Meeting, Research Update for Pathologists, "Vascular Anomalies - Recent Research Findings, New Investigational Tool, and Continuing Challenges", Milwaukee, WI, 10/01/2011

Invited Speaker, The Korean Dermatological Association's 63rd Annual Autumn Meeting, Seoul, Korea, 10/15/2011 - 10/16/2011

Invited Speaker, 1st Meeting of the German Network of Vascular Anomalies, Berlin, Germany, 10/28/2011 - 10/29/2011

Invited Speaker, "Clinical Use of Whole Genome and Whole Exome Sequencing Today", College of American Pathologists, Whole Genome Sequencing Webinar, 12/11/2011

Workshop Speaker, Intl Society for Biological & Environmental Repositories Annual Meeting - "Telepathology and Biobanking in Remote International Locations", Vancouver, British Columbia, Canada, 05/15/2012 - 05/18/2012

Invited Speaker, 19th International Workshop on Vascular Anomalies, International Society for the Study of Vascular Anomalies, Basic Course, "Histopathology of Vascular Anomalies for Pathologists", Malmo, Sweden, 06/16/2012

Invited Tutor, International Paediatric Pathology Association XXXIVth Advanced Course in Paediatric Pathology (multiple lectures over 1 week period), La Granja, Spain, 09/2012

Invited Speaker, XXI Peruvian Congress of Anatomic Pathology, Cuzco, Peru, 11/2012

Invited Speaker, San Martin Department of Health, Moyobamba City Hall, Moyobamba, Peru, 02/13/2013

Invited Speaker, New York Academy of Sciences - Controversies in Vascular Anomalies, New York City, New York, 05/03/2013 - 05/04/2013

Invited Speaker, "Exposure and Biological Analysis Core", Children's Environmental Health Sciences Core Center All Investigator Meeting, Milwaukee, 05/28/2013

Invited Speaker, 1st International Conference on Generalized Lymphatic Anomaly and GorhamStout Syndrome, Bethesda, MD, 06/07/2013 - 06/08/2013

Invited Speaker, "Clinicopathological Correlation: Vascular...or Not?", 39th Annual Meeting of the Society for Pediatric Dermatology, Milwaukee, Wisconsin, 07/11/2013 - 07/14/2013

Invited Speaker, Department of Pathology, Auckland Hospital, Auckland, New Zealand, 10/2013

Invited Organizing Moderator and Keynote Speaker, day-long International Workshop for Pathologists - "The Pathology of Vascular Lesions", Royal Children's Hospital, Melbourne, Australia, 03/31/2014

Chair, Basic Science Session, 20th International Workshop on Vascular Anomalies, International Society for the Study of Vascular Anomalies, Melbourne, AU, 04/03/2014

Invited moderator and speaker (multiple lectures), Workshop on the Classification of Vascular Anomalies, XIVth Scientific Meeting of the Eastern China Cooperative Group of Pediatric Pathologists, Shanghai, China, 04/12/2014 - 04/14/2014

Invited speaker, Vascular Birthmarks Foundation 20th Anniversary Conference and Gala, New York, NY, 10/10/2014 - 10/11/2014

Invited Speaker, "The Diagnostic Challenge of Pediatric Vascular Tumors and Malformations", University of

Wisconsin - Madison, Department of Pathology Grand Rounds, Madison, WI, 02/06/2015
 Invited Speaker and Panelist, Sturge-Weber Research Conference (NIH-funded), Bethesda, MD, 04/19/2015 - 04/20/2015
 Keynote Speaker and 3 lectures, Nordic Society for Vascular Anomalies Annual Meeting, with afternoon Workshop for Pathologists, Oslo, Norway, 05/27/2015
 Co-Chair and Speaker, Program Session (CME) on Vascular Tumors - Benign and Malignant, 23rd World Congress of Dermatology, Vancouver, Canada, 06/10/2015
 Invited Professorship in Vascular Anomalies, Texas A&M Health Science Center College of Medicine, 10/07/2015 - 10/08/2015
 Invited Speaker and Award Recipient (Physician of the Year) Vascular Birthmarks Foundation, San Diego, CA, 10/14/2015
 Invited Speaker, Paediatric Pathology Society and ANZ Paediatric Pathology Group Joint Scientific Meeting 2015, Perth, AU, 11/21/2015
 Invited Tutor (multiple lectures), International Paediatric Pathology Association Update Pediatric Pathology Course, Margaret River, Australia, 11/22/2015 - 11/27/2015
 Keynote Speaker, EADV Fostering Course in Vascular Anomalies, Malmö, Sweden, 03/08/2016
 Chair, Basic Science Session, 21st International Workshop on Vascular Anomalies, International Society for the Study of Vascular Anomalies, Buenos Aires, AR, 04/27/2016
 Chair, Difficult Case Presentations II, 21st International Workshop on Vascular Anomalies, 04/28/2016 International Society for the Study of Vascular Anomalies, Buenos Aires, AR, 04/28/2016
 Invited speaker, 2nd International Conference on Generalized Lymphatic Anomaly and GorhamStout Disease, Atlanta, GA, 06/10/2016 - 06/11/2016
 Invited Lecturer and Tutor, Dermapedia Comprehensive Course (CME) on Soft Tissue Tumors (three lectures), San Diego, CA, 04/20/2017 - 04/22/2017
 Invited Faculty, "Cases and Controversies in Vascular Anomalies", at the New York Academy of Sciences, 7 World Trade Center, New York, NY, 05/05/2017 - 05/06/2017
 Invited speaker, Association of Public Health Laboratories 2017 Annual Meeting, "Strengthening Laboratory System Partnerships -- Building Global Health Capacity Beyond Jurisdictions", Providence, Rhode Island, 06/14/2017
 Invited Speaker and Tissue Banking Subgroup Leader, Sturge-Weber Foundation Clinical Care Network Conference, New Orleans, LA, 10/01/2017 - 10/02/2017
 Invited Lecturer, "Hemangiomas", Primer Course in Vascular Anomalies, Amsterdam, The Netherlands, in conjunction with the 22nd International Workshop of the International Society for the Study of Vascular Anomalies, 05/28/2018
 Invited Speaker and Moderator (3 lectures), Advanced Course in Pathology of Vascular Anomalies, Amsterdam, The Netherlands, in conjunction with the 22nd International Workshop of the International Society for the Study of Vascular Anomalies, 05/29/2018
 Chair and Keynote Speaker, Day-long International Conference on the Histopathologic and Molecular Diagnosis of Vascular Anomalies, Amsterdam, The Netherlands, in conjunction with the 22nd International Workshop of the International Society for the Study of Vascular Anomalies, 06/2018
 Invited Lecturer, Bone and Soft Tissue Pathology Society Companion Course on Vascular lesions, "Pediatric Vascular Tumors and Malformations", 2019 Annual Meeting of the United States and Canadian Academy of Pathology, 03/17/2019

National

Invited Symposium Speaker (2 lectures), 1) Histopathology of Vascular Birthmarks, 2) Frontiers of Research in Vascular Anomalies. American Academy of Dermatology Symposium, 58th Annual Meeting, Vascular Birthmarks: Diagnosis and Management for the Millennium, San Francisco, California, 03/11/2000
 Guest Lecturer, Department of Genetics, "The Role of Pathology in Translational Research", Duke University, Durham, NC, 05/31/2000
 Guest Lecturer, Department of Biology, "Hemangiogenesis: New Targets for Therapy", Massachusetts Institute of Technology, 06/05/2000
 Guest Faculty, Second Annual CME Course on Vascular Anomalies (Speaker), "Unique Immunophenotypic Features of Juvenile Hemangioma: Implications for Pathogenesis." New York University, 05/18/2001
 Grand Rounds Lecturer, "The Pathogenesis of Infantile Hemangioma." Massachusetts General Hospital, Department of Pathology, Boston, Massachusetts, 05/30/2001

Mega-Rounds Speaker, Department of Dermatology, Harvard University (Brigham and Women's Hospital), "Infantile Hemangioma: A Link to the Placenta", 02/06/2003

Symposium Speaker, American Academy of Dermatology, 61st Annual Meeting, Vascular Birthmarks Symposium, San Francisco, California, "The Histopathology of Vascular Birthmarks: Basic Criteria, Problem Areas, and Recent Advances, 03/22/2003

Workshop (CME) Director and Speaker (with Dr. Harry Kozakewich), Society for Pediatric Pathology, "Vascular Tumors and Malformations in Children", Washington, D.C., 03/23/2003

Invited Speaker, 2003 Port Wine Stain Conference, sponsored by the Vascular Birthmarks Foundation and the Skin Surgery Center of New York, "Port Wine Stains: Through the Looking Glass, New York University, New York, NY, 10/18/2003

Faculty, 6th Annual UAMS Anatomic Pathology Conference (CME), "Vascular Tumors and Malformations of Childhood: New Diagnostic Criteria, " Peabody Hotel, Little Rock, AR, 10/19/2003

Grand Rounds Speaker, Department of Pathology, University of California at Davis, Sacramento, CA, 12/11/2003

Grand Rounds Speaker, Department of Pathology, Stanford University, Palo Alto, California, 01/28/2004

Invited Speaker, "Vascular Tumors and Malformations - A View through the Looking Glass", Skåne University Hospital, Malmo, Sweden, 10/22/2004

Workshop (CME) Director and Speaker (with Dr. Harry Kozakewich), Society for Pediatric Pathology, "Vascular Tumors and Malformations in Children", San Antonio, TX, 02/27/2005

Plenary Session Lecturer, NIH-sponsored Hemangioma Research Workshop, "Histopathology and Molecular Phenotype", Bethesda, Maryland, 04/08/2005

Co-Chair and Speaker, Basic/Translational Research break-out session, NIH-sponsored Hemangioma Research Workshop, Bethesda, Maryland, 04/09/2005

Guest Faculty, Fourth Annual CME Course on Vascular Anomalies, New York University, "Evidence for Immune Tolerance in the Development of Infantile Hemangioma, New York, NY, 05/14/2005

Invited Speaker, "Unraveling the Mystery of Infantile Hemangioma - Recent Advances in Diagnosis and Research", American Society of Pediatric Otolaryngology Annual Meeting, 05/30/2005

Visiting Professor, Department of Pathology, Indiana University, 10/05/2005

Visiting Professor, Department of Cell Biology, Harvard Medical School, Boston, MA, 11/14/2005

Visiting Professor, Department of Pathology, Children's Hospital of Philadelphia, Philadelphia, PA, 01/09/2007 - 01/10/2007

Visiting Professor, Department of Pathology, University of Texas Southwestern Medical Center, Dallas, TX, 01/23/2007 - 01/24/2007

Keynote Speaker, "Understanding Infantile Hemangioma: a Story of Discovery and Hope", Vascular Anomalies CME Course, New York University, New York, NY, 04/27/2007

Invited Speaker, Point-Counterpoint - Vascular Anomalies, New York University, New York, NY, 04/2007

Invited Speaker, "Vascular Tumors Associated with Coagulopathy", Haemangioma Vascular Malformations Center, Clinical & Integration Offsite Retreat, Cincinnati, OH, 12/14/2007

Invited Speaker, Vascular Anomalies Panel, American Society for Pediatric Otolaryngology Annual Meeting, Orlando, FL, 05/03/2008

Invited Speaker, "Vascular Malformations of the Head and Neck: a Biological Approach to Classification", American Society for Pediatric Otolaryngology Annual Meeting, Orlando, FL, 05/04/2008

Chair, Difficult Case Panel, International Society for the Study of Vascular Anomalies, 17th Annual Workshop, Boston, MA, 06/23/2008

Keynote Speaker, International Society for the Study of Vascular Anomalies, 17th Annual Workshop, Boston, MA "New Insights into Vascular Anomalies: a Pictorial Essay", 06/24/2008

Invited Speaker, "Molecular Mechanisms in the Pathogenesis of Venous Malformations", American Society for Pediatric Otolaryngology Annual Meeting, Seattle, WA, 05/22/2009

Invited Speaker, "The Life of an Endothelial Cell in Infantile Hemangioma", Children's Hospital of Philadelphia, Philadelphia, 07/2009

Invited Speaker, International Vascular Anomalies Symposium, University of Arkansas for Medical Sciences, 10/09/2009

Invited Moderator and Panelist, Pediatric Pathology Specialty Conference (CME) on Vascular Pathology, USCAP, 03/2010

Invited Speaker, Pathology Grand Rounds, University Hospitals Case Medical Center, Cleveland, Ohio, 04/14/2010

Invited Speaker, North Carolina Dermatological Society, University of North Carolina Hospitals, Asheville,

NC, 08/07/2010
Invited Grand Rounds Speaker, Children's Memorial Hospital, Chicago, IL, 08/18/2010
Virginia H. and Russell McFarland Annual Lecturer in Pediatric Pathology, Texas Children's Hospital, Houston, TX, 01/21/2011
Invited participant and speaker, Lymphatic Malformations Consensus Meeting, Children's Hospital Boston, 02/05/2011
Invited Speaker, Society for Pediatric Pathology Fall Meeting, Research Update for Pathologists, "Vascular Anomalies - Recent Research Findings, New Investigational Tool, and Continuing Challenges", Milwaukee, WI, 10/01/2011
Invited Speaker, "Clinical Use of Whole Genome and Whole Exome Sequencing Today", College of American Pathologists, Whole Genome Sequencing Webinar, 12/11/2011
Invited Speaker, New York Academy of Sciences - Controversies in Vascular Anomalies, New York City, New York, 05/03/2013 - 05/04/2013
Invited Speaker, 1st International Conference on Generalized Lymphatic Anomaly and GorhamStout Syndrome, Bethesda, MD, 06/07/2013 - 06/08/2013
Invited Speaker, "Clinicopathological Correlation: Vascular...or Not?", 39th Annual Meeting of the Society for Pediatric Dermatology, Milwaukee, Wisconsin, 07/11/2013 - 07/14/2013
Invited speaker, Vascular Birthmarks Foundation 20th Anniversary Conference and Gala, New York, NY, 10/10/2014 - 10/11/2014
Invited Speaker and Panelist, Sturge-Weber Research Conference (NIH-funded), Bethesda, MD, 04/19/2015 - 04/20/2015
Invited Speaker and Panelist, Sturge-Weber Research Conference (NIH-funded), Bethesda, MD, 04/19/2015 - 04/20/2015
Invited Professorship in Vascular Anomalies, Texas A&M Health Science Center College of Medicine, 10/07/2015 - 10/08/2015
Invited Speaker and Award Recipient (Physician of the Year) Vascular Birthmarks Foundation, San Diego, CA, 10/14/2015
Invited speaker, 2nd International Conference on Generalized Lymphatic Anomaly and GorhamStout Disease, Atlanta, GA, 06/10/2016 - 06/11/2016
Invited Lecturer and Tutor, Dermapedia Comprehensive Course (CME) on Soft Tissue Tumors (three lectures), San Diego, CA, 04/20/2017 - 04/22/2017
Invited Faculty, "Cases and Controversies in Vascular Anomalies", at the New York Academy of Sciences, 7 World Trade Center, New York, NY, 05/05/2017 - 05/06/2017
Invited speaker, Association of Public Health Laboratories 2017 Annual Meeting, "Strengthening Laboratory System Partnerships -- Building Global Health Capacity Beyond Jurisdictions", Providence, Rhode Island, 06/14/2017
Invited Speaker and Tissue Banking Subgroup Leader, Sturge-Weber Foundation Clinical Care Network Conference, New Orleans, LA, 10/01/2017 - 10/02/2017

Regional

Invited Speaker, Editor's Choice Pediatric Conference, sponsored by Children's Hospital of Wisconsin, Pfister Hotel, 06/01/2006 - 06/02/2006
Invited Speaker, Best Practices in Pediatrics - Winter 2007 Conference, Wilderness Resort, Wisconsin, 03/03/2007
Invited Speaker, "Exposure and Biological Analysis Core", Children's Environmental Health Sciences Core Center All Investigator Meeting, Milwaukee, 05/28/2013
Invited Speaker, "The Diagnostic Challenge of Pediatric Vascular Tumors and Malformations", University of Wisconsin - Madison, Department of Pathology Grand Rounds, Madison, WI, 02/06/2015

Local

Guest Lecturer, Arkansas Society for Clinical Microbiology, "PCR in the Clinical Laboratory, 01/23/1997
Invited Speaker, Arkansas Cancer Research Center Research Forum, A Unique Microvascular Phenotype Shared by Infantile Hemangioma and Human Placenta: Implications for Pathogenesis, " Little Rock, AR, 02/04/2002
Research Rounds Speaker, Department of Pathology, University of Arkansas for Medical Sciences, Little Rock, AR, 02/14/2003
Invited Speaker, Pathology Research Rounds, University of Arkansas for Medical Sciences, 08/29/2003

Invited Speaker, Dean's Research Forum, University of Arkansas for Medical Sciences, 01/27/2004

Invited Speaker, "Precursor Cells, Homing Mechanisms, and Regression in Infantile Hemangioma - Lessons from the Placenta", Cardiovascular Research Institute Seminar Series, Medical College of Wisconsin, Milwaukee, Wisconsin, 11/16/2005

Invited Lecturer, Pediatric Surgery Multidisciplinary Research Seminar Series, Children's Hospital of Wisconsin, Milwaukee, Wisconsin, 01/16/2006

Invited Speaker, "Molecular Correlates of Proliferation and Involution in Infantile Hemangioma", Children's Research Institute Seminar Series, 11/03/2006

Invited Speaker, "Premature Endothelial Senescence in Infantile Hemangioma", Cardiovascular Research Institute, Medical College of Wisconsin, 11/15/2006

Invited Speaker, Children's Research Institute, 2007 Opening Research Symposium, Milwaukee, WI, 04/12/2007

Invited Speaker, "Multifocal Lymphangiomatosis with Thrombocytopenia", Professor's Rounds, Department of Pediatrics, Medical College of Wisconsin, 10/18/2007

Invited Speaker, "Vascular Anomalies: recent discoveries bring new hope", Vascular Anomalies Family Support Symposium, Milwaukee Zoo Conference Center (sponsored by Children's Hospital of Wisconsin), Milwaukee, WI, 10/26/2007

Invited Speaker (with Altheia Roquemore-Goins), "Pathology & Laboratory Medicine: 2008 - Changes for the Future", Leadership Forum, Children's Hospital of Wisconsin, 12/04/2008

Invited speaker, Interdisciplinary Workshop on Vascular Anomalies Associated with Coagulopathies, Crown Plaza, Milwaukee, WI, 10/06/2011 - 10/07/2011

Invited Speaker, "CRI Core-Facilitated Research", Children's Research Institute Noon Seminar Series, 10/05/2012

Invited Speaker, "Biobank Update", Midwest Athletes Against Childhood Cancer Advisory Committee Meeting, 12/04/2012

Invited Speaker, Milwaukee Mayor's Office, "The Children's Research Institute (CRI) Unexplained Infant Death Center: a multi-disciplinary interest group investigating the causes of infant mortality and sudden, unexplained infant death", 03/13/2013

Invited Speaker, "p16-Mediated Endothelial Cellular Senescence", Cancer Center Seminar Series, Medical College of Wisconsin, 03/14/2013

Invited Speaker (with Curtis Hedman), "Evaluation of Environmental Health in Developing Rural Peru: novel translational approaches", Zilber School of Public Health, 03/24/2015

PEER REVIEWED WORKSHOPS/PRESENTATIONS:

International

G Shafirstein, T Waner, A Mizeracki, CH Hemphill, M Waner, PE North. Living Pig Skin as a Model for Study of Laser-Tissue Interactions in Port-Wine Stain (PWS). *Mod Pathol* 17(S1): 98A, 2004.

North PE, DeAos I, Lal A, Riggins G, Marchuk DA, Waner M, and Mihm MC. High Expression of Indoleamine 2, 3 Deoxygenase in Infantile Hemangioma. *Mod Pathol* 17(S1): 97A, 2004.

Mukunyadzi P, Zhang F, Fan C-Y, North PE. Utility of GLUT1 Expression in Distinguishing Renal Cell Carcinoma from Adrenal Tumors. United States and Canadian Academy of Pathology, 2005 Annual Meeting, San Antonio, TX *Mod Pathol* 2005.

Scherer K, Onodera H, DeAos I, Waner M, Buckmiller L, Mihm MC, and North PE. Cellular Senescence and p16 expression in Infantile Hemangioma. 2006 Society for Pediatric Pathology Annual Meeting, Atlanta, GA.

Maronn M, Catrine K, North PE, et al. Multifocal Lymphangiendotheliomatosis with Thrombocytopenia: expanding the phenotype. International Society for the Study of Vascular Anomalies 17th Congress, Boston, MA, June 21-24, 2008.

Kumar S, DeAos I, Mihm MC, and North PE. Markedly Elevated Kynurenine/Tryptophan Ratio in Proliferative Phase Infantile Hemangioma: Potential Neurological Implications. International Society for the Study of Vascular Anomalies 17th Congress, Boston, MA, June 21-24, 2008.

Salato V, Wang FW, Kumar S, and North PE. Selective High Expression of the Mesenchymal Homeobox Gene MEOX2 in Endothelial Cells of Infantile Hemangioma and Placenta. International Society for the Study of Vascular Anomalies 17th Congress, Boston, MA, June 21-24, 2008.

Szabo S, Drolet B, Jensen J, and North PE. Early Regressive and Abnormally Persistent Infantile Hemangiomas: Learning from the Extremes. International Society for the Study of Vascular

- Anomalies 17th Congress, Boston, MA, June 21-24, 2008.
- Yang Q, Salato V, Szabo S, Kumar S, Wang FW, Wimpee B, and North PE. A New Ultra-thin Organotypic Slice Model of Infantile Hemangioma (IH) with Sustained Viability and Preserved Endothelial Cell (EC) Phenotype. International Society for the Study of Vascular Anomalies 17th Congress, Boston, MA, June 21-24, 2008.
- Sieber F, Muir SA, Cohen EP, North PE, Fish BL, Irving AA, Mader M, Moulder JE. High-dose selenium for the mitigation of radiation injury: a pilot study in a rat model. 54th Annual Meeting of the Radiation Research Society, Boston, MA, September 21-24, 2008.
- Wilcox DA, Fang J, North P, Nurden P, Nurden AT, Valentin N. High Mortality in Mice with Platelets Expressing Integrin α IIb β 3 Locked-In Its High Affinity State. American Society of Hematology Annual Meeting, San Francisco CA, Dec 6, 2008.
- Szabo S, Heaton C, Wimpee B, and North PE. Differential Expression of Infantile Hemangioma (IH)-Associated Antigens along the Normal Placental Vascular Tree and in Placental Chorangiomas. 18th Congress, International Society for the Study of Vascular Anomalies, Brussels, Belgium, April 22, 2010.
- Sander T, Noll L, Zembles T, Salato V, Webb A, Kumar S, and North PE. Detection of CYP2C19 Single Nucleotide Polymorphisms in Patients with Infantile Hemangioma that Predict Reduced Metabolism of Propranolol, 18th Congress, International Society for the Study of Vascular Anomalies, Brussels, Belgium, April 22, 2010.
- Yang Q, Kumar S, Salato V, Szabo S, and North PE. Propranolol inhibits proliferation and tube formation by purified placental capillary endothelial cells, an in vitro model for infantile hemangioma (IH), and induces their apoptosis. 18th Congress, International Society for the Study of Vascular Anomalies, Brussels, Belgium, April 22, 2010.
- Miao Q, North PE et al. Nogo-B Receptor Is Essential for Angiogenesis in Vivo via Akt Pathway, American Heart Association Scientific Sessions, Nov 2010, Chicago, IL(selected as one of the top 10% AHA specialty conference abstracts, 2010).
- Weber D, Brosig C, Kumar S, Lerch-Gaggl A, Leigh N, Chun CZ, North P, Peterson T, Ramchandran R. Linking Congenital Cardiovascular Malformations to Neurobehavioral Outcomes in a Zebrafish Model: Preliminary Studies. 4th Annual Pediatric Behavioral Health Research Conference: Building and Sustaining Research Teams, Milwaukee, WI, February 25, 2011.
- Worthey E, Taylor B, Jacob H, Schauer D, North P, Sander T, McQuestion G, Bick D, Dimmock D. Experience with the analysis and management of data from whole genome sequencing in clinical practice, Annual Meeting of the American College of Medical Genetics, March 18, 2011.
- Sander T, Wong S, North PE. Pharmacogenetics testing for forensic pathology paves the way for "Personalized Justice" American Society of Investigational Pathology, Washington, DC, April 11, 2011.
- Kwon E-K, Siegel DH, Broeckel U, North PE, Worthey E, Chiu YE and Drolet BA. Functional analysis of candidate genes identified by genomewide association study (GWAS) of infantile hemangiomas (IH), Annual meeting of the Society for Investigational Dermatology, May, 2011.
- Salato V, Yang Q, Scherer K, Wimpee B, Onodera H, Waner M, Tetzlaff J, and North PE. p16INK4a mediated endothelial cell senescence is a fundamental mechanism of spontaneous involution in infantile hemangioma. 19th Congress, International Society for the Study of Vascular Anomalies, Malmo, Sweden, June, 2012.
- Lerch-Gaggl A and North PE. Not Just a Repository - The CRI Pediatric BioBank & Analytical Tissue Core: Making an Impact on Research Studies by Offering Analytical Services to Investigators. 2012 Intl Society for Biological & Environmental Repositories Annual Meeting, Vancouver, British Columbia, Canada.
- Yang Q, Kumar S, Salato V, Szabo S and North PE. Propranolol Blocks Autophagy in Infantile Hemangioma (IH) and Human Placental Capillary Endothelial Cells (HPCECs) in vitro, 19th Congress, International Society for the Study of Vascular Anomalies, Malmo, Sweden, June, 2012.
- Subramanian S, Chun R, North P, Moe D, Kelly T. Rare submandibular bronchopulmonary foregut cystic malformation mimicking lymphatic malformation. American Society of Neuroradiology Annual meeting, May 18, 2013.
- North PE. Histopathology of diffuse lymphatic malformation and Gorham's disease. First International Conference on Generalized Lymphatic Anomaly and Gorham-Stout Syndrome Bethesda, Maryland, June 6, 2013.
- Runge C, Sander T, Dimmock D, North PE, Lerch-Gaggl A, Friedland D, Kershner J. Development of a

- Genetic Newborn Hearing Screen Platform, American Society of Pediatric Otolaryngology Annual Meeting, May, 2014.
- Bachur C, Sachdev M, Connors S, Curatolo A, Shotwell L, North P, Marchuk D, Pevsner J, Moses M, Comi AM. Increased p-ERK expression in leptomeningeal vessels of Sturge Weber syndrome. 20th Congress, International Society for the Study of Vascular Anomalies, Melbourne, Australia, Australia, April 2, 2014.
- Salato V, Yang Q, Comi A, Pevsner J, Gredler J, Gallione C, Marchuk D, and North PE. Identification of Cell Types Harboring GNAQ mutation in Port Wine Stain Tissue. 20th Congress, International Society for the Study of Vascular Anomalies, Melbourne, Australia, April 2, 2014.
- Sander T, Mitchell A, Mitchell M, Noll L, Mahnke D, Routes J, and North P. Implementation of a Highly-Sensitive and Inexpensive Laboratory Developed Test for 22q11.2 Deletion Syndrome, Association for Molecular Pathology 2015 Meeting, Austin, TX, Nov 3, 2015.
- Hartman H and North PE. Peak Flow Measurement and Environmental Exposure Analysis in Rural Peru. American Academy of Allergy, Asthma, and Immunology Annual Meeting, March 4, 2016.
- Alan J. Bergmann, Luis Vasquez, Paula E North, Kim A. Anderson, Passive Sampling in the Alto Mayo, Society of Environmental Toxicology and Chemistry Annual Meeting November, 2016.
- Buenos Aires, Argentina, April 27, 2016.
- Schwalbe ML, Mrak LN, Gill KG, Pinchot JW, Aagaard- Kienitz BL, Moe D, King D, Buehler D
- Malformation of the Extremity (Fibro-Adipose Vascular Anomaly): a Clinicopathologic Study of 23 Cases. 21st Congress, International Society for the Study of Vascular Anomalies, Buenos Aires, Argentina, April 27, 2016.
- Martinez AP, Zapata M, North PE, Folpe AL, Weiss SW. Lymphatic-type Angiosarcoma (AS) with a Prominent Lymphocytic Infiltrate: A Potentially More Favorable Subgroup? United States and Canadian Academy of Pathology, 2018 Annual Meeting, Vancouver, British Columbia, Canada, March 2018.
- Mrak LN, Woods MA, Diamond AC, Pinchot JW, Aagaard Kienitz B, Arkin LM, North PE, Buehler DG, Gill KG. 21st Congress, International Society for the Study of Vascular Anomalies, Amsterdam, the Netherlands, May, 2018.
- North PE and Salato V, Lobular Capillary-Lymphatic Malformation of Subcutis: a Newly Recognized Entity with Distinctive Histological and Clinical Features, 21st Congress, International Society for the Study of Vascular Anomalies, Amsterdam, the Netherlands, May, 2018.
- North PE, Ziegler A, Mitchell A, et al. Highly Sensitive Multiplex PCR Assessment of cfDNA Donor Fraction in Pediatric and Adult Heart Transplant Patients: Non-Invasive Risk Stratification for Rejection in an Expanded Patient Population and Post-Transplantation, Cutting Edge of Transplantation Summit 2019, American Society of Transplantation, Phoenix, Arizona, Feb 2019.
- Peterson B, Tlomak W, Noll L, North P, Sander T. Use of Pharmacogenetics as an aid in discerning manner of death in oxycodone intoxication. National Association of Medical Examiner's Annual Meeting, Oct 15, 2013.
- North P, Fleischer S: The effect of increased membrane cholesterol content on rat brain synaptosomes. Soc Neurosci Abstr 5:1014, 1979.
- North P, Fleischer S: Reversible loss of high-affinity, sodium-dependent gamma-aminobutyric acid uptake of synaptic plasma membranes depleted of cholesterol. Soc Neurosci Abstr 7:306, 1981.
- North PE, Post RL: Two patterns of inhibition of (Na, K) ATPase by vanadyl ion. Fed Proc 42:1926, 1983.
- North PE, Mrak RE: Synaptic membrane transport of choline and of gamma aminobutyric acid (GABA): Effects of ethanol and other n-alcohols. Neurotoxicology 9:689, 1988.
- Sawyer JR, Swanson CM, Lukacs JL, Nicholas R, North PE, and Thomas JR: Complex translocations involving 6q13 and chromosomal instability in histologically benign, but locally aggressive cartilaginous lesions. Amer. Soc. Human Genetics Abstr, 1996.
- Dornhoffer JL, Colvin GB, North P: Microscopical examination of ossicles in patients with cholesteatoma. Proceedings of the Fifth International Conference on Cholesteatoma and Mastoid Surgery, Sardinia, Italy, 1996.
- Sawyer JR, Swanson CM, Lukacs JL, Nicholas RW, North PE, and Thomas, JR: Recurring chromosome breakpoints at 6q13-21 in histologically benign, but locally aggressive cartilaginous lesions. Seventh International Workshop on Chromosomes and Solid Tumors, 1997.
- Colby S, Chapman YL, Luo Y, Mitsunashi M, Moorthy TV, Zoha S, Allnut T, Mizeracki A, North P, Musk P, Eisenberg A, and Smead D: Use of the FMBIO II Imaging System in Diagnostic Assays. Assoc. For

- Molec. Pathol. Abstr., 1998.
- Colby S, Chapman W, Luo Y, Mitsuhashi M, Moorthy TV, Allnut T, North P, Musk P, and Smead D: Using fluorescence detection in molecular diagnostic applications. DNA Technologies in Human Disease Detection Conf. Abstr, 1998.
- North PE, Waner MW, Mizeracki A, and Mihm MC, Jr: GLUT1 is a specific marker for juvenile hemangiomas. 1999 Annual Meeting United States and Canadian Academy of Pathology. March 2026, 1999. San Francisco, California.
- Parham DM, Quiggins C, Ready R, and North PE, Comparison of manual vs. automated leukocyte counts for determination of the absolute neutrophil count. Joint Annual Meeting of the International Society of Paediatric Oncology and the American Society, Montreal, Canada, 1999.
- North PE, Waner MW, Mizeracki A, and Mihm MC, Jr.: Unique coexpression of GLUT1, merosin, and Lewis Y antigen by juvenile hemangiomas at all stages. 2000 Annual Meeting United States and Canadian Academy of Pathology.
- North PE, Mizeracki A, Thomas JR, Nicholas R, Waner MW, and Mihm MC, Jr.: Intramuscular "hemangiomas" are vascular malformations immunodistinct from juvenile hemangiomas. 2000 Annual Meeting United States and Canadian Academy of Pathology. Lab Invest 80:14A, 2000.
- North PE, Mizeracki A, Waner M, Mihm MC, Jr., and Mrak RE: Do juvenile hemangiomas originate from endoneurial microvasculature? 2000 Annual Meeting of the American Association of Neuropathologists.
- North PE and Mihm MC, Jr.: Pathology of juvenile hemangiomas and vascular malformations. 2000 Annual Meeting of the American Academy of Dermatology, San Francisco, CA, 2000.
- North PE: Frontiers of research in vascular birthmarks. 2000 Annual Meeting of the American Academy of Dermatology, San Francisco, CA, 2000.
- Brown H, Mizeracki A, Mrak RE, and North PE: Glucose transporter isoform 1 in neovascularized ocular tissue. Assoc. for Research in Vision and Ophthalmology Abstracts, Fort Lauderdale, FL, 2000.
- Walter JW, North PE, Mizeracki A, Waner M, and Marchuk DA: Non-random X-inactivation suggests that juvenile hemangiomas are monoclonally derived. 2000 Annual Meeting of the American Society of Human Genetics, Philadelphia, PA.
- North PE, Mizeracki A, Mihm MC, Jr., and Mrak RE.: GLUT1 immunoreaction patterns reliably distinguish hemangioblastoma from metastatic renal cell carcinoma. 2000 Annual Meeting United States and Canadian Academy of Pathology.
- North PE and Mihm, MC, Jr.: Juvenile hemangiomas share a unique immunophenotype with the microvasculature of placenta: implications for pathogenesis. 13th Congress, International Society for the Study of Vascular Anomalies, Montreal, Canada, 2000.
- Waner M, Waner A, North P, Mihm MC, Jr., Sigfried I, and Suen JY: Identification of two distinct types of hemangiomas. 13th Congress, International Society for the Study of Vascular Anomalies, Montreal, Canada, 2000.
- Waner M, Adams D, North P, and Yee S: A rare complication of pulsed dye laser treatment of hemangiomas. 13th Congress, International Society for the Study of Vascular Anomalies, Montreal, Canada, 2000.
- North PE, Waner MW, Mizeracki A, Mihm MC, Jr.: Diffuse (dermatomal) and focal juvenile hemangiomas are histologically and immunophenotypically similar Mod Pathol; 14(1): 71A, 2001.
- North PE, Waner MW, Mizeracki A, Nicholas R, Kincannon J, Gibson D, and Mihm MC, Jr: Placental antigens expressed by juvenile hemangiomas are not present in other benign vascular proliferations Mod Pathol; 14(1):71A, 2001.
- Nicholas RW, Thomas JR, Mizeracki A, Waner M, James CJ, Mihm MC, Jr, and North PE. Are intramuscular vascular malformations truly "hemangiomas?" Musculoskeletal Tumor Society Annual Meeting, May 2001.
- Walter J, North PE, Mizeracki A, Waner M, and Marchuk D. Somatic mutations in sporadic hemangiomas. Amer J Human Genet., 68, 2001.
- North PE, Waner MW, Mizeracki A, Mihm MC, Jr.: Diffuse (dermatomal) and focal juvenile hemangiomas are histologically and immunophenotypically similar Mod Pathol; 14(1): 71A, 2001.
- North PE, Waner MW, Mizeracki A, Nicholas R, Kincannon J, Gibson D, and Mihm MC, Jr: Placental antigens expressed by juvenile hemangiomas are not present in other benign vascular proliferations Mod Pathol; 14(1):71A, 2001.
- Walter J, North PE, Mizeracki A, Waner M, and Marchuk D. Somatic mutations in sporadic hemangiomas. Amer J Human Genet., 68, 2001.
- Nicholas RW, Thomas JR, Mizeracki A, Waner M, James CJ, Mihm MC, Jr, and North PE. Are

- intramuscular vascular malformations truly "hemangiomas?" Musculoskeletal Tumor Society Annual Meeting, May 2001.
- North PE, Frieden IJ, McCalmont T, Mizeracki A, Detmar M, and Mihm MC. The morphological spectrum of tufted angioma and kaposiform hemangioendothelioma: a lymphothelial association with coagulopathy. 14th Congress, International Society for the Study of Vascular Anomalies, Nijmegen, the Netherlands, June 27, 2002.
- DeAos I, Mizeracki A, Waner M, and North PE. Infantile hemangiomas are immunonegative for estrogen (alpha and beta) and progesterone receptors: reassessment of previous assumptions. 14th Congress, International Society for the Study of Vascular Anomalies, Nijmegen, the Netherlands, June 27, 2002.
- Mizeracki A, Waner M, Davis PF, and North PE. Histological and immunohistochemical analysis of hemangiogenesis in fibrin gels: pericytes first, endothelial cells second. 14th Congress, International Society for the Study of Vascular Anomalies, Nijmegen, the Netherlands, June 27, 2002.
- Frieden IJ, Kahn K, Cordisco M, and North PE. Multifocal angioendotheliomatosis with coagulopathy. 14th Congress, International Society for the Study of Vascular Anomalies, Nijmegen, the Netherlands, June 27, 2002.
- James CA, North PE, Nicholas R, and Waner M. Mass lesions in soft tissue arteriovenous malformations: radiologic/pathologic correlation. 14th Congress, International Society for the Study of Vascular Anomalies, Nijmegen, the Netherlands, June 27, 2002.
- North PE, Frieden IJ, Kincannon J, and Mihm MC. Multiple congenital pyogenic granuloma-like proliferations mimicking diffuse hemangiomatosis: a prototypic case study. 14th Congress, International Society for the Study of Vascular Anomalies, Nijmegen, the Netherlands, June 27, 2002.
- Sanchez-Carpintero I, North PE, Waner M, Mihm MC. The heterogeneity of cutaneous vascular stains: a clinicopathological study. 14th Congress, International Society for the Study of Vascular Anomalies, Nijmegen, the Netherlands, June 27, 2002.
- Frieden IJ, Waner M, McCalmont T, and North PE. The histologic spectrum of hemangioma of infancy, 14th Congress, International Society for the Study of Vascular Anomalies, Nijmegen, the Netherlands, June 26, 2002.
- Shafirstein G, Mizeracki A, North PE, and Waner M. Vascular structure in corrosion casts of arteriovenous malformations (AVMSs), venous malformations (VMs), and hemangiomas. 14th Congress, International Society for the Study of Vascular Anomalies, Nijmegen, the Netherlands, June 27, 2002.
- North PE, Sanchez-Carpintero I, Waner M, Mizeracki A and Mihm MC. Despite striking clinical dissimilarities segmental and focal infantile hemangiomas are histologically and immunohistochemically identical, 20th World Congress of Dermatology, Paris, France, July 2002.
- Sanchez-Carpintero I, Martinez MI, North PE, Waner M, and Mihm MC. Imiquimod: remarkable therapy for vascular lesions, 20th World Congress of Dermatology, Paris France, July 2002.
- Frieden IJ, Kahn K, Cordisco M, and North PE. Multifocal angioendotheliomatosis with coagulopathy (oral presentation). 14th Congress, International Society for the Study of Vascular Anomalies, Nijmegen, the Netherlands, June 26, 2002.
- North PE, Frieden IJ, McCalmont T, Mizeracki A, Detmar M, and Mihm MC. The morphological spectrum of tufted angioma and kaposiform hemangioendothelioma: a lymphothelial association with coagulopathy. 14th Congress, International Society for the Study of Vascular Anomalies, Nijmegen, the Netherlands, June 26, 2002.
- DeAos I, Mizeracki A, Waner M, and North PE. Infantile hemangiomas are immunonegative for estrogen (alpha and beta) and progesterone receptors: reassessment of previous assumptions. 14th Congress, International Society for the Study of Vascular Anomalies, Nijmegen, the Netherlands, June 26, 2002.
- Mathew S, Parham DM, Ready R, Quiggins C, Jacobs RF, Maes L, North PE. High interlaboratory variability in pediatric band counts. *Mod Pathol* 2002; 15(1):254A. February, 2002.
- Tyler LN, Parham DP, Glasier CM, Mrak RE, Mizeracki A, Burson GT, and North PE. Immunostaining of focal cortical dysplasia with MIB1 and anti-p53. *Mod Pathol*; 15(1):6P, 2002.
- North PE, Waner M, James CA, Mizeracki A, and Mihm MC, Jr. Congenital nonprogressive hemangioma: a distinct clinicopathological entity unlike infantile hemangioma. *Mod Pathol*; 15(1):104A, 2002.
- North PE, Mizeracki A, Waner M, and Davis P. Ex vivo hemangiogenesis in fibrin gels: a morphological and immunohistochemical analysis. *Lab Invest* 83(1):18A, 2003.
- Lyons LL, North PE, Stoler MH, Folpe AL, Weiss SW. Kaposiform hemangioendothelioma (KH) is histologically, immunohistochemically, and biologically distinct from common (juvenile) hemangioma. *Lab Invest* 83(1):16A, 2003.
- North PE, Sanchez-Carpintero I, Mizeracki A, Waner M, and Mihm MC. The distinctive histology of lip

- enlargement in port-wine stains: a clinicopathological study. *Lab Invest* 83(1):96A, 2003.
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- DeAos I, Frieden IJ, Kahn T, Cordisco M, Detmar M, and North PE. Multifocal papillary angiomatosis with thrombocytopenia: a new clinicopathological entity. *Mod Pathol* 16:2p, 2003.
- North PE, DeAos I, Lal A, Riggins G, Marchuk DA, Waner M, and Mihm MC. Immune Tolerance in Infantile Hemangioma. 15th Congress, International Society for the Study of Vascular Anomalies, Wellington, New Zealand, February 23, 2004.
- North PE, DeAos I, Hemphill CH, Waner M, Mihm MC. A Mechanism of Skin Homing in Infantile Hemangioma. 15th Congress, International Society for the Study of Vascular Anomalies, Wellington, New Zealand, February 23, 2004.
- DeAos I, James CA, and North PE. Hepatic "hemangioma": not a singular entity. 15th Congress, International Society for the Study of Vascular Anomalies, Wellington, New Zealand, February 23, 2004.
- North PE, DeAos I, Hemphill CH, Waner M, Mihm MC. D2-40 antibody: limited utility in the diagnosis of kaposiform hemangioendothelioma. 15th Congress, International Society for the Study of Vascular Anomalies, Wellington, New Zealand, February 23, 2004.
- North PE, DeAos I, Hemphill CH, Waner M, MC Mihm. Marked differences in the lymphatic compliments of cutaneous infantile and congenital hemangioma. 15th Congress, International Society for the Study of Vascular Anomalies, Wellington, New Zealand, February 23, 2004.
- Prendiville JS, Brown K, Davis J, DeSa D, Jamieson D, North P. Skeletal-extraskeletal angiomatosis in a child. 15th Congress, International Society for the Study of Vascular Anomalies, Wellington, New Zealand, February 23, 2004.
- Shafirstein G, Baumler W, Lapidoth M, North PE, Waner M. Mathematical modeling to suggest optimal FPD pulse time and wavelengths to treat PWS. 15th Congress, International Society for the Study of Vascular Anomalies, Wellington, New Zealand, February 23, 2004.
- North PE, DeAos I, Hemphill CH, Waner M, Mihm MC. CCR6 Expression by Endothelial Cells of Infantile Hemanigioma. Society for Pediatric Pathology Annual Meeting, Vancouver, British Columbia, March 6, 2004.
- Ferguson PE, Oza KK, Ellison DA, North PE, Horn H. Color-matched cassettes and slides decrease specimen handling errors. *Mod Pathol* 17(S1): 347A, 2004.
- Dadras SS, North PE, Bertoncini J, Jackson DG, Mihm MC, and Detmar M. LYVE-1, a novel lymphatic endothelial cell marker, is expressed in infantile hemangiomas. *Mod Pathol*; 17 (S1):12A, 2004.

COMMITTEE SERVICE:

Medical College of Wisconsin

- 1990 - 92 Curriculum Committee, University of Arkansas for Medical Sciences
- 1990 - 92 Search Committee for Microbiology and Immunology Chair, University of Arkansas for Medical Sciences
- 1996 - Present Faculty Incentive Plan Committee, Department of Pathology, University of Arkansas for Medical Sciences, School of Medicine
- 1996 - 2000 Promotions Committee, Class of 2000, University of Arkansas for Medical Sciences, School of Medicine
- 1998 - 2005 Residency Committee, Department of Pathology, University of Arkansas for Medical Sciences
- 2001 - 2005 MD/PhD Committee, University of Arkansas for Medical Sciences, School of Medicine
- 2006 - 2010 Scientific and Policy Advisory Committee, Children's Research Institute, Children's Hospital Health System and Medical College of Wisconsin
- 2006 - 2008 Dermatology Chair Search Committee, Medical College of Wisconsin
- 2007 - 2006 Search Committee for Chief Medical Officer and SVP, Blood Center of Wisconsin
- 2010 - 2011 Search Committees, Pediatric Hematology/Oncology Section Chief and MACC Fund Professor, Medical College of Wisconsin
- 2010 - 2014 Post-doctoral Training Program Steering Committee, Children's Research Institute
- 2011 - Present Search Committee, Children's Specialty Group CEO, Medical College of Wisconsin
- 2012 - 2013 Rank and Tenure Committee, Medical College of Wisconsin
- 2015 - 16 Search Committee, Department of Dermatology, Medical College of Wisconsin.

2015 - 2017 Search Committee, Department of Cell Biology, Neurobiology and Anatomy, Medical College of Wisconsin.

Hospital

1995 - 97 Transfusion Committee, Arkansas Children's Hospital
1996 - 2003 Point-of-Care Testing Committee, Arkansas Children's Hospital
1998 - 2004 Radiation Safety and Use Committee, Arkansas Children's Hospital
2002 - 2003 Transfusion Committee, Arkansas Children's Hospital
2002 - 2005 Phlebotomy Subcommittee (Chair), Patient Care Committee, Arkansas Children's Hospital
2003 - 2005 Medical Leadership Committee, Arkansas Children's Hospital
2003 - 2005 Member and Officer (Secretary-Treasurer, 2003-2004)/(Vice President, 2005), Medical Executive Committee, Arkansas Children's Hospital
2004 - 2005 Physicians Health Subcommittee, Arkansas Children's Hospital
2005 - Present Clinical Laboratory Executive Committee, Children's Hospital of Wisconsin
2005 - 2014 Operating Room Committee, Children's Hospital of Wisconsin
2005 - Present Medical Executive Committee, Children's Hospital of Wisconsin
2006 - Present Joint Patient Care Committee, Children's Hospital of Wisconsin
2006 - 2014 Physician's Quality Assurance Committee, Children's Hospital of Wisconsin
2006 - 2014 Council for Quality, Children's Hospital of Wisconsin
2006 - Present Action Sub-Committee, Medical Staff Executive Committee, Children's Hospital of Wisconsin
2006 - Present Credentials Committee, Children's Hospital of Wisconsin Medical Staff
2006 - 2012 Patient Care Safety Committee, Children's Hospital of Wisconsin
2006 - 2014 Medical Capital Equipment Committee, Children's Hospital of Wisconsin
2010 - 2014 Surgical Services Executive Committee, Children's Hospital of Wisconsin
2010 - 2014 Operations Executive Committee, Children's Hospital of Wisconsin
2011 - 2013 iStrategy Executive Steering Committee, Children's Hospital of Wisconsin
2012 - 2014 Quality Improvement Executive Committee, Children's Hospital of Wisconsin

MCW TEACHING ACTIVITIES:

Medical Student Education

Medical Student Summer Research Mentor, Medical College of Wisconsin, 2006 and 2009.
Lecturer, "Vascular Tumors and Malformations", M2 Pathophysiology Course, Medical College of Wisconsin, 12/03/2009.
Lecturer (1 lecture annually), Vascular Pathology, Sophomore Pathophysiology Course, University of Arkansas for Medical Sciences, Medical School, 11/2003 - 11/2006.
Section Leader (5 lectures annually), Gastrointestinal Pathology, Sophomore Pathophysiology Course, University of Arkansas for Medical Sciences, Medical School, 09/1995 - 05/2001.
Pathway Advisor, Physician Scientist Pathway, Medical College of Wisconsin, 2009 and 2014-2017.
Pathway Advisor, Global Health Pathway, Medical College of Wisconsin, 2012-2016.

Resident and Fellow Education

Residency Director, Pediatric Pathology, Children's Hospital of Wisconsin, 09/2005 - 2008.
Lecturer, "Vascular Tumors and Malformations of Childhood: a clinicopathological approach to diagnosis and treatment", Pediatric Surgery Resident Didactic Series, Children's Hospital of Wisconsin, 01/06/2006.
Lecturer, "Current Classification of Hepatic Vascular Lesions", Pediatric Surgery Residents, 08/16/2006.
Invited Lecturer, Hematology-Oncology Fellowship Lecture Series, Children's Hospital of Wisconsin, Milwaukee, Wisconsin, 04/26/2006.
Lecturer, "Vascular Tumors", Resident Lecturer Series, Department of Pathology, Medical College of Wisconsin, 01/08/2007.
Lecturer, "Vascular Malformations", Resident Lecturer Series, Department of Pathology, Medical College of Wisconsin, 01/09/2007.
Lecturer, "Vascular Malformations: a current clinicopathological approach to diagnosis and classification, Resident Didactic, Department of Otolaryngology/Head & Neck Surgery, Medical College of Wisconsin, 03/19/2009.

Invited Lecturer, "Finding the Genetic Cause of Venulo-Capillary Malformation: a needle in the haystack", Pediatric Surgery Resident Didactic Series, Medical College of Wisconsin, 02/14/2014.
Fellowship Director, Pediatric Pathology, Children's Hospital of Wisconsin, 09/2012 - 05/2015.
Director, Pediatric Molecular Pathology Rotation, University of Arkansas for Medical Sciences, 07/1999 - 06/2002.
Director, Pediatric Clinical Pathology Resident Rotation, University of Arkansas for Medical Sciences, Medical School, 07/1998 - 06/2003.

EXTRAMURAL TEACHING:

Resident and Fellow Education

05/14/2005 - Present Guest Faculty, Fourth Annual CME Course on Vascular Anomalies, New York University, New York, NY.
10/05/2005 - Present Visiting Professor, Department of Pathology, Indiana University.
11/14/2005 - Present Visiting Professor, Department of Cell Biology, Harvard Medical School, Boston, MA.
01/23/2007 - 01/24/2007 Visiting Professor, Department of Pathology, University of Texas Southwestern Medical Center, Dallas, TX.
11/09/2007 - 11/10/2007 Visiting Professor, Department of Pathology, Children's Hospital of Philadelphia, Philadelphia, PA.
06/16/2012 - Present Faculty, 19th International Workshop on Vascular Anomalies, International Society for the Study of Vascular Anomalies, Basic Course, "Histopathology of Vascular Anomalies for Pathologists", Malmö, Sweden.
09/15/2012 - 09/21/2012 Invited Tutor, International Paediatric Pathology Association XXXIVth Advanced Course in Paediatric Pathology (multiple lectures over 1 week period), La Granja, Spain.
03/31/2014 - Present Organizing Moderator and Keynote Speaker, day-long International Workshop for Pathologists - "The Pathology of Vascular Lesions", Royal Children's Hospital, Melbourne, Australia.
04/12/2014 - 04/14/2014 Guest Faculty, Workshop on the Classification of Vascular Anomalies, XIVth Scientific Meeting of the Eastern China Cooperative Group of Pediatric Pathologists, Shanghai, China, April 12-14, 2014.
05/28/2015 - Present Invited Tutor, Workshop for Pathologists (at multi-headed microscope), Department of Pathology, The Norwegian Radium Hospital, Oslo University Hospital, Oslo, Norway.
11/22/2015 - 11/27/2015 Invited Tutor, International Paediatric Pathology Association Update Pediatric Pathology Course, Margaret River, Australia.
03/08/2016 - Present Faculty and Keynote Speaker, EADV Fostering Course in Vascular Anomalies, Malmö, Sweden.
05/31/2018 - Present Faculty and Moderator, Day-long International Course on the Histopathologic and Molecular Diagnosis of Vascular Anomalies, Amsterdam, The Netherlands (scheduled) in conjunction with the 22nd International Workshop of the International Society for the Study of Vascular Anomalies.

MCW STUDENTS, FACULTY, RESIDENTS AND CLINICAL/RESEARCH FELLOWS MENTORED:

Medical Students

2012 - 2014 Katie Dobberpuhl, 2012 - 2014, MCW, Global Health Pathway Student: Pathway adviser.

EXTRAMURAL STUDENTS, FACULTY, RESIDENTS, AND CLINICAL/RESEARCH FELLOWS MENTORED:

Medical Students

Graduate Students

PhD Committees

10/2016 - Present Zachary Brandt, current., MCW (Cell Biology)

Clinical/Research Fellows

Residents

Faculty

06/2014 - Present Darya Buehler, 06/2014 - current, MD (UW-Madison Pathology), Capacity: clinical and research mentor (vascular anomalies).

PROGRAMMATIC DEVELOPMENTS:

Educational Programs

Fellow

2013 - Present Pediatric Pathology Fellowship Program (new fellowship, ACGME)

Research Programs

2012 - Present Unexplained Infant Death Focus Group, Children's Research Institute

2012 - 2015 GEOHEALTH research program (NIEHS), Alto Mayo, Peru

Children's Environmental Health Sciences Core Center, Milwaukee, WI (multi-institutional)

COMMUNITY SERVICE ACTIVITIES:

Board member, Get Fit Foundation, Milwaukee, WI, 2013 - present.

Local organizing committee, USA Triathlon National Age Group Championships, 2013 and 2014, Milwaukee, WI

BIBLIOGRAPHY

Refereed Journal Publications/Original Papers

1. **North P**, Fleischer S: Alteration of synaptic membrane cholesterol/phospholipid ratio using a lipid transfer protein. Effect on gamma-aminobutyric acid uptake. J Biol Chem 258:12421-253, 1983.
2. **North P**, Fleischer S: The use of a nonspecific lipid transfer protein to modify the cholesterol content of synaptic plasma membranes. Methods in Enzymol 98:599-613, 1983.
3. **North P**, Fleischer S: Protein-mediated exchange of synthetic phosphatidylcholines into synaptosomal

- membranes. *Biochim Biophys Acta* 772:65-76, 1984.
4. **North P**, Post RL: Inhibition of (Na,K) ATPase by tetravalent vanadium. *J Biol Chem* 259:4971-4978, 1984.
 5. Mrak RE, **North PE**: Ethanol inhibition of synaptosomal high-affinity choline uptake. *Eur J Pharmacol* 151:51-58, 1988.
 6. **North PE**, Mrak RE: Synaptosomal uptake of choline and of gamma-aminobutyric acid: Effects of ethanol and of dimethylsulfoxide. *Neurotoxicology* 10:569-576, 1989.
 7. Mrak RE, **North PE**: Triphasic effects of short chain n-alcohols on synaptic membrane transport of choline and of gamma-aminobutyric acid. *Biochim Biophys Acta* 984:97-103, 1989.
 8. Wheeler RR, Bardales RH, **North PE**, Vesole DH, Tricot G, Stanley MW: Toxoplasma pneumonia: cytologic diagnosis by bronchoalveolar lavage. *Diagnost Cytopathol* 11:52-55, 1994.
 9. Sawyer JR, Swanson CM, Koller, MA, **North PE**, and Ross WR: Centromeric instability of Chromosome 1 Resulting in Multibranching Chromosomes, Telomeric Fusions, and "Jumping Translocations" of 1q in a Human Immunodeficiency Virus-Related NonHodgkin's Lymphoma. *Cancer* 76: 1238-1244, 1995.
 10. Sawyer JR, Swanson CM, Lukacs JL, Hased SJ, Curtis MA, **North PE**, Kozlowski KJ, and Pihoker C: Telomeric Fusion and Chromosome Instability in Multiple Tissues of a Patient with Mosaic Turner's Syndrome. *Amer. J. Med. Gen.* 69: 383-387, 1997.
 11. Chen B, **North PE**, and Parham DM: A Novel Polymorphism in Intron 12 of the Dystrophin Gene and its Implications for Deletion Detection by Multiplex PCR. *Gene* 209: 211-217, 1998.
 12. Sawyer JR, Swanson CM, **North PE**, Nicholas R, and Thomas JR: Evidence for an association of 6q 13-21 chromosomal aberrations and locally aggressive behavior in cartilage tumors. *Cancer* 82:474-483, 1998.
 13. Dornhoffer JL, Colvin GB, and **North P**: Evidence of residual disease in ossicles of patients undergoing cholesteatoma removal. *Acta Otolaryngol.* 119: 89-92, 1999.
 14. Palmer HE, **North P**, Nicholas RW, Woodruff J, Allison JW, and Parham DM: Extraskelatal myxoid chondrosarcoma, pathologic case of the month. *Arch Pediatr Adolesc Med:* 11071108, 1999.
 15. **North PE** and Mihm MC, Jr: The Surgical Pathology Approach to Pediatric Vascular Tumors and Anomalies, in Hemangiomas and Vascular Malformations of the Head and Neck, Waner M and Suen, J, eds, John P. Wiley and Sons, New York, pp 93-170, 1999.
 16. **North PE**, Mizeracki A, Waner M, and Mihm MC, Jr: GLUT1: A newly discovered marker for juvenile hemangiomas. *Human Pathology:* 31(1):11-22, 2000.
 17. **North PE**, Mizeracki A, Mihm MC, Jr., and Mrak RE: GLUT1 immunoreaction patterns reliably distinguish hemangioblastoma from metastatic renal cell carcinoma. *Clin Neuropathol.* 19 (3): 131-137, 2000.
 18. Uc A, **North PE**, and Burks W: Esophageal candidiasis in an infant with reflux esophagitis. *J Pediatric Gastroenterol Nut.* 31(5): 572-4, 2000.
 19. **North PE** and Nelson R: Molecular Diagnosis of Infectious Disease. *Pediatr Commentary* 8(2): 16-21, 2000.
 20. **North PE**, Waner M, Mizeracki A, Mrak RE, Nicholas R, Kincannon J, Suen JY, and Mihm MC, Jr: A unique microvascular phenotype shared by juvenile hemangiomas and human placenta. *Arch Dermatol.* 137: 559-570-12, 2001.
 21. Redman JF and **North PE**: Discrete venous malformation (cirroid tumor) in boys. *J Urology.* 165(2): 593-594, 2001.
 22. Redman JF, Ick KA, and **North PE**: Perineal lipoma and an accessory labial fold in a female neonate. *J Urology.* 166:1450, 2001.
 23. **North PE**, Waner M, James CJ, Mizeracki A, Frieden IJ, and Mihm MC, Jr. Congenital nonprogressive hemangioma: a distinct clinicopathological entity unlike infantile hemangioma. *Arch Dermatol.* 137: 1607-1620, 2001.
 24. **North PE** and Mihm MC, Jr: Histopathological diagnosis of infantile hemangiomas and vascular malformations, in *Vascular Lesions*, Hochman M, ed., Facial Plastic Surgery Clinics of North America. 9:505-524, 2001.
 25. Walter JW, **North PE**, Waner M, Mizeracki A, Blei F, Walker JWT, Reinisch JF, and Marchuk DA. Somatic mutation of vascular endothelial growth factor receptors in juvenile hemangioma. *Genes, Chromosomes , and Cancer .* 33:295-303, 2002.
 26. Martinez MI, Sanchez-Carpintero I, **North PE**, and Mihm MC: Infantile Hemangioma: Clinical resolution with 5% imiquimod cream. *Arch Dermatol.* 138:881-884, 2002.
 27. Parham DP, Ready R, Stine K, Quiggins C, Becton D, and **North P**: Comparison of manual and automated leukocyte counts for determination of the absolute neutrophil count: application to a pediatric oncology clinic. *Med Pediatr Oncol.* 38:183-186, 2002.

28. **North PE**, Waner M, and Brodsky MC. Are infantile hemangiomas of placental origin? *Ophthalmol*. 109: 633-634, 2002.
29. **North PE**. New Insights into the Origin of Infantile Hemangioma: A Link to the Placenta, *Pediatr Commentary* 10: 4-7, 2002.
30. **North PE**, Anthony D, Young TL, Brown HH, Waner M, and Brodsky MC: Retinal neovascular markers in retinopathy of prematurity: etiological implications. *Br J Ophthalmol*. 87(3):275-278, 2003.
31. Waner M, **North PE**, Scherer K, Frieden I, Mihm M: The non-random distribution of facial hemangiomas. *Arch Dermatol* 139:869-875, 2003.
32. **North PE**, Hull C, and Kincannon J: Vascular Neoplasms and Neoplastic-Like Proliferations, in *Dermatology*, Bologna JL, Jorizzo JL, and Rapini RP, eds., Mosby, London, pp 1817-1841, 2003.
33. Sanchez-Carpintero I, Mihm MC, Waner M, Mizeracki A, and **North PE**: Epithelial and mesenchymal hamartomatous changes in mature port-wine stains: morphological evidence for a multiple germ layer field defect. *J Am Acad Dermatol* 50(4): 606-612, 2004.
34. Wheeler JG, Tran TC, **North P**, Beavers-May T, Schutze GE, snow SL: Barriers to public health management of a pertussis outbreak in Arkansas. *Arch Pediatr Adol Med* 158: 146152, 2004.
35. Kniestedt C, Brodsky MC, **North PE**, Waner M, Landau K: Infantile orofacial hemangioma with ipsilateral peripapillary excavation in girls - a variant of the PHACE syndrome *Arch Ophthalmol* 122: 1-3, 2004.
36. Shafirstein G, Baumler W, Lapidot M, Ferguson S, **North PE**, Waner M: A new mathematical approach to the diffusion theory for laser tissue interaction modeling and its implication in laser treatment of port-wine stains. *Lasers in Surg Med* 34:335-347, 2004.
37. **North PE**. Vascular Anomalies: The Multidisciplinary Approach, *Pediatr Commentary* 12: 21, 2004.
38. **North PE**, Kahn T, Cordisco MR, Dadras SS, Detmar M, Frieden IJ: Multifocal lymphangioendotheliomatosis with thrombocytopenia: a newly recognized clinicopathological entity. *Arch Dermatol* 140(5): 599-606, 2004.
39. Lyons LL, **North PE**, Mac-Moune Lai F, Stoler MH, Folpe AL, Weiss SW: Kaposiform hemangioendothelioma: a study of 33 cases emphasizing its pathologic, immunophenotypic, and biologic uniqueness from juvenile hemangioma. *Am J Surg Pathol* 28(5):559-68, 2004.
40. Dadras SS, **North PE**, Bertocini J, Mihm MC, and Detmar M. Infantile Hemangiomas Are Arrested in an Early Developmental Vascular Differentiation State *Mod Pathol* 17(9):1068-79, 2004.
41. Frieden IJ, Haggstrom AN, Drolet BA, Mancini AJ, Friedlander SF, Boon L, Chamblin L, Baselga E, Garzon M, Nopper AJ, Siegel DH, Mathes EW, Goddard DS, Biscoff J, **North PE**, Esterly NB. Infantile Hemangiomas: Current Knowledge, Future Directions. *Ped Dermatol* 22: 383-406, 2005.
42. **North PE**. Molecular Diagnostics in Real-Time, *Pediatr Commentary* 13, 2005.
43. Sanchez-Carpintero I, **North PE**, Mihm MC. Melanoma arising in giant congenital naevi, WHO Classification of Tumors, Pathology and Genetics of Skin Tumors, Lyon, 2006, pp. 83-84.
44. Thraikill KM, Moreau CS, Cockrell G, Simpson P, Goel R, **North PE**, Fowlkes JL, Bunn RC. Physiological matrix metalloproteinase concentrations in serum during childhood and adolescence, using Luminex® Multiplex technology. *Clin Chem Lab Med* 43(12):1392-9, 2005.
45. Puri SK, Dornhoffer JL, and **North PE**. Contact Dermatitis to Silicone Following Cochlear Implantation, the *Laryngoscope* 115(10):1760-2, 2005.
46. **North PE**. Molecular Diagnostics in Real-Time, *Pediatr Commentary* 13, 2005.
47. Lawley LP, Cerimele F, Weiss SW, **North PE**, Cohen C, Kozakewich HPW, Mulliken JB, Arbisser JL. Expression of WT1 distinguishes vascular malformations from proliferative endothelial lesions. *Arch Dermatol* 141(10):1297-300, 2005.
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49. **North PE**, Waner M, Buckmiller L, James CA, Mihm MC. Vascular tumors of infancy and childhood: beyond capillary hemangioma. *Cardiovasc Pathol* 15:303-317, 2006.
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52. Richter G, **North PE**, Suen JY, James CA, Buckmiller L. Arteriovenous Malformations of the Tongue: A Spectrum of Disease. *Laryngoscope* 117(2):328-3, 2007.
53. Goel R, Boylan B, Gruman L, Newman P, **North PE**, Newman D. The proinflammatory phenotype of PECAM-1-deficient mice results in atherogenic diet-induced steatohepatitis. *Am J Physiol: GI Liver*

- Physiol 293(6):G1205-14, 2007.
54. Zhang R, Ghosh SN, Zhu D, **North PE**, Fish BL, Morrow NV, Lowry T, Nanchal R, Jacobs ER, Moulder JE, Medhora M. Structural and functional alterations in the rat lung following whole thoracic irradiation with moderate doses: injury and recovery. *Int J Radiat Biol* 84(6):487-97, 2008.
 55. **North PE** and Kincannon J: Vascular Neoplasms and Neoplastic-Like Proliferations, in *Dermatology*, Second Edition, Bologna JL, Jorizzo JL, and Rapini RP, eds., Mosby, London, 2008.
 56. Deyrup A, Miettinen M, **North PE** et al. Angiosarcomas arising in the viscera and soft tissue of children and young adults: a clinicopathological study of 15 cases. *Am J Surg Pathol* 33(2):264-269, 2009.
 57. **North PE**. Vascular tumors and malformations of infancy and childhood. *Pathology Case Reviews* 13(6):213-235, 2009.
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 60. Maronn M, Catrine K, **North P**, Browning MB, Kerschner JE, Noel R, Drolet BA, Kelly M. Expanding the phenotype of multifocal lymphangioendotheliomatosis with thrombocytopenia. *Pediatric Blood & Cancer* 52(4):531-534, 2009.
 61. Pramanik K, Chun CZ, Garnaas MK, Samant G, Mull A, Li K, **North PE** and Ramchandran R. Dusp-5 and Snrk-1 coordinately function during vascular development and disease. *Blood* 113(5):1184-1191, 2009.
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 63. Si-Tayeb K, Noto FK, Nagaoka M, Li J, Battle MA, Duris C, **North PE**, Dalton S, Duncan SA. Highly efficient generation of human hepatocyte-like cells from induced pluripotent stem cells. *Hepatology* 51(1):297-305, 2010.
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