

CURRICULUM VITAE

Thomas Joseph Hornyak, M.D., Ph.D.

Work: Research & Development Service
VA Maryland Health Care System, Bethesda, MD 20814
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Current Positions Chair, Department of Dermatology, University of Maryland School of Medicine, Baltimore, Maryland
February 2017 – present

Associate Chief of Staff for Research & Development
VA Maryland Health Care System
Baltimore, Maryland
January 2016 – present

Associate Professor of Dermatology and Biochemistry and Molecular Biology, University of Maryland School of Medicine, Baltimore, Maryland
September 2011 - present

Previous Positions Chief, Dermatology Service, VA Maryland Health Care System, Baltimore, Maryland, September 2011 – January 2016

Investigator, Dermatology Branch, Center for Cancer Research, National Cancer Institute, National Institutes of Health, August 2003 – August 2011

Senior Staff, Dermatology Research, Department of Dermatology, Henry Ford Health Science Center, Henry Ford Health System, Detroit, MI, January 1999 – August 2003

Assistant Professor of Dermatology, Case Western Reserve University, April 2000 – August 2003

Instructor, The Ronald O. Perelman Department of Dermatology, New York University Medical Center, New York, NY, July 1996 - December 1998

Resident, The Ronald O. Perelman Department of Dermatology, New York University Medical Center, New York, NY, July 1993 - June 1996

Intern, Department of Medicine, The New York Hospital - Cornell University Medical Center, June 1992 - June 1993

Education

Professional:

Postdoctoral Fellow, Laboratory of Edward B. Ziff, Ph.D., Howard Hughes Medical Institute and Department of Biochemistry, New York University Medical Center, New York, NY, July 1995-December 1998

Resident, Department of Dermatology, New York University Medical Center, New York, NY, 1993-1996

Intern, Department of Medicine, The New York Hospital - Cornell University Medical Center, New York, NY, 1992-1993.

M.D., The University of Michigan Medical School, 1985-1992

Graduate: Ph.D., The University of Michigan, 1985-1991 (Biological Chemistry)

Undergraduate: A.B., Princeton University, 1981-1985, *cum laude* (in Music)

High School: St. Francis de Sales H.S., Toledo, Ohio

Board Certification

Board Re-certified in Dermatology (effective until 12/31/2026)	2015
Board Certified in Dermatology	1996
Diplomate of the National Board of Medical Examiners	1993

Medical Licensure

State of Maryland	2011
State of Michigan	1998
New York State (currently inactive)	1993

Professional Societies

Society for Investigative Dermatology
Pan-American Society for Pigment Cell Research
American Academy of Dermatology

Honors and Awards

Outstanding Teacher Award, University of Maryland Department of Dermatology	May 2016
Excellence Award in Melanoma Research – Poster Presentation, Society for Melanoma Research Congress	November 2009
<i>Pigment Cell Research</i> Outstanding Article	2004
Edward A. Krull Annual Faculty Role Model Award, Department of Dermatology, Henry Ford Health System	June 2001
Fund for Henry Ford Hospital New Investigator Award	January 1999
Young Investigator Award, American Academy of Dermatology	1998
Travel Award, Pan-American Society for Pigment Cell Research	June 1997
Albert M. Kligman Travel Fellowship, Society of Investigative Dermatology	April 1997
Research Award for Clinical Trainees, NIH Office of Education	September 1993
George R. Demuth Medical Scientist Training Award, The University of Michigan	1992
Life & Health Insurance Medical Research Fund M.D./Ph.D. Fellowship	1988-1992
Medical Scientist Training Program M.D./Ph.D. Fellowship, The University of Michigan	1985-1988
Helen and Isidore Sacks Memorial Recital, Princeton University	January 1987
Phi Beta Kappa, Princeton University	1985
Helen and Isidore Sacks Memorial Prize in Musical Performance, Princeton University	1985
National Merit Scholar	1981-1985

Clinical Activities

Staff Dermatologist, Baltimore VAMC, VA Maryland Health Care System	September 2011-
Attending Dermatologist, University of Maryland Department of Dermatology	September 2011-
Attending Staff Physician, Dermatology, Melanoma Clinic, National Naval Medical Center	7/05-2011
Dermatologist, Clinical Center, National Institutes of Health	8/03-2011
Director, Pigmented Lesion Clinic, Department of Dermatology, Henry Ford Health System	2/99-8/03
Inpatient and Day Patient rounding and consults, Henry Ford Health System	7/99-8/03
Dermatologist and Adjunct Attending Physician, Department of Medicine, Bronx-Lebanon Hospital Center, Bronx, NY	7/96 – 10/98
Consulting Dermatologist, Coler-Goldwater Memorial Hospital, Roosevelt Island, NY	11/96–12/97

Active Support

1R01AR064810-01

“Identification and Characterization of Melanocyte Stem Cells” (NIH/NIAMS)
Annual Direct Costs: \$220,000
4/1/2014-3/30/2019

1I01BX002582-01

“Melanocyte Stem Cells in Regenerative Medicine” (VA Merit Review)
Annual Direct Costs: \$150,000
7/1/2015-6/30/2019

1R13AR070648-01

“2016 Annual Meeting of the Pan-American Society for Pigment Cell Research” (NIH/NIAMS)
Annual Direct Costs: \$15,000
9/1/2016-6/30/2017

IS1BX004007

“ShEEP Request for Fluorescence-Activated Cell Sorter (FACS)” (VA ORD Shared Equipment Program)
Direct Costs: \$274,000
1/1/2017-9/30/2017

Prior Support

8/2003 – 9/2011: Intramural Research Support, National Cancer Institute, National Institutes of Health

National Institutes of Health R01 Award, “Transcriptional Regulation Of Melanocyte Development”, National Institute of Arthritis And Musculoskeletal and Skin Diseases (1 R01 AR47951-01) August 2001-August 2003

Department of Defense Neurofibromatosis Research Initiative New Investigator Award, “Neurofibromin and Melanocyte Development and Differentiation” (DAMD17-01-1-0709) September 2001-August 2003

Small Research Grant (R03), “Identification of Proliferative Melanocyte Populations”, National Institute of Arthritis and Musculoskeletal and Skin Diseases (1 R03 AR45001-01) September 1997 - August 2000

Mentored Clinical Scientist Development Award (K08),
"Lineage Determination in Neural Crest Development",
National Institute of Arthritis and Musculoskeletal
and Skin Diseases (1 K08 AR01992-01)

July 1996 – June 2001

Clinical Research Protocols and Activities

Principal Investigator, NCI-060-C-0060, Clinical Research Protocol, "Dermoscopic Diagnosis, Histopathological Correlation, and Cellular Immortalization Of Melanocytic Nevi and Primary Cutaneous Melanoma"

Associate Investigator, NCI-02-C-313, Clinical Research Protocol, "Cancer Risk in Xeroderma Pigmentosum Heterozygotes" (Kenneth Kraemer, M.D., Principal Investigator)

Associate Investigator, 08-C-0079, "Natural History Study and Longitudinal Assessment of Children, Adolescents, and Adults with Neurofibromatosis Type 1" (Brigitte Widemann, M.D., Principal Investigator)

Associate Investigator, 08-C-0151, "A Pilot Study of Sirolimus (Rapamycin, Rapammune^R) in Subjects With Cowden Syndrome or Other Syndromes Characterized by Germline Mutations in PTEN" (Phillip A. Dennis, Principal Investigator)

Other Government Research and Clinical Activities

Panelist, IC Expert, Research, Condition and Disease Categorization (RCDC) Process, Integumentary System May 2010

Reviewer, "What You Need to Know About Melanoma and Other Skin Cancers", National Cancer Institute patient education booklet 2010

Organizing Committee Member and Participant, NCI Melanoma Focus Group Workshop, Rockville, Maryland February 2007

Participant, Resource for Melanoma Research Workshop, National Cancer Institute, Gaithersburg, Maryland October 2005

Participant, Melanoma Focus Group Meeting, National Cancer Institute and Society for Melanoma Research, Rockville, Maryland September 2005

Participant, NCI Resources to Advance Melanoma Research Workshop, Rockville, Maryland February 2004

Intellectual Property Activities

Provisional Patent (UMB Docket Number TH-2015-020): "Functional Myelination of Neurons with Melanocyte Stem Cells" August 2014

M-CRADA (Materials Cooperative Research and Development Agreement) between National Cancer Institute and GlaxoSmithKline for the development of EZH2 inhibitors for melanoma 2010-2011

Committee Service

Organizer, 2016 Annual Meeting of the Pan-American Society For Pigment Cell Research, "Seeing the Light: Pigment Cells, Their Responses, and the Generation of Diversity", Baltimore, Maryland October 2016

Member, Board of Directors, Baltimore Research & Education Foundation (BREF, VA non-profit corporation) January 2016 -

President-Elect, Pan-American Society for Pigment Cell Research (Presidential term 2017-2019) 2014-2016

Basic Science Committee, American Board of Dermatology 2013 -
Co-organizer, International Investigative Dermatology 2013, May 2013
Edinburgh, Scotland

American Academy of Dermatology Research Agenda Committee	2012-2016
Cutaneous Oncology Workgroup, American Academy of Dermatology	2012-
Elected Council Member, Pan-American Society for Pigment Cell Research	2009-2012
Chair, Standing Committee for By-Laws Review, Pan-American Society for Pigment Cell Research	2010-2013
Chair, Ad Hoc Committee for By-Laws Review, Pan-American Society for Pigment Cell Research	2009-2010
Member, Grant Review Committee, Melanoma Research Alliance	2009-present
Member, Board of Tutors, NIH Clinical Research Training Program (CRTP)	2008-2011
Committee on Scientific Programs, Society for Investigative Dermatology	2008-2013
Dermatology Foundation Medical and Scientific Committee	2007-2010
Chair, Organizing Committee, Society for Investigative Dermatology Resident Retreat for Future Academicians	2010
Organizing Committee, Society for Investigative Dermatology Resident Retreat for Future Academicians	2007-2010
National Cancer Institute Animal Care and Use Committee	May 2006-2011
Co-chair, NIH Pigment Cell Interest Group	September 2004-2011
Research Committee, Henry Ford Health System	
Institutional Animal Care and Use Committee (IACUC), Henry Ford Health System	January 2003-June 2003
Elected Council Member, Pan-American Society for Pigment Cell Research	2001-2004
Research Space Committee, Henry Ford Health System	July 2000-2003
American Academy of Dermatology Research Council	March 1999-March 2001
Ad hoc Committee on Appointments, Henry Ford Health System	1999
Research Funding Committee, NYU Medical Center	1998
Admissions Committee, Department of Biological Chemistry, The University of Michigan	1988-1989
Co-organizer, Medical Scientist Training Program Retreat	1988
Medical Scientist Training Program Seminar Committee	1985-1989
Teaching Activities	
Basic Science resident lectures (6 per academic year), University of Maryland Department of Dermatology	2012 – present
Course Director, "Structure and Function of Skin", American Academy of Dermatology Annual Meeting	2009-2012
Dialogues in Dermatology, "Melanoma Etiology", American Academy of Dermatology	2009
Invited Faculty Course Director, "Melanoma Etiology", American Academy of Dermatology Annual Meeting, San Antonio, TX and San Francisco, CA	2008-2009
Lecturer, "Melanocytes and Disorders of Pigmentation", in "Structure and Function of Skin", American Academy of Dermatology Annual Meeting	2004-present
"Melanocytes and Melanoma", National Naval Medical Center Military Dermatology Residency Program	2005
Dermatology Resident Basic Science Journal Club	July 1999-2003
Discussion Leader and Lecturer for "Collagen and Elastin", "Biology of Melanocytes", "Carcinogenesis", "Epidermal Kinetics and Differentiation", and "Melanocytic Neoplasms" for dermatology residents, Henry Ford Health System	July 1999-2003
Teaching Assistant in Dermatology, NYU Medical School Cell Biology	1996-1998

Core Course "Cutaneous Biology for the Practitioner", Advances in Dermatology, NYU School of Medicine Post-Graduate School	1996-1998
Teaching Assistant, Biochemistry 500 (Medical Biochemistry), The University of Michigan Medical School	1988

Academic Advisory Activities

Graduate Student Mentor, Bishal Tandukar, Department of Biochemistry and Molecular Biology, University Of Maryland School of Medicine	2014-present
T32 Mentoring Committee, Katie Leonard, Ph.D., Post-doctoral Fellow (Dr. David Kaetzel, Department of Biochemistry & Molecular Biology, PI)	2013-2015
T32 Mentoring Committee, Michael Cavalier, Ph.D., Post-doctoral Fellow (Dr. David Weber, Department of Biochemistry & Molecular Biology, PI)	2013-2015
K99 Advisory Committee, Melissa Harris, Ph.D., Post-doctoral Fellow (Dr. William Pavan, National Human Genome Research Institute, PI)	2013-present
Graduate Student Committee Member, Daniel Grun, Ph.D. Student, Department of Biochemistry and Molecular Biology (Dr. Richard Eckert, PI)	2014-present
Graduate Student Committee Member, Nidhi Pamidimukkala, Ph.D. student, Molecular Medicine Program (Dr. David Kaetzel, Department of Biochemistry & Molecular Biology, PI)	2015-present
Graduate Student Committee Member, Devin Sharp, Ph.D. Student, Department of Biochemistry and Molecular Biology, (Dr. David Kaetzel, Department of Biochemistry & Molecular Biology, PI)	2016-present

Grant Review Activities

Rochester Melanoma Action Group Grants	2013
SU2C (Stand Up To Cancer) – MRA (Melanoma Research Alliance) Dream Team Joint Scientific Advisory Committee	October 2012
Melanoma Research Alliance	2009 - present
Dermatology Foundation	2008 - 2010
Melanoma Research Foundation	2007
Ohio Cancer Research Foundation	2006, 2010
NEI Special Emphasis Panel for Ocular Albinism RFA (ZEY1-VSN-05)	December 2003

Editorial Boards

Experimental Dermatology	2013-present
Photodermatology Photoimmunology & Photomedicine	2002-2003

Journal Reviewer

PLoS One
British Journal of Dermatology
Journal of the American Academy of Dermatology
Nucleic Acids Research
Photodermatology Photoimmunology & Photomedicine
Pigment Cell Research
Pigment Cell and Melanoma Research
Journal of Investigative Dermatology
Journal of Clinical Investigation
Mechanisms of Development

Cell Death and Differentiation
Experimental Dermatology
Oncogene
Molecular Vision
Cancer Research
Journal of Cell Science
Developmental Dynamics
Journal of Dermatological Science
Molecular Cancer Research
PLoS Genetics
Molecular Carcinogenesis
Development
Animal Genetics
Cancer
Archives of Dermatology
Scientific Reports

Publications

Doctoral Dissertation

Hornyak, T. J. Activation of Blood Coagulation Factor XIII and Interactions of Factor XIII with Fibrinogen and Fibrin. The University of Michigan, 1992.

Peer Reviewed Publications in Scientific Journals

1. Hornyak, T. J., Bishop, P. D., & Shafer, J. A. " α -Thrombin-Catalyzed Activation of Human Platelet Factor XIII: Relationship between Proteolysis and Factor XIIIa Activity" (1989) *Biochemistry* 28, 7326-7332.
2. Hornyak, T. J., & Shafer, J. A. "Role of Calcium Ion in the Generation of Factor XIII Activity" (1991) *Biochemistry* 30, 6175-6182.
3. Hornyak, T. J., & Shafer, J. A. "Interactions of Factor XIII with Fibrin as Substrate and Cofactor" (1992) *Biochemistry* 31, 423-429.
4. Hornyak, T.J., Hayes, D. H., & Ziff, E.B. "Cell Density-Dependent Regulation of Expression and Glycosylation of Dopachrome Tautomerase/Tyrosinase-Related Protein-2 (TRP-2)" (2000) *Journal of Investigative Dermatology* 115, 106-112.
5. Hornyak, T.J., Hayes, D.H., Chiu, L.-Y., & Ziff, E.B. "Transcription Factors in Melanocyte Development: Distinct Roles for Pax-3 and Mitf". (2001) *Mechanisms of Development* 101, 41-53.
6. Potterf, S.B., Mollaaghababa, R., Hou, L., Southard-Smith, E.M., Hornyak, T.J., Arnheiter, H., Pavan, W.J. "Analysis of SOX10 function in neural crest-derived melanocyte development: SOX10-dependent transcriptional control of dopachrome tautomerase". (2001) *Developmental Biology* 237, 245-257.
7. Mahmood, M.N., Lee, M.W., Linden, M.D., Nathanson, S.D., Hornyak, T.J., & Zarbo, R.J. "Diagnostic Value of HMB-45 and Anti-Melan A Staining of Sentinel Lymph Nodes with Isolated Positive Cells". (2002) *Modern Pathology* 15, 1288-1293.
8. Jiao, Z., Mollaaghababa, R., Pavan, W.J., Antonellis, A., Green, E.D., & Hornyak, T.J. "Direct Interaction of Sox10 with the Promoter of Murine *Dopachrome tautomerase (Dct)* and Synergistic Activation of *Dct* Expression with Mitf". (2004) *Pigment Cell Research* 17, 352-362.
9. Lanning, J.L., Wallace, J.S., Zhang, D., Diwakar, G., Jiao, Z., & Hornyak, T.J. "Altered Melanocyte Differentiation and RPE Transdifferentiation Induced by Mash1 Expression in Pigment Cell Precursors". (2005) *Journal of Investigative Dermatology* 125, 805-17.
10. Jiao, Z., Zhang, Z.G., Hornyak, T.J., Hozeska, A., Zhang, R.L., Wang, Y., Wang, L., Strickland, F.M., & Chopp, M. "Dopachrome tautomerase (Dct) regulated neural progenitor cell proliferation". (2006) *Developmental Biology* 296, 396-408.
11. Diwakar, G., Zhang, D., & Hornyak, T.J. "Neurofibromin as a Regulator of Melanocyte Development and Differentiation". (2008) *Journal of Cell Science* 121, 167-77.
12. Kong, H.H., Sibaud, V., Turner, M.L., Fojo, T., Hornyak, T.J., & Chevreau, C. "Sorafenib-Induced Eruptive Melanocytic Lesions". (2008) *Archives of Dermatology* 144(6):820-822.
13. Mahindra, P., DiGiovanna, J.J., Tamura, D., Brahim, J.S., Hornyak, T.J., Stern, J., Lee, C.-C. R., Khan, S.G., Brooks, B.P., Smith, J.A., Driscoll, B.P., Montemarano, A.D., Sugarman, K., & Kraemer, K.H. "Skin cancers, blindness and anterior tongue mass in African brothers". (2008) *Journal of the American Academy of Dermatology* 59 (5), 881-886.
14. Hornyak, T.J., Jiang, S., Guzmán, E.A., Scissors, B.N., Tuchinda, C., He, H., Neville, J.D., & Strickland, F.M. "Mitf Dosage as a Primary Determinant of Melanocyte Survival after UV Irradiation". (2009) *Pigment Cell and Melanoma Research* 22, 307-318.
15. Wang, Y., DiGiovanna, J.J., Stern, J.B., Hornyak, T.J., Raffeld, M., Khan, S.G., Oh, K.-S., Hollander, M.C., Dennis, P.A., and Kraemer, K.H. "Evidence Of Ultraviolet Type Mutations In Xeroderma Pigmentosum Melanomas". (2009) *Proc. Natl. Acad. Sci U.S.A.* 106, 6279-6284.
16. Chen, D., Lin, Q., Box, N., Roop, D., Ishii, S., Matsuzaki, K., Fan, T., Hornyak, T.J., Reed, J.A., Stavnezer, E., Timchenko, N.A., and Medrano, E.E., "SKI knockdown inhibits human melanoma tumor growth *in vivo*". (2009) *Pigment Cell and Melanoma Research* 22, 761-772.
17. Zaidi, M.R., Davis, S., Noonan, F.P., Cherry-Graff, C., Hawley, T., Walker, R.L., Feigenbaum, L., Fuchs, E., Lyakh, L., Young, H.A., Hornyak, T.J., Arnheiter, H., Trinchieri, G., Meltzer, P.S.,

- De Fabo, E.C., & Merlino, G. "Interferon- γ links ultraviolet radiation to melanomagenesis in mice". (2011) *Nature* 469, 548-553.
18. Fan, T., Jiang, S., Chung, N., Alikhan, A., Ni, C., Lee, C.-C. R., & Hornnyak, T.J., "EZH2-Dependent Suppression of a Cellular Senescence Phenotype in Melanoma Cells by Inhibition of p21/CDKN1A expression". (2011) *Molecular Cancer Research* 9(4), 418-429.
19. Zaidi, M.R., Hornnyak, T.J., & Merlino, G. "A genetically engineered mouse model with inducible GFP expression in melanocytes". (2011) *Pigment Cell and Melanoma Research* 24(2), 393-394.
20. Ni, C., Zhang, D., Beyer, L.A., Halsey, K.E., Raphael, Y., Dolan, D.F., & Hornnyak, T.J. "Hearing Dysfunction in Heterozygous *Mitf*^{Mi-wh/+} Mice, a Model for Waardenburg Syndrome Type 2 and Tietz Syndrome". (2013) *Pigment Cell & Melanoma Research* 26(1), 78-87.
21. Saha, K., Hornnyak, T.J., Eckert, R.L. "Epigenetic cancer prevention mechanisms in skin cancer". (2013) *AAPS J.* 15, 1064-1071.
22. Adhikary, G., Grun, D., Kerr, C., Balasubramanian, S., Rorke, E.A., Vemuri, M., Boucher, S., Bickenbach, J.R., Hornnyak, T., Xu, W., Fisher, M.L., Eckert, R.L. "Identification of a Population of Epidermal Squamous Cell Carcinoma Cells with Enhanced Potential for Tumor Formation" (2013) *PLoS One*.
23. Masaki, T., Wang, Y., Digiovanna, J.J., Khan, S.G., Raffeld, M., Beltaifa, S., Hornnyak, T.J., Darling, T.N., Lee, C.C., Kraemer, K.H. "High frequency of PTEN mutations in nevi and melanomas from xeroderma pigmentosum patients" (2014) *Pigment Cell & Melanoma Research* 27(3), 454-464. PMID: 24483290.
24. Huang, J.M. & Hornnyak, T.J. "Polycomb Group Proteins – Epigenetic Repressors with Emerging Roles in Melanocytes and Melanoma" (2015) *Pigment Cell and Melanoma Research*, 28, 330-339. PMID: 25475071
25. Jiang, S., Joshi, S.S., Kalapurakal, E., Fan, T., & Hornnyak, T.J. "Inhibition of Vemurafenib-associated MAP Kinase activation and induction of melanization in BRAFWT melanoma cells by 17-AAG" (2016) Under revision for *PLoS One*.
26. Joshi, S.S., Castaneda, M., Jiang, S., Diwakar, G., Hertzano, R.P., & Hornnyak, T.J. "Characterization of a new, inducible transgenic mouse model with GFP expression in melanocytes and their precursors" (2017) Submitted to *Gene Expression Patterns*.

Non-Peer Reviewed Publications and Commentaries

1. Hornnyak, T.J. "The Clinician-Researcher's Unique Perspective" (1990) *JAMA (Pulse Student Supplement)* 263, 756.
2. Udey, M.C. & Hornnyak, T.J. "In this issue—oncogenes, tumor suppressor genes and melanocytic lesions" (2004) *Journal of Investigative Dermatology* 122, VII-VIII.
3. Diwakar, G. & Hornnyak, T.J. "Café-au-lait Patches and Senile Plaques: How APpt the Connection?" (2006) *Journal of Investigative Dermatology* 126, 547-550.
4. Huang, J., Chikeka, I., & Hornnyak, T.J. "Melanocytic Nevi and the Genetic and Epigenetic Control of Oncogene-Induced Senescence" (2017) *Dermatologic Clinics* 35, 85-93.

Book Chapters

1. Boissy, R.E. & Hornnyak, T.J., "Extracutaneous Melanocytes", in *The Pigmentary System, Second Edition* (Blackwell Publishing, 2006).
2. Hornnyak, T.J. "The Developmental Biology of Melanocytes, and Its Application to Understanding Human Congenital Disorders of Pigmentation", in *Advances in Dermatology*, 22:201-18. (Elsevier, 2006).
3. Hornnyak, T.J. "Albinism and Other Genetic Disorders of Pigmentation", Chapter 71 of *Dermatology in General Medicine, Seventh Edition* (McGraw-Hill, 2007).
4. Hornnyak, T.J., Chung, N., and Tachibana, M. "MITF and the Waardenburg Type II and Albinism-Deafness (Tietz) Syndromes", Chapter 71 of *Inborn Errors of Development, Second Edition* (Oxford, 2008).
5. Hornnyak, T.J. "Future Advances in Melanoma Research", in *Clinics in Plastic Surgery* 37 (2010), 169-176.

6. Hornyak, T.J. "Albinism and Other Genetic Disorders of Pigmentation", *Dermatology in General Medicine, Eighth Edition* (McGraw-Hill, February 2012).
7. Morganroth, P. & Hornyak, T.J. "Oculocutaneous Albinism", Chapter 49 in *Skin of Color, Second Edition* (McGraw-Hill, March 2016).
8. Naga, L. & Hornyak, T.J. "MITF and the Waardenburg Type II and Albinism-Deafness (Tietz) Syndromes", *Inborn Errors of Development, Third Edition* (Oxford, 2016).

Invited Lectures and Presentations

1. Invited Speaker, Symposium on Coagulation and Thrombosis, Middle Atlantic Regional Meeting, American Chemical Society, May 21-23, 1991, "Subunit Interactions in Factor XIII Activation".
2. Invited Speaker, New York Academy of Medicine, Section on Dermatology and Syphilology, Residents' Night, June 4, 1996, "Transcriptional Control of Melanocyte Development".
3. Invited Speaker, Department of Dermatology, Yale University School of Medicine, January 28, 1998, "Regulation of Melanocyte-Specific Gene Expression and Application to the Analysis of Early Melanocyte Development *In Vivo*".
4. Speaker, Department of Dermatology, Henry Ford Health System, April 28, 1998, "Regulation of Melanocyte-Specific Gene Expression and Application to the Analysis of Early Melanocyte Development *In Vivo*".
5. Seminar Speaker, The University of Toledo Department of Biology, October 8, 1999, "Transcription Factors in Melanocyte Development".
6. Invited Speaker, Van Andel Research Institute, Grand Rapids, MI, March 14, 2001, "Transcriptional Regulation of Melanocyte Development".
7. Skin Diseases Research Center Lecture, Case Western Reserve University Skin Diseases Research Center, Cleveland, OH, October 25, 2001, "White Spots and Other Matters: Using Mouse Models to Understand Human Pigmentary Disorders".
8. Grand Rounds Presentation, Wayne State University Department of Dermatology, December 5, 2001, "White Spots: Using Mouse Models to Understand Human Pigmentary Disorders".
9. Invited Lecture, Kresge Hearing Research Institute, The University of Michigan, December 12, 2001, "White Spots: Using Murine Models to Understand Human Pigmentary and Deafness-Pigmentation Syndromes".
10. Co-chair and Invited Speaker, American Society for Photobiology, Baltimore, Maryland, July 7, 2003, "Transcriptional and signaling regulation of melanocyte development and differentiation".
11. Proctor & Gamble Invited Lectureship, Department of Dermatology, University of Cincinnati, Cincinnati, OH, March 11, 2004, "Using Mouse Models to Understand Human Pigmentary Disorders: Applications to Waardenburg Syndrome & Neurofibromatosis".
12. Invited Speaker, D.C. Dermatological Society, National Institutes of Health, April 27, 2004, "Using Mouse Models to Understand Human Pigmentary Disorders".
13. Invited Speaker, NCI Pediatric Oncology Branch Seminar Series, November 19, 2004, "Ras-Mediated Signalling in Melanocytes and Melanoma: Problems and Opportunities".
14. Invited Seminar Speaker, NIDCD Intramural Program, Rockville, MD, December 17, 2004, "Understanding the Role of Melanocytes in the Stria Vascularis: The *Microphthalmia-White* Mouse as a Model of Human Deafness-Pigmentation Syndromes".
15. Invited Seminar Speaker, Laboratory of Cellular Oncology, NCI, NIH, March 22, 2005, "Ras-Dependent Signal Transduction in Melanocytes and Melanoma".
16. Invited Introductory Lecture to "Pigmentation and Melanoma Symposium", Society for Investigative Dermatology Annual Meeting, St. Louis, MO, May 5, 2005
17. Invited Speaker, D.C. Dermatological Society, National Institutes of Health, June 7, 2005, "Dermoscopy and the Evaluation of Pigmented Lesions".
18. Invited Speaker, Dermatology Grand Rounds, Henry Ford Health System, Detroit, MI, March 29, 2006, "Somatic Mutations in Melanocytic Nevi and Melanoma: Relevance to Therapeutic Strategies" and "Evidence-Based Dermoscopy? A Review, and Applications to Xeroderma Pigmentosum".
19. Invited Speaker, Atlantic Dermatological Conference, Washington, D.C., April 30, 2006, "Dermoscopy and Its Relationship to Histopathology: What is the Evidence?"

20. Invited Speaker, Annual Meeting, Pan-American Society for Pigment Cell Research, Cincinnati, OH, September 7-10, 2006, "Mechanisms of Hypo- and Hyperpigmentation: Lessons Learned from Mouse Models of Waardenburg syndrome and type I Neurofibromatosis"
21. Invited Speaker, Uniformed Services University of the Health Sciences (USUHS) Molecular & Cell Biology Seminar, Bethesda, MD, October 24, 2007, "From Melanocytes to Melanoma: New Approaches to an Old Problem".
22. Invited Speaker, Dermatology Grand Rounds, John A. Dingell V.A. Medical Center, Wayne State University School of Medicine, Detroit, MI, February 27, 2008, "Using Melanocyte Biology to Understand Genetic Pigmentary Disorders and Melanoma".
23. Invited Speaker, "Melanoma and the Sun" in the series "Demystifying Medicine", National Institutes of Health, Bethesda, MD, February 10, 2009.
24. Invited Speaker, Workshop, Xeroderma Pigmentosum and Other Diseases of Human Premature Aging and DNA Repair: Molecules to Patients, Lansdowne, VA, September 21-24, 2010, "Use of dermatoscopy in diagnosis of XP".
25. Visiting Professor, Tumor Biology Graduate Program, Lombardi Comprehensive Cancer Center, Georgetown University Medical Center, Washington, DC, March 18, 2011, "Polycomb Proteins in Melanoma: Exploring Connections between Melanoma and Melanocyte Stem Cells".
26. Invited Speaker, Department of Biochemistry and Molecular Biology, University of Maryland School of Medicine, Baltimore MD, March 29, 2011, "Polycomb Proteins in Melanoma: Exploring Connections between Melanoma and Melanocyte Stem Cells".
27. Invited Speaker, University of Maryland Greenebaum Cancer Center Grand Rounds, Baltimore, MD, April 23, 2012, "Role of the Polycomb Protein EZH2 in Suppression of Melanoma Senescence and Tumorigenicity."
28. Invited Speaker, NIH Pigment Cell and Melanoma Interest Group, Bethesda, Maryland, May 16, 2013, "Characterizing Subsets of Melanocyte Stem Cells".
29. Invited Speaker, Amway Corporation, Ada, Michigan, July 30, 2013, "Distinct molecular and functional properties of melanocyte progenitors from the hair follicle bulge and secondary hair germ".
30. Invited Speaker, International Pigment Cell Conference 2014, Singapore, Singapore, September 4, 2014, "Functional Properties of Subsets of Melanocyte Stem Cells".
31. Invited Speaker, University of Toledo Department of Biochemistry and Cancer Biology, February 5, 2015, "Melanocyte Stem Cells in the Hair Follicle: Detailed Characterizations and Regenerative Possibilities".
32. Invited Speaker, Pan-American Society for Pigment Cell Research, Orange, California, September 28, 2015, "In Vitro Myelination of Peripheral Neurons by CD34+ Melanocyte Stem Cells from the Murine Hair Follicle Bulge".
33. Invited Speaker, Grand Rounds, Department of Medicine, Georgetown University Medical Center, Washington, DC, September 1, 2016, "Hair Follicle and Skin-Derived Stem Cells: Characteristics and Potential for Regenerative Medicine".

Abstracts and Other Oral Presentations (Selected)

1. Abstract, Theodore S. Zimmerman Memorial Conference on Thrombosis and Hemostasis, La Jolla, CA, February 25-28, 1990, "Intersubunit Interactions in the Activation of Factor XIII".
2. Abstract, NIH Research Festival, Bethesda, MD, September 20, 1993, "Intersubunit Interactions in the Activation of Factor XIII".
3. Abstract and Oral Presentation, Society of Investigative Dermatology Annual Meeting, Washington, DC, April 26, 1997, "Density-dependent Activation of TRP-2 in Mouse Melanocytes".
4. Abstract and Oral Presentation, Pan-American Society for Pigment Cell Research Annual Meeting, Providence, RI, June 16, 1997, "Activation of TRP-2 Expression: Regulation by Cell Density in Culture and *In Vivo* Expression in Transgenic Mice".
5. Abstract and Oral Presentation, International Investigative Dermatology '98, Cologne, Germany, May 8, 1998, "Role of MITF in Melanocyte Development: A Transgenic Analysis".

6. Abstract and Oral Presentation, Pan-American Society for Pigment Cell Research Annual Meeting, Snowmass Village, CO, August 16, 1998, "Cell Density-Mediated Induction of Tyrosinase-Related Protein Gene Expression and Differential Regulation of TRP-2 Glycoforms".
7. Abstract and Oral Presentation, Society for Investigative Dermatology Annual Meeting, Chicago, Illinois, May 8, 1999, "Pax-3 As A Proliferation Factor for Developing Melanocytes".
8. Abstract and Oral Presentation, International Pigment Cell Conference, Satellite Meeting on Cellular and Molecular Control of Pigment Cell Development, Nagoya, Japan, November 4, 1999, "Comparison of the Roles of Pax3 and Mitf in Melanocyte Development".
9. Oral Presentation, Michigan Dermatological Society, Henry Ford Hospital, Detroit, MI, November 10, 1999, "Transcription Factors in Melanocyte Development: A Transgenic Analysis".
10. Abstract and Oral Presentation, Great Lakes Mammalian Development Meeting, Samuel Lunenfeld Research Institute/Mount Sinai Hospital, Toronto, Ontario, Canada, April 8, 2000, "Transcription Factors in Melanocyte Development: Distinct Roles for Pax-3 and Mitf".
11. "Hot Off The Bench" Poster Presentation, Society for Investigative Dermatology Annual Meeting, Chicago, Illinois, May 10, 2000, "Microphthalmia and Loss of Coat Pigmentation from Transgenic Expression of a Neurogenic Factor in Pigment Cell Precursors".
12. Abstract and Oral Presentation, Pan-American Society for Pigment Cell Research Annual Meeting, College Station, TX, June 25, 2000, "Microphthalmia and Loss of Coat Pigmentation from Transgenic Expression of a Neurogenic Factor in Pigment Cell Precursors".
13. Oral Presentation, International Federation of Pigment Cell Societies Development Group Workshop, The Cloisters, NIH, April 5, 2001, "Pax3 and Mitf: Differential Effects upon Melanocyte Development *in vivo*".
14. Abstracts, Poster, and Oral Presentation, Society for Investigative Dermatology Annual Meeting, Washington, DC, May 12, 2001, "Transcriptional Repression Activity and Induction of RPE Neural Differentiation Revealed by Expression of Mash-1 Transcription Factor in Pigment Cell Precursors in Transgenic Mice" and "*In vivo* Analysis of Melanocyte Development: Regulation by *c-kit* and Pax-3".
15. Abstract and Oral Presentation, Pan-American Society for Pigment Cell Research Annual Meeting, Minneapolis, MN, June 17, 2001, "Negative Regulation of Melanogenic Gene Expression and Induction of RPE Neural Differentiation Revealed by Transgenic Expression of Mash1 in Pigment Cell Precursors".
16. Abstract and Oral Presentation, Society for Investigative Dermatology Annual Meeting, Los Angeles, CA, May 17, 2002, "Synergistic Activation of the Murine *dopachrome tautomerase* Gene by the Transcription Factors Sox10 and Mitf".
17. Abstract and Poster Presentation, XVIII International Pigment Cell Conference, Egmond aan Zee, The Netherlands, September 9-13, 2002, "Enhanced MAP Kinase Activity in Differentiated *Nf1 +/-* Melanocytes".
18. Abstract and Oral Presentation, XVIII International Pigment Cell Conference Satellite Meeting III (Pigment Cell Societies Development Group), Egmond aan Zee, The Netherlands, September 13, 2002, "Synergistic Induction of Murine *Dopachrome tautomerase* Gene Expression by the Transcription Factors Sox10 and Mitf".
19. Abstract and Poster Presentation, Association for Research in Otolaryngology Annual Meeting, Daytona Beach, Florida, February 24, 2003, "Hearing Dysfunction in *Mitf^{Mi-wh/+}* Mice, a Model for Human Waardenburg and Tietz Syndromes".
20. Abstract and Oral Presentation, International Investigative Dermatology, Miami Beach, Florida, May 4, 2003, "Enhanced Erk phosphorylation and melanogenic enzyme expression in *Nf1 +/-* melanocytes".
21. Abstract and Oral Presentation, Pan-American Society for Pigment Cell Research Annual Meeting, North Falmouth, Massachusetts, September 7, 2003, "Hearing Dysfunction in *Microphthalmia-white* Heterozygous (*Mitf Mi-wh/+*) Mice, a Model for Human Waardenburg and Tietz Syndromes".
22. Abstract and Poster Presentation, Society for Investigative Dermatology Annual Meeting, St. Louis, MO, May 5, 2005, "Hearing dysfunction and loss of strial melanocytes in *Mitf^{Mi-wh/+}* mice, a model for human Waardenburg and Tietz syndromes".

23. Abstract and Poster Presentation, International Pigment Cell Conference, Reston, VA, September 20, 2005, "Interaction of BRAF and BRAF^{V599E} with HSP-90 and modulation with the geldanamycin analog 17-AAG".
24. Abstract and Oral Presentation, International Pigment Cell Conference, Reston, VA, September 20, 2005, "Increased Pigmentation Gene Expression in Kit-Positive *Nf1* +/- Melanocytes". (G. Diwakar, presenter)
25. Abstract and Oral Presentation, International Pigment Cell Conference, Reston, VA, September 21, 2005, "Hearing Dysfunction and Loss of Strial Melanocytes in *Mitf*^{Mi-wh/+} Mice, a Model for Human Waardenburg and Tietz Syndromes".
26. Abstract and Poster Presentation, Society for Investigative Dermatology Annual Meeting, Philadelphia, PA, May 3-6, 2006, "Interaction of BRAF and BRAF^{V600E} with HSP90 in melanoma cells and inhibition of RAF-dependent signaling by the geldanamycin analog 17-AAG" (T. Hornyak, presenting author)
27. Abstract and Poster Presentation, Society for Investigative Dermatology Annual Meeting, Philadelphia, PA, May 3-6, 2006, "Increased expression of Bmi-1 in human melanoma cell lines" (N. Chung, presenting author)
28. Abstract and Poster Presentation, Society for Investigative Dermatology Annual Meeting, Philadelphia, PA, May 3-6, 2006, "Comparison of the transduction efficiency of primary human melanocytes by lentivirus produced using different transfection reagents" (E. Achebe, presenting author)
29. Abstract and Poster Presentation, Society for Investigative Dermatology Annual Meeting, Philadelphia, PA, May 3-6, 2006, "Laser capture microdissection and DNA sequencing analysis of melanoma biopsies from xeroderma pigmentosum patients" (Y. Wang, presenting author)
30. Abstract and Poster Presentation, Xeroderma Pigmentosum and Other Diseases of Human Premature Aging and DNA Repair: Molecules to Patients Conference, National Conference Center, Lansdowne, VA, September 5-8, 2006, "Dermoscopy in the Management and Evaluation of Xeroderma Pigmentosum (XP) Patients"
31. Abstract and Oral Presentation, Pan-American Society for Pigment Cell Research Annual Meeting, Chicago, IL, September 13-16, 2007, "Identification and Characterization of Melanocyte Label-Retaining Cells" (H.-Y. Hwang, presenting author).
32. Abstract and Oral Presentation, Pan-American Society for Pigment Cell Research Annual Meeting, Chicago, IL, September 13-16, 2007, "Expression of polycomb group proteins BMI-1 and EZH2 in melanocytes and melanoma".
33. Abstract and Oral Presentation, 20th International Pigment Cell Conference and 5th International Melanoma Research Congress, Sapporo, Japan, May 7-12, 2008, "Characterization of melanocyte label-retaining cells by microarray analysis" (H.-Y. Hwang, presenting author).
34. Abstract and Oral Presentation, International Investigative Dermatology 2008, Kyoto, Japan, May 15-18, 2008, "Characterization of melanocyte label-retaining cells by microarray analysis" (H.-Y. Hwang, presenting author).
35. Abstract and Poster Presentation, Society for Investigative Dermatology Annual Meeting, Montreal, Canada, May 6-9, 2009, "Inhibition of cell proliferation by BMI-1 depletion in human melanoma cells" (B. Zhao, presenting author).
36. Abstract and Oral Presentation, Pan-American Society for Pigment Cell Research Annual Meeting, Memphis, TN, September 4-7, 2009, "Functional properties and characterization of melanocyte label-retaining cells" (H.-Y. Hwang, presenting author).
37. Abstract and Poster Presentation, Pan-American Society for Pigment Cell Research Annual Meeting, Memphis, TN, September 4-7, 2009, "Importance of EZH2 for the suppression of cellular senescence in melanocytes and melanoma cells" (T. Fan, presenting author).
38. Abstract and Poster Presentation, Society for Melanoma Research 2009 International Congress, November 1-4, 2009, "Suppression of a cellular senescence phenotype in melanoma cells by the Polycomb factor EZH2".
39. Oral Plenary Presentation, Society for Investigative Dermatology Annual Meeting, Atlanta, GA, May 5-8, 2010, "In vivo regeneration of the follicular pigmentary unit with melanocyte progenitors from adult skin".

40. Oral Plenary Presentation, Japanese Society for Investigative Dermatology Annual Meeting, Kyoto, Japan, December 10, 2011, "Preferential in vivo regeneration of the follicular pigmentary unit with melanocyte progenitors derived from the secondary hair germ".
41. Oral Presentation, International Federation of Pigment Cell Societies Pigment Cell Development Conference, Edinburgh, Scotland, May 7, 2013, "Distinct molecular and functional properties of melanocyte progenitors from the hair follicle bulge and secondary hair germ".
42. Abstract and Oral Presentation, European Society for Pigment Cell Research, Edinburgh, Scotland, September 16, 2015, "In Vitro Myelination of Peripheral Neurons by CD34+ Melanocyte Stem Cells from the Murine Hair Follicle Bulge".
43. Abstract and Poster Presentation, Pan-American Society for Pigment Cell Research, Orange, California, September 27-30, 2015, "Quiescence and Proliferative Properties of Melanocyte Stem Cell Sub-populations in Bulge and Secondary Hair Germ Region of Hair Follicle" (B. Tandukar, poster presenter, 3rd prize poster award).
44. Abstract and Poster Presentation, Pan-American Society for Pigment Cell Research, Orange, California, September 27-30, 2015, "Melanocyte stem cell marker expression in human skin-derived stem cells" (S. Joshi, poster presenter).

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