Curriculum Vitae
Angela R. Hess

Biographical Data:

Home address:
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Mailing address:
Bloomsburg University
Dept. of Biological and Allied Health Sciences
271 Hartline Science Center
400 East Second Street
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Faculty Appointments:

2007-present: Assistant Professor
Bloomsburg University; Dept. of Biological and Allied Health Sciences, Bloomsburg, PA.

2007: Adjunct Faculty
William Rainey Harper College; Department of Biology
Palatine, IL.

2006-2007: Research Assistant Professor
Northwestern University; Feinberg School of Medicine
Department of Dermatology, and the Children's Memorial Research Center, Children's Memorial Hospital, Chicago, IL.

Employment:

2004-2006: Research Scientist
Children's Memorial Research Center; Children's Memorial Hospital
Chicago, IL.

Education:

2002-2004: Postdoctoral Fellow
Department of Anatomy and Cell Biology; The Holden Comprehensive Cancer Center, University of Iowa, Iowa City, IA.

1998-2002: Ph.D. Anatomy and Cell Biology
Emphasis in Molecular Medicine
Department of Anatomy and Cell Biology; University of Iowa, Iowa City, IA.

1998: B.S. Microbiology, Minor in Biochemistry and Molecular Biology
The Pennsylvania State University, University Park, PA.

Honors and Awards:

2007: College of Science and Technology Research/Scholarship award from Bloomsburg University. Project titled "EphA2 as a promoter of growth in malignant melanoma"

2003: Finalist for the UMI Dissertation Award sponsored by the National Council of Graduate Schools.
2003: Received the D.C. Spriestersbach Dissertation Prize in the Biological and Life Sciences from the University of Iowa.
2002: Received travel award from the American Association of Anatomists to attend the Annual Experimental Biology Meeting.
2001: Selected to attend American Association for Cancer Research special workshop; "Pathobiology of Cancer". Received training in the histology and pathology of numerous tumor types.
2000-2002: President of the Department of Anatomy and Cell Biology Graduate Students, the University of Iowa.
2000: Recipient of Tung-Yang Wing Award for Superior Achievement in Anatomy Graduate Education, the University of Iowa.
1999: Electron Microscopy Techniques Presentation Award, the University of Iowa.
1997: Recipient of Biochemistry and Molecular Biology Research Award; the Department of Biochemistry and Molecular Biology, the Pennsylvania State University.
1995-1998: Member of The Pennsylvania State University Ronald E. McNair Scholars program; received undergraduate research scholarship for project entitled: *Isolation and characterization of the 61D3 monoclonal antibody.*

Teaching Experience:

Bloomsburg University:	Anatomy and Physiology I (50:173); Anatomy and Physiology II (50:174); Concepts in Biology I (50:114); Applied Research (80:590)
William Rainey Harper College:	Human Anatomy (BIO 160)
Northwestern University	Guest Lecturer to Northwestern Dermatology Medical Residents: "Melanocytes to Melanoma: To Tan or Not To Tan?"
University of Iowa:	Gross Anatomy for Medical Students (60:103:600), Gross Anatomy for Dental Students (060:101); Gross Anatomy for Physical Therapy Students (060:108)

Undergraduate and Graduate students: mentored research projects

2008: Katie Raymis, undergraduate summer research project. Bloomsburg University
2008: Shannon Carper, undergraduate summer research project. Bloomsburg University
2008: Jillian Kida, undergraduate honors project. Bloomsburg University
2008: Jesseca Whitenight, undergraduate summer research project. Bloomsburg University

Professional Experience:

Reviewer for Journal:	*Cancer Research*
Reviewer for Journal:	*Experimental Dermatology*
Reviewer for Journal:	*American Journal of Pathology*
Reviewer for Journal:	*IOVS*
Grant Reviewer for:	PA Perf Review 06-07 Cycle B
	Health Research Board, Ireland

Professional Memberships:

2008-present: Member of the Bloomsburg University Institutional Animal Care and Use Committee
2006-present: Member of the Children's Memorial Research Center

2006-2007: Associate Member of the Robert H. Lurie Comprehensive Cancer Center, Northwestern University, Chicago, IL.
2006-2007: Member, Steering Committee for the Women's Faculty Organization, Northwestern University, Chicago, IL.
2000-present: Member, American Association for Cancer Research
2000-present: Member, American Society for Cell Biology
2002-2004: Member of the ASCB Sub-Committee on Postdoctoral Training
2000-present: Member, American Association of Anatomists

Grant Activity:

Current:

1/1/2007-12/31/2008: Melanoma Research Foundation Career Development Award
Project Title: "EphA2 as a therapeutic target for malignant melanoma" $50,000/year
Principle Investigator

1/1/2008-12/31/2008: Bloomsburg University Foundation Margin of Excellence Grant
Project Title: "Investigating the role of EphA2 in promoting malignant melanoma" $4372.00
Principle Investigator

5/1/2008-5/1/2009: Research and Disciplinary grant from Bloomsburg University
Project Title: "Investigating the role of EphA2 in malignant melanoma" $9858.00
Principle Investigator

6/1/2008-5/31/2009: TALE Teacher-Scholar grant
Project Title: "Establishing an academic biology learning environment (ABLE)" $2986.00
Co-Principle Investigator

Past:

2002-2004: Post-doctoral Oncology Research Fellowship; Holden Comprehensive Cancer Center, University of Iowa.
2001-2002: Pre-doctoral Research Fellowship; Department of Internal Medicine, University of Iowa

Invited Talks:

"Summer Sun: The Good, The Bad, and The Ugly" Featured speaker for the Bloomsburg University Beta Beta Beta National Honor Society Induction Ceremony. (2007)

"Melanocytes to Melanoma: To Tan or Not to Tan?" Northwestern University Department of Dermatology. Guest lecturer for medical residents. (2006)

"Bench to Bedside: Focal Adhesion Kinase promotes an aggressive melanoma phenotype" Northwestern University Department of Dermatology grand rounds. (2006)

Publications:

Publications in Refereed Journals:

1. **Hess A.R**, N.V. Margaryan, E.A. Seftor, and M.J.C. Hendrix, 2007. Deciphering the signaling events that promote melanoma tumor cell vasculogenic mimicry and their link to embryonic vasculogenesis: Role of the Eph Receptors. *Developmental Dynamics* 236:3283-3296.

2. Topczewska, J.M, L.M. Postovit, N.V. Margaryan, A. Sam, **A.R. Hess**, W.W. Wheaton, B. Nickoloff, J. Topczewski, and M.J.C. Hendrix. 2006. Convergence of Embryonic and Tumorigenic Pathways via Nodal Signaling: Role in Melanoma Aggressiveness. *Nature Medicine* 12(8): 925-932.

3. **Hess, A.R.** and M.J.C. Hendrix. 2006. Focal adhesion kinase signaling and the aggressive melanoma phenotype. *Cell Cycle* 5(5): 478-480.

4. **Hess, A.R.**, E.A. Seftor, L.M. Gruman, M.S. Kinch, R.E.B. Seftor and M.J.C. Hendrix. 2006. VE-cadherin regulates EphA2 in aggressive melanoma cells through a novel signaling pathway: implications for vasculogenic mimicry. *Cancer Biology and Therapy* 5(2): 228-233. (Cover Illustration)

5. Payne, S.L., B. Fogelgren, **A.R. Hess**, E.A. Seftor, E.L. Wiley, S.F.T. Fong, K. Csiszar, M.J.C. Hendrix, and D. A. Kirschmann. 2005. Lysyl oxidase regulates breast cancer cell migration and adhesion through a hydrogen peroxide-mediated mechanism. *Cancer Research* 65(24): 11429-11436.

6. **Hess, A.R.**, L.M. Postovit, E.A. Seftor, N.V. Margaryan, G.B. Schneider, R.E.B. Seftor, B.J. Nickoloff, and M.J.C. Hendrix. 2005. Focal adhesion kinase promotes an aggressive melanoma phenotype. *Cancer Research* 65(21): 9851-9860.

7. van der Schaft, D., R.E.B. Seftor, E.A. Seftor, **A.R. Hess**, L.M. Gruman, D.A. Kirschmann, Y. Yokoyama, A.W. Griffioen, and M.J.C. Hendrix. 2004. Differential effects of angiogenesis inhibitors on vascular network formation by endothelial and melanoma cells. *Journal of the National Cancer Institute* 96(19): 1473-1477

8. Hendrix, M.J.C., E.A. Seftor, **A.R. Hess**, and R.E.B. Seftor. 2003. Vasculogenic mimicry and tumour-cell plasticity: lessons from melanoma. *Nature Cancer Review*s 3: 411-421.

9. Seftor, R.E.B., E.A. Seftor, **A.R. Hess**, Paul S. Meltzer, and M.J.C. Hendrix. 2003. The role of the vasculogenic phenotype and its associated extracellular matrix in tumor progression: implications for immune surveillance. *Clinical and Applied Immunology Reviews* 3: 263-276.

10. Hendrix, M.J.C., E.A. Seftor, **A.R. Hess**, and R.E.B. Seftor. 2003. The molecular plasticity of human melanoma cells. *Oncogene* 22:3070-3075.

11. Hendrix, M.J.C., E.A. Seftor, **A.R. Hess**, and R.E.B. Seftor. 2003. The molecular plasticity of human melanoma cells. *Oncogene* 22:3070-3075.

12. Walker-Daniels, J., **A.R. Hess**, M.J.C. Hendrix, and M.S. Kinch. 2003. Differential regulation of EphA2 in normal and malignant cells. *American Journal of Pathology* 162(4): 1037-1042.

13. **Hess, A.R.**, E.A. Seftor, R.E.B. Seftor, and M.J.C. Hendrix. 2003. Phosphoinositide 3-kinase regulates MT1-MMP and MMP-2 activity during melanoma vasculogenic mimicry. *Cancer Research* 63: 4757-4762.

14. Hendrix, M.J.C., E.A. Seftor, P.S. Meltzer, **A.R. Hess**, L.M. Gruman, B.J. Nickoloff, L. Miele, D.D. Sheriff, G.C. Schatteman, M.A. Bourdon, and R.E.B. Seftor. 2002. The plasticity of aggressive melanoma tumor cells: recapitulation of an embryonic stem cell program. *Recent Advances and Research Updates* 3(2): 187-200.

15. Seftor, E.A., Meltzer, P.S., Schatteman, G.C., Gardner, L.M.G., **A.R. Hess**, Kirschmann, D.A., Seftor R.E.B., and Hendrix, M.J.C. 2002. Expression of multiple phenotypes by aggressive melanoma tumor cells: role in vasculogenic mimicry. *Critical Reviews in Oncology/Hematology* 44: 17-27.

16. Hendrix, M.J.C., E.A. Seftor, P.M. Meltzer, L.M.G. Gardner, **A.R. Hess**, G.C. Schatteman, and R.E.B. Seftor. 2001. Expression and functional significance of VE-cadherin in aggressive melanoma cells: role in vasculogenic mimicry. *Proceedings of the National Academy of Science* 98:8018-8023.

17. **Hess, A.R.**, E.A. Seftor, L.M.G. Gardner, K. Carles-Kinch, G.B. Schneider, M.S. Kinch, R.E.B. Seftor, and M.J.C. Hendrix. 2001. Molecular regulation of tumor cell vasculogenic mimicry by tyrosine phosphorylation: role of epithelial cell kinase. *Cancer Research* 61:3250-3255.

18. Maniotis, A. J., R. Folberg, **A.R. Hess**, E.A. Seftor, L.M.G. Gardner, J. Pe'er, J.M. Trent, P.S. Meltzer, and M.J.C Hendrix. 1999. Vascular channel formation by human melanoma cells in vivo and in vitro: vasculogenic mimicry. *American Journal of Pathology* 155(3): 739-752.

Books:

1. Hendrix, M.J.C., E.A Seftor, **A.R. Hess** and R.E.B. Seftor. 2006. The plasticity of melanoma cells and associated clinical implications, In: Melanocytes to Melanoma: The Progression to Malignancy, (V.J. Hearing and S.P.L. Leong, eds.), Humana Press, Totowa, NJ, USA, pp533-550

2. Hendrix, M.J.C., E.A. Seftor, P.S. Meltzer, **A.R. Hess**, L.M. Gruman, B.J. Nickoloff, L. Miele, D.D. Sheriif, G.C. Schatteman, M.A. Bourdon, and R.E.B. Seftor. 2004. The stem cell plasticity of aggressive melanoma tumor cells. In: Germinal Stem Cells, (E.S. Sell ed.), Humana Press, Totowa, NJ, USA, pp297-306.

3. Seftor, E.A., **A.R. Hess**, Meltzer P.S., Schatteman, G.C., Gruman, L.M., Kirschmann, D.A., Seftor, R.E.B., and Hendrix, M.J.C. 2001. Tumor cell plasticity allows for vasculogenic mimicry by aggressive melanoma. In: Basic and Clinical Research on Tumor Markers (J.C. Barrett, K. Imai, T. Kakizoe, J.E. Shively, and K. Yamaguchi Ed.)

Presented (Abstracts):

1. **Hess, A.R.,** N.V. Margaryan, and M.J.C. Hendrix. 2008. EphA2 as a potential therapeutic target for malignant melanoma. Proceedings of the American Association for Cancer Research, *in press*.

2. Postovit, L., Topczewska, J., Margaryan, N., Sam, A., **A.R. Hess**, Wheaton, W.W., Nickoloff, B.J., Topczewski, J., and Hendrix, M.J.C. 2006. The convergence of embryonic and tumorigenic signaling pathways contributes to tumor cell plasticity. Molecular Biology of the Cell, in press.

3. Payne, S.L., **A.R. Hess**, R.R. Driskell, J.F. Engelhardt, M.J.C. Hendrix, D.A. Kirschmann. 2005. Lysyl oxidase facilitates intracellular signaling in invasive breast cancer cells. Proceedings of the American Association for Cancer Research 46: 287.

4. Kirschmann, D.A., **A.R. Hess**, E.A. Seftor, N. Margaryan, and M.J.C. Hendrix. 2003. Lysyl oxidase facilitates cancer cell motility. Proceedings of the American Association for Cancer Research 44: 999.

5. van der Schaft, D.W.J., E.A. Seftor, **A.R. Hess**, L.M. Gruman, Y. Yokoyama, A.W. Griffioen, and M.J.C. Hendrix. 2003. The differential effects of angiogenesis inhibitors on vascular network formation by endothelial cells versus aggressive melanoma tumor cells. Proceedings of the American Association for Cancer Research 44: 696.

6. **Hess, A.R.**, E.A. Seftor, R.E.B. Seftor, and M.J.C. Hendrix. 2003. Phosphoinositide 3-kinase is an important regulator of MT1-MMP and MMP-2 activity during aggressive melanoma tumor cell vasculogenic mimicry *in vitro*. Proceedings of the American Association for Cancer Research 44: 474.

7. Lee, M.J.L., E.A. Seftor, **A.R. Hess**, R.E.B. Seftor, and M.J.C. Hendrix. 2002. Role of c-met signaling in tumor cell vasculogenic mimicry. Molecular Biology of the Cell 13(S): 74a.

8. **Hess, A.R.**, Seftor, E.A., R.E.B. Seftor, and M.J.C. Hendrix. 2002. Phosphoinositide 3-kinase acts downstream of EphA2 to regulate the membrane-type 1 matrix metalloproteinase (MT1-MMP) and matrix metalloproteinase 2 (MMP-2) promoting vasculogenic mimicry *in vitro*. Molecular Biology of the Cell 13(S): 210a.

9. **Hess, A.R.**, Seftor, E.A., Gruman, L.M., Gruman, Kinch, M.S., Seftor, R.E.B., and Hendrix, M.J.C. 2002. Molecular Dissection of Vasculogenic Mimicry Displayed by Highly Aggressive Human Melanoma Tumor Cells. FASEB Journal 16(5 Pt 2): A1249.

10. Hendrix, M.J.C., E.A. Seftor, L.M. Gruman, **A.R. Hess**, L.M.L. Lee, D.A. Kirschmann, D.D. Sheriff, G.C. Schatteman, and R.E.B. Seftor. 2002. Transendothelial function of human metastatic melanoma cells: role of inductive microenvironment in cell fate determinations. Proceedings of the American Association for Cancer Research 43: 39.

11. **Hess, A.R.**, Seftor, E.A., Gruman, L.M., Gruman, Kinch, M.S., Seftor, R.E.B., and Hendrix, M.J.C. 2002. Molecular Regulation of Melanoma Cell Tumor Cell Vasculogenic Mimicry by EphA2 and VE-cadherin: A Novel Signaling Pathway. Proceedings of the American Association for Cancer Research 43: 36

12. **Hess, A.R.**, Seftor, E.A., Kirschmann, D.A., Gruman, L.M., Schneider, G.B., Arbiser, J.L., Seftor, R.E.B., and Hendrix, M.J.C. 2001. Molecular signaling pathways critical for tumor cell vasculogenic mimicry. Molecular Biology of the Cell 12(S): 18a-19a.

13. **Hess, A.R.**, E.A. Seftor, L.M.G. Gardner, G.B. Schneider, R.E.B. Seftor, and M.J.C. Hendrix. 2001. Epithelial cell kinase (EphA2) and its downstream effector, phosphoinositide 3-kinase, as molecular regulators of tumor cell vasculogenic mimicry. Proceedings of the American Association for Cancer Research 42: 939.

14. **Hess, A.R.**, E.A. Seftor, L.M.G. Gardner, G.B. Schneider, R.E.B. Seftor, and M.J.C. Hendrix. 2000. Molecular regulation of tumor cell vasculogenic mimicry by tyrosine phosphorylation: role of epithelial cell kinase. Molecular Biology of the Cell 11(S): 335a.

15. Maniotis, A., R. Folberg, **A. Hess**, N. Sharma, E. Seftor, and M.J.C. Hendrix. 2000. Endothelial cell damage in melanomas. ARVO 41:S109.

16. Maniotis, A., R. Folberg, **A. Hess**, E.A. Seftor, J. Pe'er, J.M. Trent, P.S. Meltzer, and M.J.C. Hendrix. 1999. Tumor Vasculogenesis. FASEB J 13: LB163.