

Curriculum Vitae
Kimberly M. McDermott, Ph.D.

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EDUCATION

- 2001 **University of Nebraska Medical Center**, Doctor of Philosophy (Ph.D.) in Biochemistry and Molecular Biology.
- 1995 **University of Dallas**, Bachelor of Arts (B.A.) in Biology.

BIOMEDICAL RESEARCH EXPERIENCE

- 2001-Present **Postdoctoral Fellow**, Department of Pathology, University of California San Francisco, San Francisco, California.
- Mentor: Thea D. Tlsty, Ph.D.
 - Research Focus: Mechanistic studies on the improper organization of the microtubule cytoskeleton (centrosome and ciliary dysfunction) and the consequence of these on mammary gland development, function and carcinogenesis.
- 1995-2001 **Graduate Student**, Department of Biochemistry and Molecular Biology and The Eppley Cancer Center Research Training Program, University of Nebraska Medical Center, Omaha, Nebraska.
- Mentor: Michael A. Hollingsworth, Ph.D.
 - Research Focus: Molecular and biochemical analysis of the adhesion properties of MUC1 in the progression and metastasis of pancreatic cancer.
- 1994-1995 **Undergraduate Research Assistant**, Biology Department, University of Dallas, Irving, Texas.
- Mentor: Kathleen Shupe-Ricksecker, Ph.D.
 - Research Focus: Identification of genes from Aloe Vera plants involved in bacterial resistance.

TEACHING EXPERIENCE

- 2004 **Invited Temporary Faculty Member**, 'Experiments in Cell and Molecular Biology', San Francisco State University, Department of Biology.
- Responsibilities: contributed to the design of the course curriculum, wrote and presented classroom lectures, coordinated experimental protocols for the students and graded laboratory reports and exams.
 - Student Evaluations: "very professional"; "excellent instructor and truly knowledgeable of the material"; "she makes every effort to teach it in the most effective manner"; "I have felt more comfortable working with Kimberly than many other instructors at this university".

TEACHING EXPERIENCE (cont.)

- 2004 **Deputy Course Director**, ‘Molecular Pathology and Biology of Neoplasia’, University of California San Francisco Biomedical Sciences Graduate Program.
- Responsibilities: contributed to the design of the course curriculum, coordinated the participation of UCSF faculty, presented classroom lectures and graded exams.
 - Student Evaluations: “Content solid, well supported and well reasoned”; “speaker was calm and clear”; “I thought this was a really interesting presentation and covered topics I hadn’t heard much about before”.
- 2003 **UCSF Postdoctoral Teaching Fellowship**, ‘Cancer Block’, University of California San Francisco School of Medicine.
- Responsibilities: contributed to the design of the course curriculum, acted as course discussion leader and graded exams.
 - Student Evaluations: “She solicited feedback from the group about how the session was structured/led, and made adjustments in response to those suggestions”; “When Kimberly explains things, she did so very effectively”; “Excellent at checking in with the group to make sure the group process was working for everyone”; “Very easy to approach and really enthusiastic about having us learn from each other”.
- 1995-Present **Supervision of Undergraduate and Graduate Students**, University of California San Francisco and University of Nebraska Medical Center.
- Responsibilities: taught an overview of the research project background and mentored the development of research projects and the laboratory skills necessary to complete that projects.

GRANTS AND FELLOWSHIPS

- 2007 **NIH K99/R00 Pathway to Independence Award**, The Role of Cilia in Mammary Gland Biology
Role: Principle Investigator. *Direct Costs*: \$905,622. *Priority Score*: 135. *Status*: (Awarded September 2007 to 2012).
- 2003-2005 **Postdoctoral Fellowship**, California Breast Cancer Research Program, University of California San Francisco.
- 2002-2003 **Postdoctoral Fellowship**, Hooper Foundation Training Grant, University of California San Francisco.
- 2001-2002 **Postdoctoral Fellowship**, NIEHS Training Grant, University of California San Francisco.
- 1998-1999 **Graduate Student Regents Tuition Fellowship**, University of Nebraska Medical Center.
- 1998-1999 **McDonald Graduate Fellowship**, University of Nebraska Medical Center.

AWARDS

- 2004 **Best Overall Disease Mechanism Poster**, Joint Breast, Prostate and Brain SPORE Retreat, University of California San Francisco.
- 2002 **AFLAC Scholars in Training Award** for travel to the American Association of Cancer Research Annual Meeting.

AWARDS (cont.)

- 2000 **Norman and Bernice Harris Cancer Research Graduate Student Award for Excellence in Cancer Research**, University of Nebraska Medical Center.
- 1999 **Award for excellence in manuscript writing**, Midwest Student Biomedical Research Forum.
- 1999 **Eppley Cancer Center Award for Excellence in Cancer Research**, Midwest Student Biomedical Research Forum.
- 1999 **Predoctoral Student Travel Award** for travel to the American Society for Cell Biology Annual Meeting.
- 1993-1995 **GTE Math and Science Award**, University of Dallas (Competitive Academic Tuition Scholarship).
- 1991-1995 **Presidential Scholarship**, University of Dallas (Competitive Academic Tuition Scholarship).

EDUCATIONAL TRAVEL

- 1997 **AACR Educational Workshop on Molecular Biology and Pathology of Neoplasia**, Keystone, Colorado.
- Intensive one-week course on the pathology and molecular biology of human cancer.
- 1997 **Wellcome Trust Biomedical Research Collaboration Grant for Collaborative Studies**, Institute of Molecular Medicine, University of Oxford, England.
- Advisors: Drs. Ann Harris and Paul Crocker
 - Conducted research focused on understanding how the primary amino acid sequence of a protein contributes to the type and extent of its glycosylation in pancreatic cancer cells.

SELECTED POSTER & ORAL PRESENTATIONS

- 2007 FASEB Society Conference on The Biology of Cilia, Saxton River, VT. **(Invited Speaker)**
- 2006 Annual American Society for Cell Biology Conference, San Diego, CA. **(Invited Speaker)**
- 2006 International Symposium on Tumor Stem Cells, Seoul, South Korea. **(Invited Speaker)**
- 2005 EMBO Workshop on Centrosomes and Spindle Pole Bodies, Heidelberg, Germany. **(Poster)**
- 2005 Keystone Symposia on Cancer and Development, Banff, Canada. **(Poster)**
- 2004 The Colloquium in Microbiology, Cell and Molecular Biology, San Francisco State University. **(Invited Speaker)**
- 2003 Annual American Society for Cell Biology Conference, San Francisco, CA. **(Poster)**
- 2003 Annual UCSF Cell Biology Retreat, Wilbur Hot Springs, CA. **(Invited Speaker)**

SELECTED POSTER & ORAL PRESENTATIONS (cont.)

- 2002 Annual UCSF Tetrad Retreat, Lake Tahoe, CA. **(Poster)**
- 2002 1st Annual AACR 'Molecular Imaging in Cancer' Conference, Orlando, FL. **(Poster)**
- 2000 40th Annual American Society for Cell Biology Meeting, San Francisco, CA. **(Poster)**
- 2000 Midwest Student Biomedical Research Forum, Omaha, Nebraska. **(Invited Speaker)**
- 1999 39th Annual American Society for Cell Biology Meeting, Washington D.C. **(Poster)**
- 1999 Midwest Student Biomedical Research Forum, Omaha, Nebraska. **(Poster)**
- 1998 5th International Workshop on Carcinoma-Associated Mucins, Cambridge, England. **(Poster)**
- 1997 AACR Molecular Biology and Pathology of Neoplasia Workshop, Keystone, Colorado. **(Poster)**

PUBLICATIONS

McDermott, K.M., Pickering, C., Roy, S., Kozakiewicz, B.K., and Tlsty, T.D. Centrosome Dysfunction in the Early Stages of Pancreatic Cancer. (In Preparation)

McDermott, K.M., and Siegel, V., Tlsty, T.D. Increased Centrosome Dysfunction in Primary Mammary Epithelial Cells from BRCA1 Mutation Carriers. (In Preparation)

McDermott, K.M., Liu, B.Y., Tlsty, T.D and Pazour, G.J. Primary Cilia Regulate Branching Morphogenesis and Mammary Gland Lobular-Alveolar Development. (Submitted to Development)

Swanson, B.J., **McDermott, K.M.**, Singh, P.K., Eggers, J.P., Crocker, P.R., and Hollingsworth, M.A. MUC1 is a counter-receptor for Myelin-Associated Glycoprotein (Siglec-4a) and their interaction contributes to adhesion in pancreatic cancer perineural invasion. (In Press, Cancer Research)

McDermott, K.M., Zhang, J., Holst, C.R., Kozakiewicz, B.K., Singla, V., Tlsty, T.D. p16(INK4a) Prevents Centrosome Dysfunction and Genomic Instability in Primary Cells. PLoS Biol 2006 March; 4(3): e51.

Discussion of this publication in the scientific news:

- Robey, R. Research Highlights (Genomic Instability: Beyond Boveri). Nature Reviews Cancer 2006 May; (6), 157-165.

Berman, H., Zhang, J., Crawford, Y. G., Gauthier, M. L., Fordyce, C. A., **McDermott, K. M.**, Sigaroudinia, M., Kozakiewicz, K. and Tlsty, T. D. Genetic and epigenetic changes in mammary epithelial cells identify a subpopulation of cells involved in early carcinogenesis. Cold Spring Harb Symp Quant Biol 2005 (70) 317-27.

Tlsty, T.D., Crawford, Y.G., Holst, C.R., Fordyce, C.A., Zhang, J., **McDermott, K.M.**, Kozakiewicz, K., and Gauthier, M.L. Genetic and Epigenetic Changes in Mammary Epithelial Cells May Mimic Early Events in Carcinogenesis. J Mammary Gland Biol Neoplasia, 2004 Jul; 9(3):263-74.

PUBLICATIONS (cont.)

Silverman, H.S., Sutton-Smith, M., **McDermott, K.M.**, Heal, P., Leir, S.H., Morris, H. R., Hollingsworth, M.A., Dell, A. and Harris, A. Contribution of Tandem Repeat Number to the O-Glycosylation of Mucins. *Glycobiology*. 2003 Apr; 13(4):265-77..

McDermott, K.M., Crocker, P.R., Harris, A., Burdick, M.D., and Hollingsworth, M.A. Overexpression of MUC1 Reconfigures the Binding Properties of Tumor Cells. *Int J Cancer*. 2001 Dec 15; 94(6):783-91.

Silverman, H.S., Parry, S., Burdick, M.D., **McDermott, K.M.**, Batra, S.K., Hollingsworth, M.A., and Harris, A. *In Vivo* Glycosylation of Mucin Tandem Repeats. *Glycobiology*. 2001 Jun; 11(6):459-71.

Parry, S., Silverman, H.S., **McDermott, K.M.**, Willis, A., Hollingsworth, M.A., and Harris, A. Identification of MUC1 Proteolytic Cleavage Sites *In Vivo*. *Biochem Biophys Res Commun*. 2001 May 11; 283(3):715-20.

Volle, D.J., Fulton, J.A., Chaika O.V., **McDermott, K.M.**, Huang, H., Steinke, L.A., and Lewis, R.E. Phosphorylation of the Kinase Suppressor of Ras by Associated Kinases. *Biochemistry*. 1999 Apr 20;38(16):5130-7.

CONTACT INFORMATION FOR LETTERS OF REFERENCES

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Relationship: Graduate Mentor

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Relationship: Current and Future Research Collaborator