**Curriculum Vitae**

**Carrie A. Franzen, PhD**

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**EDUCATION**

**Ph.D.,** Molecular Genetics, University of Illinois. Chicago, IL, August 17, 2006

**B.A.,** 1999, Biological sciences, Augustana College, Rock Island, IL, 1999

**EDUCATION**

B.A., 1999, Biological sciences, Augustana College

Ph.D. August 17, 2006, Molecular Genetics, University of Illinois at Chicago.

Dissertation: CCN1(CYR61)-TRAIL mediated apoptosis in prostate carcinoma cells

Adviser: Dr. Lester F. Lau

**RESEARCH EXPERIENCE**

1999-2006 - Graduate Student, Department of Molecular Genetics, University of Illimois at Chicago

2006-2011 – Post-doctoral research fellow, Dr. Jill Pelling’s laboratory, Northwestern University, Department of Pathology

2011-2012 – Post-doctoral research fellow, Dr. Raymond Bergan’s laboratory, Northwestern University, Department of Medicine, Division of Hematology and Oncology

2012-2015 – Post-doctoral Research Fellow, Dr. Gopal Gupta’s laboratory, Loyola University Chicago, Department of Urology

2017-2019 – Research Professional 1, Dr. Y. Lynn Wang’s laboratory, University of Chicago, Department of Pathology

2019-2021 – Research Professional/Laboratory Manager, Dr. Bana Jabri’s laboratory, University of Chicago, Department of Immunology

2021-2023 – Senior Scientist, Tempus AI

2023-2025 – Principal Scientist, Tempus AI

**TEACHING/TUTORING EXPERIENCE**

1996 – Present - Tutored elementary school, high school, and college students in basic math, pre-algebra, algebra, geometry, algebra 2, trigonometry, biology, genetics, and ACT prep (English, Math, Reading, Science, Writing, and test taking strategies) in person and using different online platforms

June 2015 – ACT Science Intensive class at Ray Chinese School for junior high and high school students

January 2018-June 2018 – ACT Science class at Fenghua Academy for junior high and high school students

**ACADEMIC AND PROFESSIONAL HONORS**

2010-2012 American Cancer Society Postdoctoral Fellowship #PF-10-235-01-CSM

2010 Award for best oral presentation at the Northwestern University Department of Pathology retreat

2007-2008 Organized Northwestern Calandra Forum

2008 American Institute for Cancer Research postdoctoral fellowship, excellent priority score (1.77),

 (no grants funded due to budget constraints)

2006-2007 Institutional Ruth L. Kirschstein National Research Service Award (NRSA) # T32 070085

2007 Invited to judge the UIC College of Medicine student research forum

2006 Honorable Mention at Sigma Xi competition, UIC

2006 First place winner of the UIC College of Medicine student research forum

1997 Member of the Aristeia Honor Society at Augustana College

1997 Award for academic excellence at Augustana

**PRESENTATIONS AT PROFESSIONAL MEETINGS**

* Lymphoma Research Foundation Mantle Cell Lymphoma Workshop, Atlanta, 2018

Invited for oral presentation

* International Society for Extracellular Vesicles meeting, Boston, 2013

Invited for poster presentation

* American Association for Cancer Research, Chicago, IL 2012

Invited for poster presentation

* Northwestern University Department of Pathology Retreat, Oak Brook, IL 2010

 Invited for oral presentation

* Northwestern University Posters and Wine

 Poster presentation, June 2008

* Lewis Landsburg Research Day

 Poster presentation, March 2008

* Cytoskeleton Signaling in Cancer Annual Meeting

 Invited for poster presentation San Diego, CA, 2008

* Presentation at the Northwestern Calandra Forum, 2007
* National Student Research Forum, Galveston, TX, 2006

 Invited for poster presentation

* American Association for Cancer Research, Washington D.C., 2006

 Invited for poster presentation

* Midwest Student Biomedical Research Forum, Omaha, NE, 2006

 Invited for poster presentation

* Signal Transduction Symposium, Chicago, IL, 2006

 Invited for poster presentation

**ABSTRACTS**

1. W. Wang, **C.A. Franzen**, M. Sukhanova, G. Venkataraman, M. Ming, A. Guo, P. Lu, D. Sheng, A. Gao, C. Xia, J. Li, X. Zhou, and Y. L. Wang. RAC2 mediates the link between B-Cell Receptor signaling and cell adhesion in mantle cell lymphoma. Lymphoma Research Foundation Mantle Cell Lymphoma Workshop, Atlanta, 2018, *Oral Presentation.*
2. W. Wang, **C.A. Franzen**, M. Sukhanova, G. Venkataraman, M. Ming, A. Guo, P. Lu, D. Sheng, A. Gao, C. Xia, J. Li, X. Zhou, and Y. L. Wang. RAC2 links B-cell receptor signaling and cell adhesion in mantle cell lymphoma. American Society for Hematology, Atlanta, 2017, *Poster*.
3. **C.A. Franzen**, K.A. Greco, R.H. Blackwell, K.E. Foreman, G.N. Gupta. Urothelial cells undergo epithelial to mesenchymal transition after exposure to muscle invasive bladder cancer exosomes. American Urological Association annual meeting, New Orleans, 2015, *Poster.*
4. A.F. Van Huis, **C.A. Franzen**, and G.N. Gupta. Exosome-Mediated Regulation of PTEN Expression in Bladder Cancer. American Urological Association annual meeting, Orlando, 2014, *Poster.*
5. K.A. Greco, **C.A. Franzen**, P.C. Kuo, R.C. Flanigan, and G.N. Gupta. PLK1 Silencing in Bladder Cancer by siRNA Delivered with Exosomes. American Urological Association annual meeting, Orlando, 2014, *Poster.*
6. **C.A. Franzen**, P. Simms, K.E. Foreman, and G.N. Gupta. Novel Method Of Exosome Quantification And Cellular Uptake Using The Amnis ImageStreamX. International Society for Extracellular Vesicles meeting, Boston, 2013, *Poster.*
7. **C.A. Franzen,** V. Todorović, J.C. Pelling, R.C. Bergan. Apigenin regulates prostate cancer matrix composition, cell attachment, and cell motility through an integrin alpha 1 dependent pathway. Aspen Cancer Conference, Aspen, 2012, *Poster.*
8. **C.A. Franzen,** V. Todorović, J.C. Pelling, R.C. Bergan. Apigenin regulates prostate cancer matrix composition, cell attachment, and cell motility through an integrin alpha 1 dependent pathway. American Association for Cancer Research, Chicago, 2012, *Poster.*
9. **C.A. Franzen**, S. Mirzoeva, R.C. Bergan, K.J. Green, and J.C. Pelling. Apigenin inhibits PC3-M cell motility through the FAK/Src signaling pathway. Cytoskeleton Signaling in Cancer meeting, San Diego, 2008, *Poster.*
10. **C.A. Franzen,** R.I. Monzon, and L.F. Lau. The extracellular matrix protein CCN1 (CYR61) sensitizes prostate carcinoma cells to TRAIL-induced apoptosis. American Association for Cancer Research, Washington D.C., 2006, *Poster.*

**PUBLICATIONS**

1. W. Wu, W. Wang, C.A. Franzen, H. Guo, J. Lee, Y. Li, M. Sukhanova, D. Sheng, G. Venkataraman, M. Ming, P. Lu, A. Gao, C. Xia, J. Li, L.L. Zhang, V.C. Jiang, M.L. Wang, J. Andrade, X. Zhou, and Y. L. Wang. Inhibition of B-cell receptor signaling disrupts cell adhesion in mantle cell lymphoma via RAC2. Blood Advances 2021 Jan; 5 (1): 185–197.
2. P. Lu, S. Wang, C.A. Franzen, G. Venkataraman, R. McClure, L. Li, W. Wu, N. Niu, M. Sukhanova, J. Pei, D.A. Baldwin, R. Nejati, M.A. Wasik, N. Khan, Y. Tu, J. Gao, Y. Chen, S. Ma, R.A. Larson & Y.L. Wang. Ibrutinib and venetoclax target distinct subpopulations of CLL cells: implication for residual disease eradication. Blood Cancer Journal 2021 February; 11(39): 1-14.
3. K.A. Greco, **C.A. Franzen**, K.E. Foreman, R.C. Flanigan, P.C. Kuo, G.N. Gupta. PLK-1 Silencing in Bladder Cancer by siRNA Delivered with Exosomes. *Urology (in press)*
4. **C.A. Franzen**, R. H. Blackwell, K.E. Foreman, P.C. Kuo, G.N. Gupta. Urinary Exosomes: The Potential for Biomarker Utility, Intercellular Signaling, and Therapeutics in Urologic Malignancy.

*Invited Review for Journal of Urology (in press).*

1. **C.A. Franzen**, R.H. Blackwell, V. Todorovic, K.A. Greco, K. E. Foreman, R.C. Flanigan, P.C. Kuo, and G.N. Gupta. Urothelial Cells Undergo Epithelial to Mesenchymal Transition After Exposure to Muscle Invasive Bladder Cancer Exosomes. *Oncogenesis 2015 Aug 17*.
2. J. Driver, C.E. Weber, J.J. Callaci, A. Kothari, M.A. Zapf, P.K. Roper, D. Borys, **C.A. Franzen**, G.N. Gupta, P.Y. Wai, J. Zhang, P.C. Kuo, Z. Mi. Alcohol Inhibits Osteopontin Dependent Transforming Growth Factor-β1 Expression in Human Mesenchymal Stem Cells. *Journal of Biological Chemistry 2015 Apr 17; 290(16).*
3. R.H. Blackwell, **C.A. Franzen**, R.C. Flanigan, P.C. Kuo and G.N. Gupta. The untapped potential of urine shed bladder cancer exosomes: biomarkers, signaling, and therapeutics. *Bladder 2014; 1(1)*
4. Z. Mi , C.Weber, P. Wai, N. Li, J. Driver, **C.A. Franzen**, G.N. Gupta, J. Zhang, and P.C. Kuo. Osteopontin Mediates TGF-β1 Dependent Transformation Of Mesenchymal Stem Cells Into Cancer Associated Fibroblasts In Breast Cancer *Oncogene 2014 Dec 22*
5. C.E. Weber, J. Driver, **C.A. Franzen**, J.B. Mascarenhas, Z. Mi, G.N. Gupta, P.Y. Wai, and P.C. Kuo. The Constituents and Potential Targets of the Extracellular Matrix: Implications for Carcinogenesis and Cancer Treatment. *Carcinogenesis and Mutagenesis 2013.*
6. **C.A. Franzen**, P.E. Simms, A.F. Van Huis, K.E. Foreman, P.C. Kuo, and G.N. Gupta. Characterization of Uptake and Internalization of Exosomes by Bladder Cancer Cells. *BioMed Research International 2014.*
7. S. Mirzoeva, **C. A. Franzen**, and J. C. Pelling. Apigenin inhibits VEGF expression in human prostate carcinoma cells via a Smad- and Src-dependent mechanism. *Molecular Carcinogenesis 2013.*
8. **C.A. Franzen**, V. Todorović, B.V. Desai, K.J. Green, and J.C. Pelling. The desmosomal armadillo protein plakoglogin regulates prostate cancer cell adhesion and motility through vitronectin-dependent Src signaling *PLoS One 2012 July; 7(7)*
9. **C.A. Franzen**, E. Amargo, V. Todorovic, B.V. Desai, S. Huda, S. Mirzoeva, K. Chiu, B.A.

Grzybowski, T-L Chew, K.J. Green, and J.C. Pelling. The chemopreventive bioflavonoid

apigenin inhibits PC3-M cell motility through the focal adhesion kinase (FAK)/Src signaling

pathway. *Cancer Prev Res*. 2009 Sep;2(9):830-41.

1. Mirzoeva S., N.D. Kim, K. Chiu, **C.A. Franzen**, R.C. Bergan, and J.C. Pelling. Inhibition of HIF**-**1 alpha and VEGF Expression by the Chemopreventive Bioflavonoid Apigenin is Accompanied by Akt Inhibition in Human Prostate Carcinoma PC3-M Cells. *Mol Carcinog*. 2008 Sep;47(9):686-700.
2. **Franzen, C.A.**, C.C. Chen, V. Todorović, V. Jurić, R.I. Monzon, and L.F. Lau. Integrin-Mediated Matrix Signaling Regulates TRAIL-Induced Apoptosis in Prostate Carcinoma Cells. *Mol. Cancer Res*. 2009 Jul; 7(7):1045-55

**MANUSCRIPTS IN REVISION**

1. A. Vistarop\*, C.A. Franzen\*, A. Efimov, P. Lu, P. Patel, K. Carroll, E. Cukierman, M. Messmer, S. Ma, J. Franco-Barraza, J. Gao, and Y.L. Wang. Shelter in place: Live CLL cells inside the bone marrow fibroblasts and its implication in residual disease persistence.