David J. Elzi Curriculum Vitae

David J. Elzi
bioAffinity Technologies
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Education and training

B.A. University of Colorado at Boulder 1991-1995
Molecular Cellular and Developmental Biology
Cum Laude in Biochemistry

Ph.D. University of Washington and Fred Hutchinson Cancer Research Center Seattle, WA, 1999-2007
Molecular and Cellular Biology
Dr. Robert N. Eisenman
Dissertation title: Transcriptional properties of the Kaiso class of transcription factors

Post-doctoral Fellowship
University of Colorado Denver School of Medicine, Department of Surgery
2007-2008
Drs. Christopher C. Silliman and Anirban Banerjee

Post-doctoral Fellowship
Greehey Children's Cancer Research Institute, UTHSCSA, San Antonio, TX
2008-2014 Post-doctoral fellow
Dr. Yuzuru Shiio

Positions

1993,1994	Cancer Undergraduate Research Fellow, University of Colorado School of Medicine
1996-1999	Research Technician, Bonfils Blood Center and University of Colorado Health Sciences Center, Denver, CO
1998-1999	Independent Flight Instructor, KBJC Broomfield, CO
1999-2007	Graduate Research Assistant, University of Washington and Fred Hutchinson Cancer Research Center; Robert Eisenman, graduate advisor
2007-2008	Post-doctoral Fellow, University of Colorado Health Sciences Center
2008-2014	Post-doctoral Fellow, Greehey Children's Cancer Research Institute, UT Health San Antonio, TX
2014-2015	Research Scientist (Shiio Lab), Greehey Children's Cancer Research Institute, UT Health San Antonio, TX
2015-2016	Research Scientist (Rebel Lab), Greehey Children's Cancer Research Institute, UT Health San Antonio, TX
2016-2020	Director of Basic and Applied Research, bioAffiniy Technologies, San Antonio, TX

2020-Present Vice President of Research, bioAffinity Technologies, San Antonio, TX

Honors

1991	University of Colorado Regent Scholarship
1993	Gold Key Honor Society
1993, 1994	University of Colorado Cancer Center Student Fellowship
1995	Cum laude Biochemistry, University of Colorado
2000-2002	Viral Oncology Training Grant, University of Washington and Fred Hutchinson Cancer Research Center, Seattle, WA
2003-2006	Chromosome Metabolism and Cancer Training Grant, Fred Hutchinson Cancer Research Center, Seattle, WA
2012	Honorable mention top four applicants Ladies Auxiliary to the Veterans of Foreign Wars Postdoctoral Cancer Research Fellowship
2012, 2013	GCCRI Director's Travel Award for conference presentation

Peer-reviewed publications (in chronological order)

Elzi, D.J., Hiester, A.A., and Silliman, C.C. Receptor-Mediated Calcium Entry is Required for Maximal Effects of Platelet Activating Factor Primed Responses in Human Neutrophils. Biochemical and Biophysical Research Communications. 1997. 240:763-765.

Silliman, C.C., Voelkel, N.F., Allard, J.D., Elzi, D.J., Tuder, R.M., Johnson, J.L., Ambruso, D.R. Plasma and Lipids from Stored Packed Red Blood Cells Cause Acute Lung Injury in an Animal Model. Journal of Clinical Investigation. 1998 101:1458-1467.

Barnett, C.C., Moore, E.E., Mierau, G.W., Partrick, D.A., Biffl, W.L., Elzi, D.J., Silliman, C.C. ICAM-I-CD18 interaction mediates neutrophil cytotoxicity through protease release. American Journal of Physiology. 1998. 274: C 1634-C 1644.

Leavy, P.J., Sellins, K.S., Thurman, G., Elzi, D., Hiester, A., Silliman, C.C., Zerbe. G., Cohen, J.J., Ambruso, D.R. In Vivo Treatment With Granulocyte Colony-Stimulating Factor Results in Divergent Effects on Neutrophil Functions Measured In Vivo. 1998. Blood. 92:4366-4374.

Johnson, J.L., Moore E.E., Partrick D.A., Tamura, T.Y., Zallen, G., Elzi, D.J., Silliman, C.C. Erk 1/2 and p38 MAP kinase pathways serve opposite roles in neutrophil cytotoxicity. 1999. Archives Surgery. 134:1074-1078.

Elzi, D.J., MacKenzie T., and Silliman, C.C. Ionomycin activates P38 and P42/44 MAP kinases in Human Neutrophils. 2001 American Journal of Physiology, Cell Biology, 281(1):C350-60.

Silliman CC, Moore EE, Zallen G, Gonzalez R, Johnson JL, Elzi DJ, Meng X, Hanasaki K, Ishizaki J, Arita H, Ao L, England KM, Banerjee A. Presence of the M-type sPLA(2) receptor on neutrophils and its role in elastase release and adhesion. Am J Physiol Cell Physiol. 2002 Oct;283(4):C1102-C1113.

Wyman TH, Bjornsen AJ, Elzi DJ, Smith CW, England KM, Kelher M, Silliman CC.

Related Articles, Links A two-insult in vitro model of PMN-mediated pulmonary endothelial damage: requirements for adherence and chemokine release. J Physiol Cell Physiol. 2002 Dec;283(6):C1592-603.

Silliman CC, Boshkov LK, Mehdizadehkashi Z, Elzi DJ, Dickey WO, Podlosky L, Clarke G, Ambruso DR. Transfusion-related acute lung injury: epidemiology and a prospective analysis of etiologic factors.
Blood. 2003 Jan 15;101(2):454-62.

Silliman CC, Elzi DJ, Ambruso DR, Musters RJ, Hamiel C, Harbeck RJ, Paterson AJ, Bjornsen AJ, Wyman TH, Kelher M, England KM, McLaughlin-Malaxecheberria N, Barnett CC, Aiboshi J, Bannerjee A. Lysophosphatidylcholines prime the NADPH oxidase and stimulate multiple neutrophil functions through changes in cytosolic calcium. J Leukoc Biol. 2003 Apr;73(4):511-24.

Kelher MR, Ambruso DR, Elzi DJ, Anderson SM, Paterson AJ, Thurman GW, Silliman CC. Formyl-Met-Leu-Phe induces calcium-dependent tyrosine phosphorylation of Rel-1 in neutrophils. Cell Calcium. 2003 Dec;34(6):445-55

Weber A[*], Marquardt J[*], Elzi D[*], Forster N[*], Starke S, Glaum A, Defossez PA, Yamada D, Delrow J, Eisenman RN, Christiansen H, Eilers M. Zbtb4 represses transcription of P21CIP1 and controls the cellular response to p53 activation. EMBO J. 2008 Jun 4;27(11):1563-74..[*]These authors contributed equally to the work.

McLaughlin NJ, Banerjee A, Khan SY, Lieber JL, Kelher MR, Gamboni-Robertson F, Sheppard FR, Moore EE, Mierau GW, Elzi DJ, Silliman CC. Platelet-activating factor-mediated endosome formation causes membrane translocation of p67phox and p40phox that requires recruitment and activation of p38 MAPK, Rab5a, and phosphatidylinositol 3-kinase in human neutrophils. J Immunol. 2008 Jun 15;180(12):8192-203.

Xu M, Luo W, Elzi DJ, Grandori C, Galloway D. NFX1 interacts with mSin3A/HDAC to repress hTERT transcription in keratinocytes. Mol Cell Biol. 2008 Aug;28(15):4819-28.

Oh MJ, Seo TB, Kwon KB, Yoon SJ, Elzi DJ, Kim BG, Namgung U. Axonal outgrowth and Erk1/2 activation by training after spinal cord injury in rats. J Neurotrauma. 2009 Nov;26(11):2071-82.

Eun JC, Moore EE, Banerjee A, Kelher MR, Khan SY, Elzi DJ, McLaughlin NJ, Silliman CC. Leukotriene b4 and its metabolites prime the neutrophil oxidase and induce proinflammatory activation of human pulmonary microvascular endothelial cells. Shock. 2011 Mar;35(3):240-4.

Silliman CC, Moore EE, Kelher MR, Khan SY, Gellar L, Elzi DJ. Identification of lipids that accumulate during the routine storage of prestorage leukoreduced red blood cells and cause acute lung injury. Transfusion. 2011 Dec;51(12):2549-5

Elzi DJ, Lai Y, Song M, Hakala K, Weintraub ST, Shiio Y. Plasminogen activator inhibitor 1 - insulin-like growth factor binding protein 3 cascade regulates stress-induced senescence. Proc Natl Acad Sci U S A. 2012 Jul;109(30):12052-7.

Elzi DJ, Song M, Hakala K, Weintraub ST, ShiioY. Wnt antagonist SFRP1 functions as secreted mediator of senescence. Mol Cell Biol. 2012 32(21): 4388-99.

Elzi DJ, Song M, Hakala K, Weintraub S, Shiio Y. Proteomic analysis of the EWS-Fli-1 interactome reveals the role of the lysosome in EWS-Fli-1 turnover; Journal Proteome Research, 2014; 13(8):3783-91.

Elzi DJ, Song M, Shiio Y. Role of galactose in cellular senescence; Experimental Gerontology, 2015; pii: S0531-5565(15)30081-4.

Elzi DJ, Song M, Houghton PJ, Chen Y, Shiio Y. The role of FLI1-EWS, a fusion gene reciprocal to EWS-FLI1, in Ewing sarcoma. Genes & Cancer, 2015; 6(11-12):452-61.

Elzi DJ, Song M, Blackman B, Weintraub ST, López-Terrada D, Chen Y, Tomlinson GE, Shiio Y .FGF19 functions as autocrine growth factor for hepatoblastoma. Genes Cancer. 2016 ;7(3-4):125-35.

McLaughlin NJ, Banerjee A, Elzi DJ, Gamboni F, Khan SY, Meng X, Mitra S, Silliman CC. LysoPCs induce Hck- and PKCδ-mediated activation of PKCγ causing p47phox phosphorylation and membrane translocation in neutrophils. Kelher MR. J Leukoc Biol. 2017;101(1):261-273.

Silliman CC, Kelher MR, Khan SY, West FB, McLaughlin NJD, Elzi DJ, England K, Bjornsen J, Kuldanek SA, Banerjee A. Supernatants and lipids from stored red blood cells activate pulmonary microvascular endothelium through the BLT2 receptor and protein kinase C activation. Transfusion. 2017; 57(11):2690-2700.

Zhou F, Elzi DJ, Jayabal P, Ma X, Chiu YC, Chen Y, Blackman B, Weintraub ST, Houghton PJ, Shiio Y. GDF6-CD99 Signaling Regulates Src and Ewing Sarcoma Growth. Cell Rep. 2020 Nov 3;33(5):108332.

Elzi DJ, Bauta WE, Sanchez JR, Das T, Mogare S, Zannes Fatland P, Iza M, Pertsemlidis A, Rebel VI. Identification of a novel mechanism for meso-tetra (4-carboxyphenyl) porphyrin (TCPP) uptake in cancer cells. FASEB J. 2021 Mar;35(3):e21427.

Teaching experience

1998-1999	Independent Flight Instructor, KBJC, Broomfield, CO
1998-present	FAA certificated flight instructor (ASE-IA)
2001	Graduate Teaching Assistant, Biochemistry 441, U of Washington
2001	Science in Education Partnership Mentor, FHCRC
2002	Curriculum developer, Aviation Learning Center, Museum of Flight, Seattle WA
2007	Preceptor, Bench to bedside first year medical student groups, University of Colorado School of Medicine
2008	Guest lecturer, series of lectures over one week on mechanisms of eukaryotic gene regulation, Department of Oriental Medicine, Daejon, South Korea
2011	Mentor, rotation graduate student Fall 2011, UTHSCSA, San Antonio

2014 Mentor, rotation graduate student Fall 2014, UTHSCSA, San Antonio
2016 Mentor, summer undergraduate student, Summer, 2015, UTHSCSA, San Antonio
2017 Acting instructor, masters student internship, Fall 2017, UTSA
2021 Acting instructor, masters student internship, Summer 2021, UTSA

Poster presentations

1997 ASCB Annual Meeting, Washington D.C., December
1999 FASEB Experimental Biology meeting, Washington D.C., April
2011 ASCB Annual Meeting, Denver CO, December
2012 ASCB Annual Meeting, San Francisco, CA, December
2013 ASCB Annual Meeting, New Orleans, LA December
2014 ASCB Annual Meeting, Philadelphia, PA December
2015 ASCB Annual Meeting, San Diego, CA December
2020 ASCB Annual Meeting, Virtual, December
2021 AACR Annual Meeting, Virtual, April
2022 ASCB Annual Meeting, Washington DC, December
2023 UMASS RNA Therapeutics Symposium, Worchester MA, June

Invited lectures, outreach activities, and committee assignments

2007 Invited lecture on transcriptional control in cancer; Daejon University, Daejon South Korea
2018 Lunch and Learn Session, Department of Biology, University of Texas at San Antonio
2018 Table leader, ASCB/EMBO Annual Meeting, San Diego, CA
2019 Pedagogy Conference Presentation, Northeast Lakeview College, San Antonio, TX
2019 Table leader, ASCB/EMBO Annual Meeting, Washington DC
2023 UTSA student field trip to bioAffinity Technologies - Organizer, moderator, and discussion panel participant, San Antonio TX, April
2023 Table leader, ASCB/EMBO Annual Meeting, Boston, MA
2024 – present Membership Committee, American Society for Cell Biology