**Patricia Ernst, Ph.D.**



ORCID ID

0000-0001-7638-2939

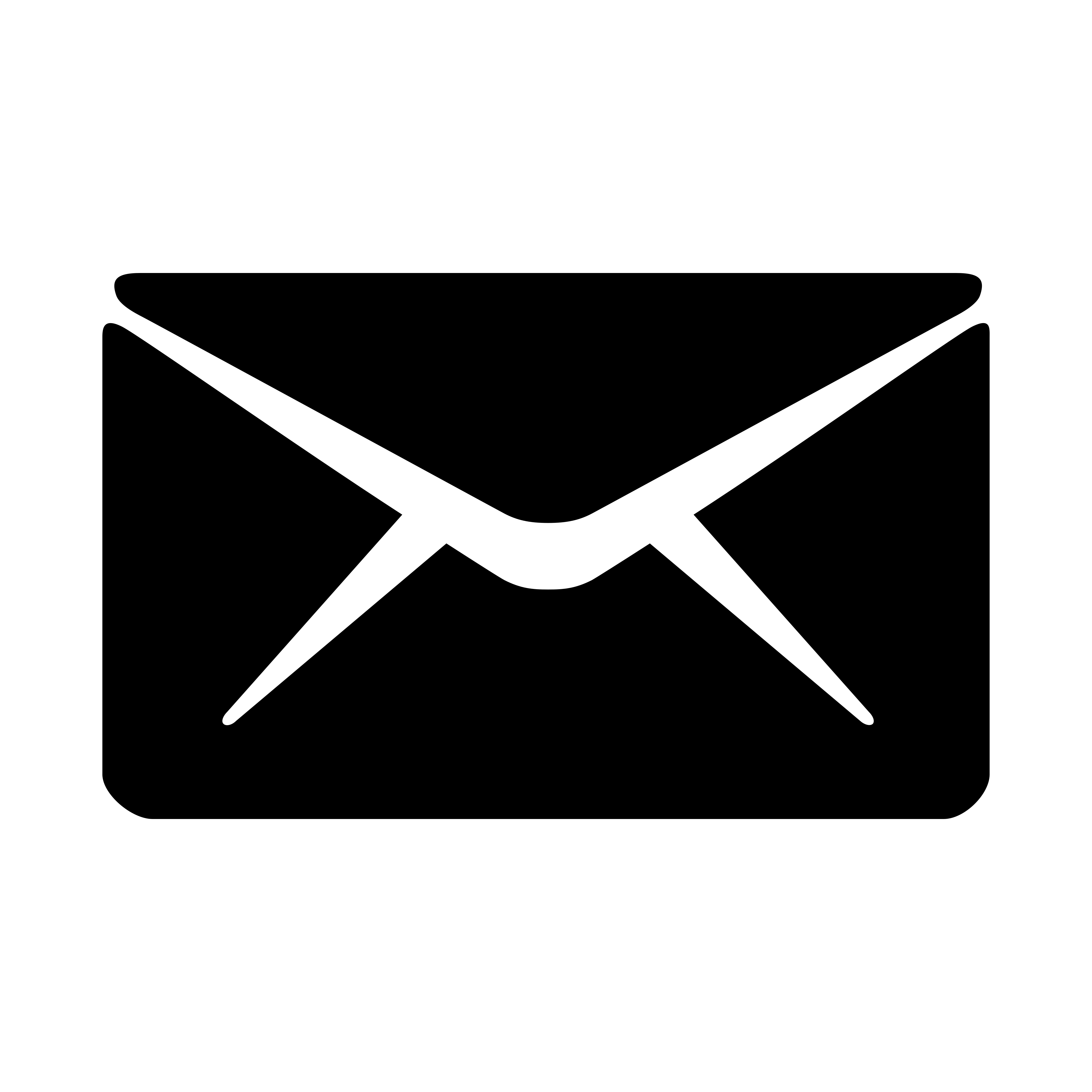
Department of Pediatrics (Hematology/Oncology/BMT) and Pharmacology

University of Colorado/Anschutz Medical Campus

12800 E. 19th Ave. Mail Stop 8302

Aurora, CO 80045

Office: 303-724-8804

patricia.ernst@cuanschutz.edu

A blue butterfly on a white background

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**Updated: 10.4.25**

**EDUCATION**

1998-2004 Harvard Medical School, Dana Farber Cancer Institute, Boston, MA. Postdoctoral Fellow, Pathology Department, Dr. Korsmeyer, Mentor

1997-1998 Washington University, St. Louis, MO.

Postdoctoral Fellow, Dept. of Molecular Oncology, Dr. Korsmeyer, Mentor

1990-1996 University of California, Los Angeles, CA.

Ph.D. in Microbiology and Immunology, Dr. Smale, Graduate Mentor

1985-1990 University of Washington, Seattle, WA.

B.S. in Biochemistry, Chemistry Department, Dr. Perlmutter, Undergraduate Mentor

**PROFESSIONAL POSITIONS**

2020-present Co-Director Molecular and Cellular Oncology Program, University of Colorado Cancer Center

2014-present Professor of Pediatrics and of Pharmacology, University of Colorado Anschutz Medical Campus, Denver

2017-2023 Pre-Clinical Associate Co-Director of the Medical Scientist Training Program, University of Colorado

2014-2019 Adjunct Professor of Genetics, Geisel School of Medicine at Dartmouth

2011-2014 Co-Director, Cancer Mechanisms Program of the Norris Cotton Cancer Center at Dartmouth

2009-2014 Associate Professor of Genetics and of Microbiology and Immunology, Dartmouth Medical School, Hanover, NH

2005-2014 Member, Norris Cotton Cancer Center

2004-2010 Assistant Professor of Genetics Dartmouth Medical School, Hanover, NH

2004 Instructor in Pathology, Harvard Medical School and Dana Farber Cancer Institute, Boston, MA

1998-2004 Postdoctoral Fellow, Department of Cancer Immunology and AIDS, Dana-Farber Cancer Institute, Boston, MA.

* 1. Postdoctoral Fellow, Department of Molecular Oncology, Washington University, St. Louis, MO.
  2. Graduate Student, Department of Microbiology and Immunology, University of California, Los Angeles, CA.
  3. Teaching Assistant, Department of Chemistry, University of

Washington, Seattle, WA

1986-1988 Laboratory Assistant, Immunex Corporation, Seattle, WA

**CERTIFICATIONS**

2023-pres NIH CSR training-Mitigating Bias in Peer Review, Review Integrity

2022 CIMR “Maximizing Mentoring”

2021-presCITI Health Information Privacy and Security (HIPS) for Clinical Investigators

2021-presCITI GCP for Clinical Trials with Investigational Drugs and Medical Devices (U.S. FDA Focus)

**HONORS AND AWARDS**

2022-2027 External Advisory Board Member, Institute for Medical Science, University of Tokyo

2022-pres Scientific Advisory Board, Kate Amato Foundation

2021-pres *Frontiers in Immunology*, Editorial Board

2019-pres Postle Family Chair in Pediatric Cancer and Blood Disorders at Children’s Hospital Colorado

2019-pres Co-Chair of Friday Scientific Workshop on Myeloid Development, American Society of Hematology Annual Meeting

2018-2022 Elected ISEH Vice-President (ascend to President in 2021)

2017-2019 *Journal of Experimental Medicine*, Advisory Editorial Board

2017-2019 *Blood*, Editorial Board

2016-2019 Scientific Program Committee, ISEH

2013 2015 Keystone Symposium Co-Organizer (“Hematopoiesis”)

2012-2015 Elected Board of Directors, ISEH

2009-2012 Gabrielle’s Angel Foundation for Cancer Research Award

2005-2007 V Foundation Scholar Award

2005-2007 Sydney Kimmel Scholar’s Award

2004-2009 Mentored Research Scientist Development Award (K01), NIDDK

2001-2004 Special Fellow of the Leukemia & Lymphoma Society

* 1. Beckenstein Fellow of Dana-Farber Cancer Institute

1997-2000 Fellow of the Cancer Research Fund of the Damon Runyon-Walter Winchell Foundation

1994-1995 University of California President’s Dissertation Year Fellowship

1991 Women’s University Club Merit Scholarship

1990 A. F. Rasmussen, Jr. Scholarship

**PEER-REVIEWED PUBLICATIONS**

**1**. Vann KR, Sharma R, Hsu CC, Devoucoux M, Tencer AH, Zeng L, Lin K, Zhu L, Li Q, Lachance C, Ospina RR, Tong Q, Cheung KL, Yang S, Biswas S, Xuan H, Gatchalian J, Alamillo L, Wang J, Jang SM, Klein BJ, Lu Y, **Ernst P**, Strahl BD, Rothbart SB, Walsh MJ, Cleary ML, Côté J, Shi X, Zhou MM, Kutateladze TG. Structure-function relationship of ASH1L and histone H3K36 and H3K4 methylation. *Nat Commun*. 2025 Mar 6;16(1):2235.

**2**. Sparbier CE, Gillespie A, Gomez J, Kumari N, Motazedian A, Chan KL, Bell CC, Gilan O, Chan YC, Popp S, Gough DJ, Eckersley-Maslin MA, Dawson SJ, Lehner PJ, Sutherland KD, **Ernst P**, McGeehan GM, Lam EYN, Burr ML, Dawson MA. Targeting Menin disrupts the KMT2A/B and polycomb balance to paradoxically activate bivalent genes. *Nat Cell Biol*. 2023 Feb;25(2):258-272

**3**. Nguyen N, Gudmundsson KO, Soltis AR, Oakley K, Roy KR, Han Y, Gurnari C, Maciejewski JP, Crouch G, **Ernst P**, Dalgard CL, Du Y. Recruitment of MLL1 complex is essential for SETBP1 to induce myeloid transformation. *iScience*. 2022 Jan 21; 25(1):103679.

**4.** Rogawski DS, Deng J, Li H, Miao H, Borkin D, Purohit T, Song J, Chase J, Li S, Ndoj J, Klossowski S, Kim E, Mao F, Zhou B, Ropa J, Krotoska MZ, Jin Z, **Ernst P**, Feng X, Huang G, Nishioka K, Kelly S, He M, Wen B, Sun D, Muntean A, Dou Y, Maillard I, Cierpicki T, Grembecka J. Discovery of first-in-class inhibitors of ASH1L histone methyltransferase with anti-leukemic activity. *Nat Commun*. 2021 05 14; 12(1):2792

**5.** Libbrecht C, Xie HM, Kingsley MC, Haladyna JN, Riedel SS, Alikarami F, Lenard A, McGeehan GM, **Ernst P**, Bernt KM. Menin is necessary for long term maintenance of meningioma-1 driven leukemia. Leukemia. 2021 05; 35(5):1405-1417.

**6.** Yang W, Trahan GD, Howell ED, Speck NA, Jones KL, Gillen AE, Riemondy K, Hesselberth J, Bryder D and **P Ernst**. Enhancing hematopoiesis from murine embryonic stem cells through MLL1-induced activation of a Rac/Rho/integrin signaling axis. *Stem Cell Reports*, 2020 Feb 11;14(2):285-299.

**7.** Addicks GC, Brun CE, Sincennes M-C, Saber J, Porter CJ, Stewart AF, **Ernst P** and MA Rudnicki. MLL1 is required for PAX7 expression and satellite cell self-renewal in mice. *Nature Communications*, 2019. Sep 18;10(1):4256

**8.** Hurtz C, Chan LN, Geng H, Ballabio E, Xiao G, Khoury H, Chen CW, Armstrong SA, Chen J, **Ernst P**, Melnick AM, Milne TZ and M Muschen. Rationale for targeting BCL6 in MLL-rearranged acute lymphoblastic leukemia. *Genes Dev*, 2019 Sep 1;33(17-18):1265-1279.

**9**. Chen Y and **P Ernst.** Hematopoietic transformation in the absence of MLL1/KMT2A: distinctions in target gene reactivation. *Cell cycle*, 2019 Jun 4:1-7

**10.** Chen Y, Jones KL, Anastassiadis K, Kranz A, Stewart AF, Arndt K, Grembecka J, Meyerson M and **P Ernst.** Distinct Pathways Affected by Menin versus MLL1/MLL2 in *MLL*-rearranged Acute Myeloid Leukemia. *Experimental Hematology*, 2019 Jan;69:37-42.

**11.** Gan T, Li BE, Mishra BP, Jones, KL and **P Ernst.** Lymphocyte-specific loss of MLL reveals preBCR checkpoint defects. *Journal of Immunology*, 2018 Mar 1;200(5):1682-1691

**12.** Chen Y, Anastassiadis K, Kranz A, Stewart AF, Arndt K, Waskow C, Yokoyama A, Jones KL, Neff T, Lee Y and **P Ernst.** MLL2, not MLL1, plays a major role in sustaining *MLL*-rearranged Acute Myeloid Leukemia. *Cancer Cell*, 2017 Jun 12;31(6):755-760

**this work was highlighted by Thirman** (same *Cancer Cell* issue)

**13.** Xu H, Valerio DG, Eisold ME, Sinha A, Koche RP, Hu W, Chen CW, Chu SH, Brien GL, Hsieh JJ, **Ernst P** and SA Armstrong. NUP98-Fusion proteins interact with the NSL and MLL1 complexes to drive leukemogenesis. *Cancer Cell*, 2016 Dec 12;30(6):863-878

**14.** Lin W, Francis JM, Li H, Gao X, Pedamallu CS, **Ernst P** and Meyerson M. Kmt2a cooperates with menin to suppress tumorigenesis in mouse pancreatic islets. *Cancer Biol Ther*. 2016 Dec;17(12):1274-1281

**15**. Shen EY, Jiang Y, Javidfar B, Kassim B, Loh YH, Ma Q, Mitchell AC, Pothula V, Stewart AF, **Ernst P**, Yao WD, Martin G, Shen L, Jakovcevski M, Akbarian S. Neuronal Deletion of Kmt2a/Mll1 Histone Methyltransferase in Ventral Striatum is Associated with Defective Spike-Timing Dependent Striatal Synaptic Plasticity, Altered Response to Dopaminergic Drugs and Increased Anxiety. *Neuropsychopharmacology*. 2016 Dec;41(13):3103-3113.

**16.** Riedel SS, Haladyna JN, Bezzant M, Stevens B, Pollyea DA, Sinha AU, Armstrong SA, Wei Q, Pollock RM, Daigle SR, Jordan CT, **Ernst P**, Neff T, Bernt KM. MLL1 and DOT1L cooperate with meningioma-1 to induced acute myeloid leukemia. *Journal of Clinical Investigation*, 2016 126(4):1438-50.

**17.** Jakovcevski M, Ruan H, Shen EY, Dincer A, Ma Q, Peter C, Jiang Y, Cheung I, Mitchell AC, **Ernst P,** Yao W-D, Akbarian S, Stewart F, Pothula V and B. Javidfar. "Neuronal Kmt2a/Mll1 Histone Methyltransferase is Essential for Prefrontal Synaptic Plasticity and Working Memory" *Journal of Neuroscience*, 2015 Apr 1;35(13):5097-6108

**18.** R Bharadwaj, C J Peter, Y Jiang, P Roussos, A Vogel-Cierna, E Shen, A Mitchell, W Mao, C Whittle, A Dincer, M Jakovcevski, V Pothula, T Rasmussen, S G Giakoumaki, P Bitsios, P D Gardner, **P Ernst**, S Ghose, P Sklar, V Haroutunian, C Tamminga, R H Myers, K Futai, M A Wood and S Akbarian, Conserved higher order chromatin regulates NMDA receptor gene expression and cognition. *Neuron*, 2014 Dec 3;84(5):997-1008

**19.** Mishra BP, Zaffuto KM, Artinger EL, Org T, Mikkola HKA, Cheng C, Djabali M and **P Ernst**. The histone methyltransferase activity of MLL1 is dispensable for hematopoiesis and leukemogenesis. *Cell Reports,* 2014 May 22;7(4):1239-47

**20.** Artinger EL and **P Ernst.** Cell context in the control of self-renewal and proliferation regulated by MLL1. *Cell Cycle*, 2013 Sep 15;12(18):2969-72.

**21.** Li BE, Gan T, Meyerson M, Rabbitts T and **P Ernst.** Distinct pathways regulated by Menin and by MLL1 in hematopoietic stem cells and B-cells. *Blood*, 2013 Sep 19;122(12):2039-46

**this work was highlighted by Djabali** (same *Blood* issue)

**22.** Huang LH, Gui J, Artinger EL, Craig R, Berwin BL, **Ernst P,** Chang CC, and Chang TY. Acat1 gene ablation in mice increases hematopoietic progenitor cell proliferation in bone marrow and causes leukocytosis. *Arterioscler Thromb and Vasc Biol,* 2013 Sep;33(9):2081-7

**23.** Artinger EL, Mishra BP, Zaffuto KM, Li BE, Chung EKY, Moore AW, Chen Y, Cheng C and **P Ernst.** AnMLL-dependent program sustains hematopoiesis. *PNAS*, 2013 Jul 16;110(29):12000-5.

**this work was highlighted by Luc and Orkin** (*PNAS* 2013 110(29):11670-11671)

**24.** Stan RV, Tse D, Deharvengt SJ, Smits NC, Xu Y, Luciano MR, McGarry CL, Buitendijk M, Nemani KV, Elgueta R, Kobayashi T, Shipman SL, Moodie KL, Daghlian CP, **Ernst P**, Lee HK, Suriawinata AA, Schned AR, Longnecker DS, Fiering SN, Noelle RJ, Gimi B, Shworak NW, Carrière C. [The Diaphragms of Fenestrated Endothelia: Gatekeepers of Vascular Permeability and Blood Composition](http://geiselmed.dartmouth.edu/ernst/pdf/dev_cell" \t "_blank). *Developmental Cell*, 2012 Dec 11;23(6):1203-18.

**25.** Cai X, Gaudet JJ, Mangan JK, Chen MJ, De Obaldia ME, Oo Z, **Ernst P\***, Speck NA\*. Runx1 loss affects apoptosis and proliferation but minimally impacts long-term hematopoietic stem cell frequency, *PLoS One*, 2011;6(12):e28430 (\*co-corresponding authors)

**26.** Gan T\*, Jude CD\*, Zaffuto KM and **P Ernst**. Developmentally regulated removal of MLL reveals a selective requirement during adult but not fetal hematopoiesis, *Leukemia*, 2010 Oct;24(10):1732-41 (\*equal contribution)

**27.** Thiel A, Blessington P, Zou T, Feather D, Wu X, Yan J, Zhang H, Liu Z, **Ernst P**, Koretzky GA, and X Hua. MLL-AF9-induced leukemogenesis requires co-expression of the wild type *Mll* allele. *Cancer Cell,* 2010 Feb 17;17(2):148-59.

**28.** Lim DA, YC Huang, Swigut T, A Mirick, Verdugo JMG, Wysocka J, **Ernst** **P** and A Alvarez-Buylla. Chromatin remodeling factor *Mll1* specifies neurogenesis from postnatal brain neural stem cells. *Nature,* 2009 Mar 26;458(7237):529-33.

**29.** Jude CD, Climer L, Xu D, Artinger E, Fisher JK, and **P Ernst**. Unique and independent roles for MLL in adult hematopoietic stem cells and progenitors.  *Cell Stem Cell,* 2007 Sep 13;1(3):324-37.

**30.** Bansal D, Fröhling S, Scholl C, Mcdowell E, Lee BH, Döhner K, **Ernst P**, Zon LI, Gilliland DG, and BJP Huntly. Cdx4 dysregulates *Hox* gene expression and generates acute myeloid leukemia alone, and in cooperation with Meis1a, in a murine model. *PNAS,* 2006 Nov 7;103(45):16924-9.

**31.** Wang Y, Yates F, Naveiras O, **Ernst P** and GQ Daley. Embryonic stem cell-derived hematopoietic stem cells. *PNAS,* 2005 Dec 27;102(52):19081-6.

**32.** Wang J, Iwasaki H, Kristov A, Febbo PG, Thorner AR, **Ernst P**, Anastasiadou E, Kutok JL, Kogan SC, Zinkel SS, Fisher JK, Hess JL, Golub TR, Armstrong SA Akashi K and SJ Korsmeyer. Conditional MLL-CBP targets GMP and models therapy-related myeloproliferative disease. *EMBO J,* 2005 Jan 26;24(2):368-81.

**33. Ernst P,** Mabon M, Davidson AJ, Zon LI, and Korsmeyer SJ. An *Mll*-dependent *Hox* Program Drives Hematopoietic Progenitor Expansion. *Current Biology*, 2004 Nov 23;14(22):2063-9.

**34. Ernst P**, Fisher J, Avery W, Wade S, Foy D, and Korsmeyer SJ. Definitive Hematopoiesis Requires the Mixed Lineage Leukemia Gene. *Developmental Cell* 2004 Mar;6(3):437-43.

**this work was highlighted by Witte and Dorshkind** (*Mol Cell* 2004 Mar 26;13(6):765-6.) **and covered by New England Cable News and the Harvard Gazette**

**35.**  Davidson A, **Ernst P**, Wang Y, Dekens MPS, Kinglsey PD, Palis J, Korsmeyer SJ, Daley G and Zon LI. Cdx4 mutants fail to specify haematopoietic progenitors during embryogenesis and can be rescued by multiple Hox genes. *Nature,* 2003 Sep 18;425(6955):300-6.

**36.** Hsieh J, **Ernst P**, Erdjument-Bromage H, Tempst P, Korsmeyer SJ. Proteolytic cleavage of MLL generates a complex of N- and C-terminal fragments that confers protein stability and subnuclear localization. *Mol Cell Biol*., 2003 Jan;23(1):186-94.

**37. Ernst P**, Wang J, Huang M, Goodman RH, and Korsmeyer SJ. MLL and CREB bind cooperatively to the nuclear coactivator CREB-binding protein. *Mol Cell Biol.,* 2001 Apr;21(7):2249-58.

**38.** Trinh LA, Weinmann AS, Hahm K, **Ernst P**, Cobb BS, Garraway IP, Merkenschlager M and Smale ST. Down-regulation of TDT transcription in CD4(+)CD8(+) thymocytes by Ikaros proteins in direct competition with an Ets activator. *Genes Dev.,* 2001 Jul 15;15(14):1817-32.

**39.** Hanson RD, Hess JL, Yu BD, **Ernst P**, van Lohuisen M, Berns A, van der Lugt NMT, Shashikant CS, Ruddle F H, Seto M and Korsmeyer SJ. Mammalian Trithorax and polycomb-group homologues are antagonistic regulators of homeotic development. *PNAS,* 1999 Dec 7;96(25):14372-7.

**40. Ernst P**, Hahm K, Trinh L, Davis JN, Roussel MF, Turck CW and Smale ST. A potential role for Elf-1 in terminal transferase gene regulation. *Mol Cell Biol.* 1996 Nov;16(11):6121-31.

**41.** Hahm K, **Ernst P**, Lo K, Kim G, Turck C and Smale S. The lymphoid transcription factor LyF-1 is encoded by specific, alternatively spliced mRNAs derived from the *Ikaros* gene. *Mol Cell Biol.,* 1994 Nov;14(11):7111-23.

**42. Ernst P**, Hahm K and Smale ST. Both LyF-1 and an Ets protein interact with a critical promoter element in the murine terminal transferase gene. *Mol Cell Biol,*1993 May;13(5):2982-92.

**BOOK CHAPTERS, REVIEWS, PERSPECTIVES**

**1**. **Ernst P**, Kyei PS and A Yokoyama. *KMT2A*-rearranged leukemia: from mechanism to drug development*. Exp Hematol*. 2025 Sep 7:151:105247; online before print

**2.** Liao W, Kohler ME, Fry T, Ernst P. Does lineage plasticity enable escape from CAR-T cell therapy? Lessons from *MLL-r* leukemia. *Exp Hematol.* 2021 Aug; 100:1-11.

**3.** Yang, W and **P Ernst**. Distinct functions of histone H3, lysine 4 methyltransferases in and malignant hematopoiesis. *Curr Opin Hematol.* 2017July;24(4):322-328.

**4**. Yang, W and **P Ernst**. Role of SET/MLL family methyltransferases in hematopoiesis and leukemia. *Int Journal Hematol*, 2017 Jan;105(1):7-16.

**5.** Watanabe T, Ernst P. Context, Context, Context: New Gene Programs Linked to Bad Behavior in MLL-AF9-Initiated Leukemia. *Cancer Cell*. 2016 Jul 11; 30(1):3-5.

**6.** P. Harte and **P Ernst.** Silent cancer regulator Sirtuin1: ready to pounce on leukemia targets. *Nature Medicine,* 2015 Apr 7;21(4):308-10.

**7.** Mishra BP and **P Ernst.** Deconvoluting MLL1-dependent pathways in hematopoiesis and leukemia. *Leukemia Supplements* 2014, 3, S9–S10; doi:10.1038/leusup.2014.5

**8.** Li BE and **P Ernst.** Two decades of leukemia oncoprotein epistasis: the Mixed Lineage Leukemia paradigm for epigenetic deregulation in leukemia. *Experimental Hematology,* 2014 Dec;42(12):995-1012

**9. Ernst, P** and CR Vakoc. WRAD: enabler of the SET1-family of methyltransferases. *Brief Funct Genome,* 2012 May;11(3):217-26.

**10.** Passegué E and **P Ernst**. IFN- wakes up sleeping hematopoietic stem cells. *Nature Medicine,* 2009 Jun;15(6):612-3.

**11. Ernst P.** “Hematopoietic Stem Cells” pg. 1-22 in “*Molecular Basis of Hematopoiesis*”. eds. Barbara Kee and Amittha Wickrema. Springer Science + Business Media, LLC 2009

**12.** Jude CD\*, Gaudet J\*, Speck NA and **P Ernst**. Leukemia and Hematopoietic Stem Cells: Balancing Proliferation and Quiescence. *Cell Cycle,* 2008 Mar 1;7(5):586-91.

\*equal contribution

**13. Ernst P**, Wang J and SJ Korsmeyer. The role of *MLL* in Hematopoiesis and Leukemia. *Curr. Opin. Hematology,* 2002 Jul;9(4):282-7.

**14. Ernst P**, Hahm K, Cobb BS, Brown KE, Trinh LA, McCarty AS, Merkenschlager M, Klug CA, Fisher AG, Smale ST. “Mechanisms of transcriptional regulation in lymphocyte progenitors: insight from an analysis of the terminal transferase promoter” *Cold Spring Harb Symp Quant Biol.* 1999;64:87-97.

**15. Ernst P** and Smale ST. Combinatorial Regulation of Transcription II: The Immunoglobulin mu Heavy Chain Gene. *Immunity* 1995 May;2(5):427-38.

**16. Ernst P** and Smale ST. Combinatorial Regulation of Transcription I: General Aspects of Transcriptional Control. *Immunity* 1995 Apr;2(4):311-9.

**INVITED PRESENTATIONS**

* 1995, July 23-29, “TdT regulation by Ets proteins” 9th International Congress of Immunology. San Francisco, CA
* 1999, Sept. 18-20, “Role of *Mll* in lymphopoiesis” Mouse Models of Hematologic Malignancies. New York, NY
* 2003, June 18, “MLL in the development of the hematopoietic system” Annual Meeting of the Dana-Farber-Harvard Cancer Center Consortium Boston, MA
* 2004, June 22, “Probing Mechanisms of hematopoietic stem cell development using *Mll* (Mixed Lineage Leukemia) gene deficiency” Lund University, Lund, Sweden
* 2005, Jan. 26 “HSC function through the vantage point of the Mixed Lineage Leukemia gene,” Regional Hematologic Malignancies Retreat, Worcester, MA
* 2006, March 22 “Developing conditional knockout models of *Mll*,” Terry Fox Institute, University of British Columbia, BC, Canada
* 2006, Nov. 20 “Probing mechanisms of hematopoietic stem cell maintenance using *Mll* (Mixed Lineage Leukemia) gene deficiency,” Regional Hematologic Malignancies Retreat, Holderness, NH
* 2007, March 29 “Role of MLL in hematopoiesis” University College London, Institute for Child Health, London, UK
* 2007, July 21-25 “Unique and independent roles for the Mixed Lineage Leukemia (MLL) gene in adult hematopoietic stem cells and progenitors,” FASEB Summer Research Conference (Hematopoietic Malignancies), Saxton’s River, VT
* 2007, Nov. 16-17, “The Mixed Lineage Leukemia (MLL) protein regulates quiescence and proliferation in the hematopoietic system,” Regional Hematologic Malignancies Retreat, Holderness, NH
* 2007, Dec. 6, “Unique and independent roles for the Mixed Lineage Leukemia (MLL) gene in adult hematopoietic stem cells and progenitors,” Maine Medical Research Institute, Scarborough, ME
* 2008, Feb. 29, “Roles of the MLL methyltransferase in sustaining hematopoiesis,” University of Utah, Salt Lake City, UT
* 2008, May 1, “Roles of the MLL proto-oncogene in sustaining adult hematopoiesis” University College London, Institute for Child Health, London, UK
* 2008, May 5, “Roles of the MLL proto-oncogene in sustaining adult hematopoiesis” Centre d’Immunology de Marseille-Luminy, Marseille, France
* 2008, May 13, “Roles of the MLL proto-oncogene in sustaining adult hematopoiesis”, Institut de Recherches Clinique de Montreal, Montreal, Canada
* 2008, June 6, “Roles of the MLL proto-oncogene in sustaining adult hematopoiesis” Fred Hutchinson Cancer Research Center, Seattle, WA
* 2008, July 9-12, “Roles of the Mixed Lineage Leukemia proto-oncogene (MLL) in sustaining adult hematopoiesis” ISEH Annual Meeting, Boston, MA
* 2008, Sept. 9-11, “Using MLL loss-of-function models to understand Mixed Lineage Leukemia,” Mouse Models of Hematologic Malignancies Symposium, Boston, MA
* 2008, Nov. 20, Plenary Talk, “Regulating stem cell quiescence in normal hematopoiesis and leukemia” 19th Congress of the Hellenic Society of Haematology, Athens Greece
* 2009, Jan. 26, “Using MLL loss-of-function models to understand Mixed Lineage Leukemia,” The Children’s Hospital of Philadelphia, Division of Oncology, Philadelphia, PA
* 2009, Feb. 10, “Using MLL loss-of-function models to understand Mixed Lineage Leukemia,” Yale Department of Pathology, New Haven, CT
* 2009, Feb. 19, “Using MLL loss-of-function models to understand Mixed Lineage Leukemia,” Robert H. Lurie Comprehensive Cancer Center, Northwestern University, Chicago IL
* 2009, March 26, “Using MLL loss-of-function models to understand Mixed Lineage Leukemia,” Dept. of Immunology, Roswell Park Cancer Institute, Buffalo, NY
* 2009, March 27, “Unique and independent roles of the MLL methyltransferase in hematopoietic stem and progenitor cells,” Stem Cell and Cancer Research Institute, McMaster University, Hamilton, Ontario
* 2009, June 5, “Lessons from *Mll* loss-of-function models,” 14th Congress of the European Hematology Association, Berlin, Germany
* 2009, Aug. 6, “Using MLL Loss-of-Function Models to Study Mixed Lineage Leukemia,” FASEB Summer Conference: Hematologic Malignancies. Saxtons River, VT
* 2009, Sept. 14-16, “Multiple Roles of the MLL Methyltransferase in Hematopoiesis” Hemato-Linné Symposium, Lund Stem Cell Center, Lund, Sweden
* 2010, March 8, “The PreB Cell Checkpoint is Dependent on MLL” Leukemia and Lymphoma Conference, U. Mass. Medical School, Worcester, MA, USA
* 2010, March 12, “Role of MLL in Hematopoiesis and Leukemia” Dartmouth ICIP Working Group, Lebanon, NH
* 2010, April 12, “What Are Stem Cells and What Can They Do For You?” Dartmouth Community Medical School presentation, Hanover, NH
* 2010, May 27, "Using MLL Loss-of-Function Models to Understand and Cure Mixed Lineage Leukemia", Immunology Program Retreat, Fairlee, VT
* 2010, Sept. 15, “What Are Stem Cells and What Can They Do For You?” Dartmouth Community Medical School presentation, Manchester, NH
* 2010, Sept. 27, “Using MLL Loss-of-Function Models to Study Mixed Lineage Leukemia” Jackson Labs, Bar Harbor, ME
* 2010, Jan. 11, “Using MLL Loss-of-Function Models to Study Mixed Lineage Leukemia”, Dept. of Pathology, Dartmouth Medical School, Lebanon, NH
* 2011, Feb. 26 “Integrating *MLL* into Pathways Controlling Normal and Aberrant Hematopoiesis”, USA-Japan Cooperative Cancer Workshop Hayama, Japan
* 2011, March 28 “Control of HSC Self-Renewal by *Mll*-Dependent Pathways”, Keystone Symposium (“Hematopoiesis”), Big Sky, MT
* 2011, June 9, “Integrating the MLL Methyltransferase into Pathways Controlling Normal and Aberrant Hematopoiesis”, Jackson Laboratories, Bar Harbor, ME
* 2011, Aug. 1, “Menin-MLL Collaboration in Hematopoiesis” FASEB Summer Conference: Hematologic Malignancies. Saxton’s River, VT
* 2011, Oct. 31, “MLL-Menin Pathways in Hematopoiesis” American Cancer Society Professors Meeting, Atlanta, GA
* 2012, Feb. 16, “The MLL1 Methyltransferase Domain is Dispensable for Hematopoietic Stem Cell and Leukemia Stem Cell Maintenance” Cancer Mechanisms group, Dartmouth Medical School, Lebanon, NH
* 2012, Feb. 20, “Hematopoietic Stem Cell-Specific Pathways Regulated by *Mll1* Coordinate Self-Renewal with Proliferation” at the invitation only NIH workshop “Regulatory Determinants of Hematopoietic Stem Cell Self-Renewal, Lineage Commitment, and Terminal Differentiation: New Insights.” American Institute of Architects, Washington DC
* 2012, Aug. 24, “*Mll1* is a Master Regulator Coordinating Hematopoietic Stem Cell Fate and Proliferation” ISEH Annual Meeting, Amsterdam, Netherlands
* 2012 Nov. 16, “Coordination of self-renewal, proliferation and gene expression by MLL1” Hellen Diller Family Comprehensive Cancer Center at UCSF, San Francisco, CA
* 2012, Dec. 8, “Coordinating self-renewal and proliferation via *Mll1-Hox* pathways and beyond” Scientific Program, The American Society for Hematology 54th Annual Meeting, Atlanta, GA
* 2013, May 17, “Role of epigenetic regulators in lymphopoiesis and leukemia” Dartmouth Annual Immunology Program Retreat, Lake Morey Resort, VT
* 2013, Aug. 5-9, “MLL1 pathways in hematopoiesis and leukemia” invited talk at the FASEB Sumer Conference, Hematologic Malignancies. Saxton’s River, VT
* 2013, Aug. 22-25 “MLL1-dependent pathways and mechanisms that maintain hematopoiesis” at the ISEH Annual Meeting, Vienna, Austria
* 2013, Sept. 9, “Lessons from the *MLL1* proto-oncogene: self-renewal and epigenetic regulation in hematopoiesis and leukemia” Pediatric Hematology/Oncology Dept. Penn State Hershey Children’s Hospital, Hershey, PA
* 2013, Sept. 19-20, “Role of MLL1 in hematopoiesis and leukemia” Plenary Speaker for Annual Midwest Blood Club Meeting, Cincinnati, OH
* 2013, Nov. 4, “Mechanisms of gene regulation by MLL1 proteins” Cancer Center/Chemical Biology Program, University of Michigan, MI
* 2013, Nov. 14, “Coordination of self-renewal, proliferation and gene expression by MLL1”, Herman B Wells Center for Pediatric Research, Indiana University School of Medicine, IN
* 2013, Nov. 20, “Unravelling the roles of *Mll1* in hematopoiesis and leukemia” Speaker, Gabrielle’s Angel Foundation Symposium, NY
* 2014, Feb. 28, “Deconvoluting the role of MLL1 epigenetic pathways in hematopoiesis and leukemia” Biomedical Research Centre, University of British Columbia, Vancouver, CA
* 2014, March 7-8 “*Mll1* function in hematopoiesis and leukemogenesis” Plenary Speaker for “Stem Cell Biology and Myelodysplastic Disorders Symposium” Providence, RI
* 2014, Oct. 25, “*Mll1* in blood homeostasis” American Association of Blood Banks Annual Meeting, Epigenetic and Metabolic Regulation of Stem Cells Session, Philadelphia, PA
* 2014, Nov. 14-15, “*Mll1*-dependent pathways in HSC self-renewal” Harvard/California Stem Cell 2.0 Meeting, Massachusetts General Hospital, Boston, MA
* 2014, Dec. 5, “Stem Cell Function without MLL1” Workshop on Myeloid Development (Satellite meeting of ASH), San Francisco, CA
* 2014, Dec. 12, Panel Discussion at “Top Medical Innovators” hosted by Scientific American World View and Center for Medicine in the Public Interest. California Academy of the Arts and Sciences, San Francisco, CA.
* 2014, Dec. 18, University of Colorado Immunology Program, “Role of *Mll1* in B cell differentiation” Aurora, CO
* 2015, Feb. 25, “Pathways and Mechanisms Coordinating HSC Self-Renewal by the MLL1 Epigenetic Regulator” invited talk at the Keystone Symposia “Hematopoiesis,” Keystone, CO
* 2015, May 14, “Deconvoluting the role of MLL1 epigenetic pathways in hematopoiesis and leukemia” Technical University of Dresden, Dresden, Germany
* 2015, Sept. 13, “Role of *Mll1* in hematopoiesis and leukemia” Kyoto University School of Medicine, Medical Innovation Center, Kyoto, Japan
* 2015, Nov. 6, “Role of *Mll1* in hematopoiesis and leukemia,” University of Illinois College of Medicine, Chicago, IL
* 2016, April 14-15, “Requirement for endogenous histone methyltransferases in MLL-fusion leukemia” Pharmacology Program Retreat, University of Colorado, Denver/Anschutz Medical Campus, Keystone, CO
* 2016 May 2-5, “Requirement for endogenous histone methyltransferases in MLL-fusion leukemia” 11th International Workshop on Molecular Aspects of Myeloid, Stem Cell Development and Leukemia, Cincinnati, OH, USA
* 2016 May 12, “Histone methyltransferases in hematopoiesis and Leukemia” Dept. of Biomedical Engineering, UC Santa Cruz, Santa Cruz CA
* 2016 May 12, Second talk at Chromatin Club forum: “Role of H3K4 methylation in mammals” Dept. of Bioengineering, UC Santa Cruz, Santa Cruz CA
* 2016 Aug. 25-28 “Role of endogenous histone methyltransferases in leukemia” ISEH Annual Meeting, San Diego, CA
* 2016, Sept. 20 “New drug targets in MLL-fusion leukemia” Pediatrics Department Annual Retreat, University of Colorado, Aspen, CO
* 2016 Nov. 7, “Endogenous Histone Methyltransferases in *MLL*-Fusion Leukemia” Herman B. Wells Center for Pediatric Research, Indiana University, Indianapolis, IN
* 2016 Dec. 5, “The role of MLL1 and MLL2 in MLL-Fusion Oncoprotein-Initiated Leukemia” American Society of Hematology Annual Meeting, San Diego, CA
* 2017 Apr. 20, “MLL1, not MLL2, plays a critical role in MLL-FP-driven AML,” Hematology Symposium, University of Massachusetts Medical School, Worcester, MA
* 2017 May 5, “ Endogenous methyltransferases in AML” University of Colorado Cancer Center, Hematologic Malignancies Program Retreat, Aurora, CO
* 2017 July 26, “MLL2, rather than MLL1, plays a major role in sustaining MLL-rearranged leukemia” FASEB Hematologic Malignancies Conference, Saxton’s River, VT
* 2017 Aug. 26, “MLL family histone methyltransferases in hematopoiesis and leukemia” Plenary talk, ISEH Annual Meeting, Frankfurt, Germany
* 2017 Oct. 27, “Histone methyltransferases in hematopoiesis and leukemia” Molecular Biology Program Annual Retreat, Snow Mountain Ranch, CO
* 2017 Nov. 3, “MLL family histone methyltransferases in hematopoiesis and leukemia” Dept. of Pathology, University of Utah School of Medicine, Salt Lake City, UT
* 2017 Dec. 6, “H3K4 methyltransferases in hematopoiesis and leukemia” Dept. of Anatomy and Cell Biology, University of Florida College of Medicine, Gainesville, FL
* 2018 May 31, “MLL family histone methyltransferases in hematopoiesis and leukemia,” Div. of Hematology/Oncology. Boston Children’s Hospital, Boston, MA
* 2018 Aug. 6, “MLL family histone methyltransferases in hematopoiesis and leukemia,” Regional Colorado Chromatin Meeting, Aurora, CO
* 2018 Dec. 2, Biochemical and Genetic Insights into MLL/11q23 Translocation Leukemia” Introduction for Scientific Spotlight at the 60th Annual American Society of Hematology Meeting, San Diego, CA
* 2019 Jan. 24, “Histone Methyltransferases in Leukemia and Hematopoiesis” Vanderbilt-Ingram Cancer Center, TN
* 2019 June 10, “Approaches to Understanding Cancer and Developing New Therapies” Visiting Professorship in Cancer Biology, University of Nebraska, Omaha NE
* 2019 June 11, “Histone Methyltransferases in Leukemia and Hematopoiesis” Department of Biochemistry and Molecular Biology, University of Nebraska Medical Center, Omaha, NE
* 2019, July 28-Aug.2, “Unique roles of histone methyltransferases and their complex components in hematopoiesis and leukemia” FASEB Summer Research Conference (Hematopoietic Malignancies), Snowmass, CO
* 2019, Aug. 21, “Developmental licensing of transformation by MLL fusion oncoproteins” University of Queensland, QIMR Berghofer Medical Research Institute, Queensland Australia
* 2019, Oct. 3, “Developmental licensing of transformation by MLL fusion oncoproteins” 3rd International Conference on Stem Cells (Aegean Conferences), Chiana, Crete, Greece
* 2019, Oct. 24, “Enhancing hematopoiesis from embryonic stem cells through MLL1-induced activation of a Rac/Rho/Integrin signaling axis”, Molecular Biology Program Retreat, Snow Mountain Ranch, CO.
* 2019, Nov. 22, “Unique roles of histone methyltransferases and their complex components in hematopoiesis and leukemia” BC Cancer Agency and University of British Columbia, Vancouver, BC
* 2020, 3-8 April, “Enhancing hematopoiesis from embryonic stem cells through MLL1-induced activation of a Rac/Rho/Integrin signaling axis”, Keystone Symposium (“Hematopoiesis”), Big Sky, MT (postponed due to pandemic to virtual seminar April 14, 2021)
* 2020, 9 September, “Revisiting the role of NFB-mediated signaling in MLL-rearranged acute myelogenous leukemia”, Center for Cancer and Blood Disorders Wednesday noon conference, Children’s Hospital Colorado, Aurora, CO
* 2021, 27 September, “Identifying methods to inhibit MLL2/KMT2B; pilot experiments to interfere with chromatin targeting” Colorado Genome Regulation Seminar, University of Colorado/AMC
* 2021, 16 December, “Unique roles of histone methyltransferases and their complex components in hematopoiesis and leukemia” Prospective Faculty Candidate seminar for Cancer Biology Program. University of Colorado/AMC
* 2022, “Regulation of B/Myeloid Fate to Improve Murine Models of High Risk, MLL-rearranged Pediatric B-ALL” 13th International Workshop on Molecular Aspects of Myeloid Stem Cell Development and Leukemia, Cincinnati, OH
* 2022, 27 June, “Developing a pediatric-relevant B-ALL model system to study relapse from CAR T cell treatment” CCBD Wednesday Research Conference, Division of Hematology/Oncology/Bone Marrow Transplant
* 2022, August 26 "Manipulating B/Myeloid Fate to Improve Mouse Models of Escape from CAR T Cell Killing" 21st Annual Colorado Immunology and Microbiology Conference, Aspen, CO
* 2022, Oct 20 “Developing a pediatric B-ALL murine model to study “lineage-switch” relapse from Chimeric Antigen Receptor T cell therapy” Colorado Springs, CO
* 2022, 9 Nov, "Unique roles of histone methyltransferases and their complex components in hematopoiesis and leukemia" Prospective Faculty Candidate seminar for Cell Biology, Stem Cells and Development Program. University of Colorado/AMC
* 2023, Feb 20 "Manipulating B/Myeloid Fate to Improve Mouse Models of Escape from CAR T Cell Killing" AACR Special Conference on Pediatric Hematologic Malignancies New Orleans, LA (postponed)
* 2023, Sept 28 “KMT2B/MLL2 in leukemia and hematopoieisis” Tsuruoka Conference: Roles of epigenetic factors in caner” Tsuruoka, Japan (virtual)
* 2023, Oct 27 “Unique Biological Functions of H3K4 histone methyltransferases” Molecular Biology Retreat, Snow Mountain Ranch, CO
* 2024 Oct 22 “Improving Pediatric B-Cell Acute Lymphoblastic Leukemia Models to Understand how to Target Lineage Plasticity” Basic to Translational Seminar Series, Pediatrics, University of Colorado/Anschutz Medical Campus, CO
* 2024 Nov 12, “Modelling pediatric *KMT2A-*r B-ALL; insights into lineage plasticity and implications for CD19-targeted therapies” Tokyo Women’s Medical University, Tokyo Japan
* 2024 Nov 12, “Modelling pediatric *KMT2A-*r B-ALL; insights into lineage plasticity and implications for CD19-targeted therapies” Institute of Medical Sciences, University of Tokyo, Tokyo Japan
* 2024, Nov 15, “Modelling pediatric *KMT2A*-r B-ALL; insights into lineage plasticity and implications for CD19-targeted therapies” Fujita Health Sciences Symposium on Cancer Science, Nagoya, Japan

**GRANT SUPPORT**

ACTIVE

“Targeting an Oncogenic Driver in Infant Acute Lymphoblastic Leukemia:

Bedside to Bench Correlative Studies”

Agency: Morgan Adams Foundation 1/1/23-12/31/25

Type: Private Foundation Grant

“Defining and predicting features of lineage-switch potential in *KMT2A*-r B-ALL using barcoding”

Agency: NIH/NCI (1R01CA269269-03S1) 4/01/22-3/31/26

Type: R01 supplement

Role: PI with Matt Witkowski co-I

“Escape from CAR T surveillance through lineage plasticity”

Agency: NIH/NCI (1R01CA269269) 4/01/22-3/31/27

Type: R01

Role: PI (with Terry Fry) and M. Eric Kohler as co-I

“Functional interplay between endogenous MLL1/KMT2A and MLL-fusion oncoproteins”

Agency: IMSUT, University of Tokyo 01/01/24-12/31/26

Type: International Collaboration Grant

Role: PI with Drs. Yokoyama and Iwama

RECENT COMPLETED

“Impact of Obesity in a syngeneic murine CAR T model”

Agency: THI Program, University of Colorado Cancer Center

Type: Catalyzing Creative Collisions Grant 6/01/24-5/31/25

Role: PI with Dr. Henry

“Bench to Bedside Discovery of Menin Inhibitor Mechanisms in Trial AALL2121”

Agency: Golfer’s Against Cancer Foundation

Type: Colorado Foundation Grant 10/1/23-9/30/24

“MLL Family Histone Methyltransferases in Myeloid Leukemia”

Agency: NIH/NCI (1R01CA224436) 6/01/18-5/31/24

Type: R01

Role: PI

“Evaluating a novel collaboration between NOTCH1 and MLL1 for improved targeted treatments in T-ALL” 1/1/21-12/30/24

Agency: Leukemia and Lymphoma Society

Role: mentor for Therese Vu, Postdoctoral Fellow

“Enhancing hematopoiesis through modulation of a histone methyltransferase: evaluating a new MLL1 gain-of-function animal model” 7/01/19-6/30/23

Agency: NIH/NIDDK (1R01DK120369)

Type: R01

Role: PI

“Developing Pediatric B-ALL Models to Identify Mechanisms of Relapse upon CAR-T Failure” Agency: Morgan Adams Foundation 1/1/19-12/31/21

Type: Private Foundation Grant

“Identification of an embryonic cell-intrinsic cancer checkpoint: studying differential transcriptional effects of the proto-oncogene MLL1 versus MLL-ENL in an embryonic system” Agency: AB NEXUS; Boulder-Anschutz pilot grant for incentivizing cross-campus collaborations

Type: Intercampus Pilot Award 12/1/20-11/31/21

Role: co-I with Mary Allen

“Connecting Epigenetic Regulator MLL1 to ERK and Survival Signaling in B cells”

Principle Investigator: Patricia Ernst

Agency: NIH/NIAID (R21-AI112143673) 8/1/17-7/31/20

Type: R21

“Developing MLL2-targeted therapy for pediatric leukemia”

Principle Investigator: Patricia Ernst 9/1/18-8/31/19

Agency: Kate Amato Foundation

Type: Private Foundation Pediatric Cancer Research Innovation Grant

Lady Tata Memorial Fellowship 9/01/18-8/31/19

Principle Investigator: Wenjuan Liao

“MLL2 as an Epigenetic Target in Acute Myelogenous Leukemia.”

Type: UK Postdoctoral fellowship to provide training for 1 year for Dr. Liao.

University of Colorado RNA Biosciences Initiative Pilot

“Enhancing Hematopoietic Stem Cell Emergence from Pluripotent Embryonic Stem Cells Using MLL1 Induction”

Principle Investigator: Patricia Ernst 1/1/18-12/31/18

Type: intramural pilot grant

**PROFESSIONAL MEMBERSHIPS**

* 2004- American Society of Hematology Active Member (ASH)
* 2004- International Society for Stem Cell Research (ISSCR)
* 2004- International Society for Experimental Hematology (ISEH)
* 2009- European Hematology Society (EHA)
* 2022- Children’s Oncology Group (COG)
* 2022- Cancer Therapy Evaluation Group (CTEP)

**SERVICE**

* Organizer of New England Regional (5 institute) Hematology Retreat, Holderness NH, 2006
* Breast Cancer Translational Scientist Search Committee, Dartmouth Med. School 2006/7 & 2007/8
* Member, NCIC Panel H (Hematopoiesis) Study Section (National Cancer Institute of Canada, now Canadian Cancer Society Research Institute), 2007-2011
* Women in Science Program, Mentor 2008-2009
* ISEH Young Investigator Planning Committee, 2007-2008
* Co-Organizer of 3rd Northeast Regional IDeA Meeting (Delaware, New Hampshire, Maine, Vermont, Rhode Island) hosted by Dartmouth Aug. 2009
* Stem Cell Expertise, I-Search Interview Projects, Richmond Middle School (Max Block, 2008; Katherine Chen 2009)
* Interviewee for Women, Gender and Science Course, Dartmouth College, 2009
* Co-Organizer of New England Regional Hematology Retreat, Holderness, NH, 2009
* ARRA Challenge Grant Ad-Hoc Reviewer, NHLBI Stem Cell Panel, 2009
* Norris Cotton Cancer Center Shared Resource Review Panel, 2009
* American Cancer Society Review Panel, Institutional Grants 2009-2010
* NICHD Ad-Hoc Reviewer, Epigenetics and Development Special Emphasis Panel, 2010
* Dartmouth Community Medical School Speaker, Stem Cells and Regenerative Medicine, 2010
* Pharmacology and Toxicology Search Committee, Dartmouth Med. School 2010/11
* NRSA Review Panel-Fellowships: Physiology and Pathobiology of Cardiovascular and Respiratory Systems, 2010
* Ad Hoc Reviewer, MCH Study Section, NIH, Washington DC, Feb. 2011
* Member, Pharmacology and Toxicology Molecular Therapeutics Faculty Search Committee, 2011-2012
* Member, Committee on Internal Review of PEMM Graduate Program 2011
* Chair, Genetics Faculty Search Committee, Genetics Position, Dartmouth Medical School, Fall 2011-2012
* Board of Directors, ISEH (International Society for Experimental Hematology and Stem Cells), 2011-2014
* Panel Speaker, Dartmouth Postdoc Association Job Search Workshop, 2012
* Organizer, Safanie Leukemia Mini-Symposium, May 2013
* Charter member, MCH Study Section, NIH 2012-2018
* Co-Organizer, Keystone Symposium (“Hematopoiesis”), 2015
* Nominating Committee, ISEH, 2014-2016
* Session Chair, ISEH Annual Meeting 2014 Montreal
* Chair, Stem Cell Section of Myeloid Workshop, Satellite meeting of ASH, 2015-2018
* Session Chair, ISEH Annual Meeting 2015 Kyoto
* Session Chair, 11th Annual Workshop on Molecular Aspects of Myeloid, Stem Cell Development and Leukemia 2016 Cincinnati
* Scientific Program Committee, ISEH Annual Meeting, 2017
* Medical Scientist Training Program Admission Committee, University of Colorado 2016-2017
* Faculty Organizer, Molecular Biology Program Retreat, Snow Mountain Ranch 2016
* Leukemia and Lymphoma Society Career Development Program Review 2017-2021
* Panel Speaker, CU Denver Center for Identity and Inclusion, “Biomedical Careers”, 2018
* Scientific Program Committee, Poster Judge, and Session Chair for ISEH Annual Meeting, 2018
* Reviewer, Agence Nationale de la Recherche grants, 2018
* External Advisory Board, External Advisory Board, Northwestern University Leukemia and Lymphoma Society SCOR grant, Drs. Crispino, Eklund, Kelleher, Ntziachristos and Shilatifard PIs.
* Chair, Scientific Spotlight “Biochemical and Genetic Insights into MLL/11q23 Translocation Leukemia”, American Society of Hematology Annual Meeting 2018
* Chair, "From Single Cell Measurements to Molecular Mechanisms" Session at Keystone Symposium "Single Cell Biology" Jan. 2019
* Curriculum Reform Committee, MSTP Representative, University of Colorado School of Medicine, 2018-2019
* Reviewer, Eidgenössische Technische Hochschule (ETH) Zürich Research Commission, 2019
* Member, Director Search Committee for Gates Bio-manufacturing Facility, University of Colorado/AMC March 2020
* Ad hoc NIH Reviewer. SEP ZRG1 VH-C (02) August 2020
* Reviewer, R01 application as part of CCTSI K to R program, December 2020
* Member, Pharmacology Chair Search Committee February 2021
* Reviewer, Anschutz NRSA workshop & mock study section, April 2021
* Career Development committee member, Maura Gasparetto, Research Assistant Professor, Hematology, University of Colorado/AMC, June 2021
* Poster judge, Pharmacology Research Day October 8, 2021
* Reviewer, Anschutz NRSA workshop & mock study section, November 2021
* Ad hoc NIH Reviewer. SEP ZRG1 OBT-C November 2021
* Career Panel Speaker (MSTP representative), CREU Summer Research Program, July 2022
* Poster Judge, Colorado Genome Regulation Symposium, Aug. 2022
* Poster Judge, 10th Annual Pharmacology Research Day, Sept. 2022
* Institutional internal reviewer, Searle Grant Applications, 2022
* Reviewer, Kate Amato Foundation, 2022-pres
* Ad hoc NIH Reviewer GRIC study section, 2023
* Poster Judge, Colorado Genome Regulation Symposium, Aug. 2024
* Ad hoc NIH Reviewer ZRG1 BTC-D (02) Cancer Biology study section, 2024
* Career Development committee member, Cailin Collins, Assistant Professor, Hematology, University of Colorado/AMC, April 2025
* CREU/DICR applicant review, April, 2025
* CCTSI K to R grant reviewer, April, 2025
* Ad hoc NIH Reviewer, ZRG CTH-L, Mammalian Models for Translational Research, July 2025

**JOURNAL AND NON-NIH REVIEWING**

Journals: *Cell, Nature Medicine, Cancer Cell, Cell Stem Cell, Molecular and Cellular Biology, Leukemia, Genes and Development, Blood, Stem Cells, BMC Genomics, Journal of Clinical Investigation, Journal of Experimental Hematology, Journal of Experimental Medicine, European Journal of Cancer, International Immunopharmacology, Stem Cell Reports, Cell Cycle, etc.*

* Abstract Selection Committee for ISSCR (2007)
* Abstract Selection Committee for ISEH (2007)
* Cancer Research UK (UK Private Funding Agency, 2008)
* Oral session judge and session chair, ISEH Annual Meeting (2008)
* Abstract Selection Committee for ASH (2009)
* Abstract Selection Committee for ISEH (2013, 2016, 2017, 2018)
* Agence Nationale de la Recherche (French Grant Agency, 2018)
* Swiss National Science Foundation, ETH Zurich Research Commission (Swiss Grant Agency, 2019)
* Kay Kendall Leukaemia Fund Grant Review (UK Private Granting Agency, 2019)
* Leukemia and Lymphoma Society Career Development Program (2016-2026)
* Kate Amato Foundation Grant Review (2022-pres)

**TEACHING**

**Visiting Professorships:**

University of Nebraska Medical Center June 2019

Special Guest Lecturer in Cancer Biology: two hours lecture “Approaches to Understanding Cancer and Developing New Therapies”

**University of Colorado:**

CANBIO7690: Cancer Biology second year graduate students, 2025, “Aesthetics of Figure Design” for grant-writing course, 1 hr lecture

CANBIO7613: Cancer Biology Journal Club, faculty discussion leader. One hour course; 2022, 2024, 2025.

PHCL 7620: Pharmacology first year graduate class, 2015-present “Epigenetics and Cancer” one two-hour lecture/discussion

PHCL 7600: Frontiers in Pharmacology, 2016-present, “Histone methyltransferases in leukemia” 2 hours lecture, once per year

PHCL 7613: Pharmacology Journal Club: Pharmacology first year students; faculty discussion leader. February 2015, Sept. 2016.

IDPT Biomedical Science Core Course III. “Bioenergetics”. One 2 hr lecture on

7808-001: Metabolism and Epigenetics, Heritability and Disease, 2 hr mock study section follow-up for proposal critiques, 2017.

IDPT Weekly MSTP Noon Seminar and Grant Writing Course. Two hours every

7645: Wednesday all academic year. 2018-2023

IDPT Course Director for: Molecules to Medicine MD/PhD Journal Club. 2 hrs weekly

7805: discussion on assigned papers and course direction ad hoc. 2018-2023

**Dartmouth:**

BIOC110: Biochemistry and Genetics (medical school course) 8 in-class hours per term, 1 term. 2006-2014

BIOC103: Biochemistry, Cell and Molecular Biology III (graduate course, Introduction to Stem Cells) 1.5 in-class hours per term, 2010-2013

GENE 271: Structure and Function of Chromatin (graduate course); 22 in-class hours per term, 2-3 terms/yr. 2004-2014

GENE 147: Animal Development, Stem Cells, and Human Disease (graduate course, Stem Cells-Case Studies and Paradigms); 8 in-class hours per term, 1 term. 2010-2014

MICRO264: Immunology Journal Club (graduate course); 2 in-class hours per term, 1 term. 2008

MICRO142: Advanced Topics in Immunology (graduate course, Epigenetics and Cell Plasticity); 2 in-class hours per term. 2011-2014

MICRO144: Advanced Immunology Elective (graduate course, Fundamentals of Hematopoiesis lecture); 1.5 in-class hours per term. 2011-2014

GENE 109: Principles of Animal Development. 4.5 in-class hours. 2013-2014

Junior Faculty Mentored

Chao Cheng, Asst. Prof., Genetics, Dartmouth. Ad hoc mentoring; support letters for grant and faculty position applications

Manabu Kurokawa, Asst. Prof., Pharmacology and Toxicology, Dartmouth. Ad hoc mentoring; support letters for grant and faculty position applications

Li Wang, Asst. Prof., Microbiology and Immunology, currently Assistant Professor at University of Wisconsin Milwaukee Blood Center

Nathan Dahl, MD. Asst. Prof, CCBD and Dept. of Pediatrics

Tobias Neff, Asst. Prof. Pediatrics, University of Colorado/Children’s Hospital Pediatrics. K to R program and grant review.

Kathrin Bernt, Asst. Prof. Pediatrics, University of Colorado/Children’s Hospital Pediatrics

Daniel Sherbenou, M.D., Ph.D. Assistant Prof. Medicine, University of Colorado/Children’s Hospital Pediatrics (pre-K08 program grant review only)

Eric Pietras, Asst. Prof. Medicine, University of Colorado/Heme/Onc Division. K01 Advisory committee, ad hoc mentoring, K to R program, connect with Early Career Reviewer Program (NIH MCH study section)

Curtis Henry, Asst. Prof. of Pediatrics, Winship Cancer Institute, Emory University. Ad hoc mentoring, connect with Early Career Reviewer Program (NIH MCH study section)

Jean Mulcahy-Levy, Asst. Prof of Pediatrics and Pharmacology, University of Colorado/AMC grant reviewing

Nathan Dahl Asst. Prof of Pediatrics and Pharmacology, University of Colorado/AMC grant reviewing, Cancer Center introductions

Maura Gasparetto, Research Assistant Professor of Medicine (Hematology), University of Colorado/AMC

Craig Forrester, Assistant Professor, Pediatrics (Heme/Onc/BMT) University of Colorado/ AMC

Matt Witkowski, Assistant Professor, Pediatrics (Heme/Onc/BMT) University of Colorado/ AMC

Cailin Collins, Assistant Professor, Medicine (Hematology) University of Colorado/AMC

Jacob Cawley, Assistant Professor, Dept. of Clinical Sciences, Colorado State University

Fellow Mentoring and Advisory Committees

Zacchary Graff, MD (Fry lab, CU Anschutz)

Nathan A. Dahl, MD (Vibhakar lab, CU Anschutz)

Kelly Faulk, MD (Bernt lab, CU Anschutz)

Courtney Jones, PhD (Jordan lab, CU Anschutz)

Andrew Volk, PhD (Crispino lab, Northwestern)

Paul Huang, PhD (Randolf lab, Wash. U.)

Gilbert Rahme (Bernstein lab, MIT)

Ana Vujovic (Jordan lab, CU Anschutz)

External Thesis Examiner

Priya Dedhia, MD PhD Candidate (Warren Pear, Mentor) University of Pennsylvania, 2009

Dmitri Madera, PhD candidate (Lucio Castillia, Mentor) University of Massachusetts, 2011

Jessica Tessel, PhD candidate (Michelle Kelliher, Mentor) University of Massachusetts, 2013

Rishi Puram, MD PhD Candidate (Benjamin Ebert, Mentor) Harvard Medical School, 2014

Clea Grace, PhD Candidate (Louise Purton, Mentor) University of Melbourne, 2022

Ann Sun, PhD Candidate (Andrew Weng, Mentor) University of British Columbia,2024

Graduate Qualifying Exam Committees Graduate Student Thesis Committees

Ralda Nehme, PhD candidate, 2005 Liya Roudaia (MD/PhD-Biochemistry)

Jennifer Sargent, PhD candidate, 2006 Gudrun Bjornsdottir (PhD-Biochemistry)

Liya Roudaia, MD/PhD candidate, 2006 Robert Lampman (MD/PhD-Biochemistry)

Jesse Blackburn, PhD candidate, 2006 Michael Miller (MD/PhD-Biochemistry)

Yun Lu, PhD candidate, 2007 Wei Chen (MS-Biochemistry)

Ching-Yi Tsai PhD candidate, 2008 Sierra Kent (PhD- Pharmacology/Toxicology)

Valerie Jacobs, MD/PhD candidate, 2009 Ming Ding (PhD-Pharmacology/Toxicology)

Arica Beisaw, MS candidate, 2009 Sankhamala Chakraborti (MS-Biochemistry)

Paul Huang PhD candidate, 2009 Bo Yan (PhD-Genetics)

Mee Rie Sheen PhD candidate, 2011 Haoxu Ouyang (PhD-Pharmacology/Toxicology)

Kinjal Desai, PhD candidate, 2012 Arica Beisaw (MS-Genetics)

Fan Zheng, PhD candidate, 2013 Tamara Zaytouni (PhD-Genetics)

Jen Conrad, PhD candidate, 2013 Gilbert Rahme (PhD-Genetics)

Ana-Maria Dimitru, MD/PhD cand. 2014 Jillian Langer (PhD-Genetics)

Ismail Sola, PhD candidate 2016 Rebecca Crepeau (PhD-Immunology)

Philip Tatman MD/PhD candidate 2017 Yu-Chi Lee (PhD-Immunology)

Austin Jolly, MD/PhD candidate 2019 Jennifer Spiltoire (PhD, Pharmacology)

Anagha Inguva, MD/PhD candidate 2019 Jennifer Rabe PhD (PhD, Mol. Biology)

Stephanie Eramo PhD candidate 2023 Gregory Kirkpatrick (MD/PhD Mol. Biology)

Scott Lin, MD/PhD candidate 2025 Eric Nguyen (MD/PhD, Mol. Biology)

Ismael Sola (PhD, CSD Program)

Marlie Fisher (MD/PhD Mol. Biology)

Greg Wright (PhD, Pharmacology Program)

Laurel Darragh (MD/PhD, Immunology)

Anagha Inguva (MD/PhD, Cancer Biology)

Jackie Turner (MD/PhD, Pharmacology)

Lily Nguyen (MD/PhD, MCDB Program, Boulder)

Raquel Ortega (MD/PhD MCDB Program, Boulder)

Connor Hughes (MD/PhD, Pharmacology)

Ad hoc for Faye Camp (MD/PhD Program, Immunology)

Mary Foster (PhD, Immunology)

Amalia Rivera-Reyes (MS, Immunology)

Varuna Nangia (MD/PhD, Biochemistry. Boulder)

Stephanie Eramo (PhD, Molecular Biology)

Sophia Celli (MD/PhD, Immunology)

Angie Vasquez (PhD, Immunology)

Scott Lin (MD/PhD, Cancer Biology)

Undergraduate/Highschool Trainees

2005-2007: Anika Mirick Thesis, “Role of *Mll* in Neurogenesis”

2005-2006: Matt Maccani

2007-2009 Corina Din-Lovinescu

2007-2008 Daniel Chiu

2008-2009 Jeffrey Barron (Presidential Scholar)

2008-2009 Derek Su

2008 summer Peter Samuels (Carlton College Undergraduate)

2009 Ting Ting Liu (Women in Science Program)

2009 summer Allison Schwartz (Hanover High School Student)

2010 Jamie Li

2011 summer Sabrina Stewart

2010-2014 Yoo Jung (YJ) Kim (HHMI Scholar, Paul. K. Richter and Evalyn E. Cook Richter Fellow, Presidential Scholar)

2015-2018 Claire Wingert (High School, now UC Berkeley student) summers

2015 Nikodimos Sendek (Cherry Creek High School student, now MIT) summer

2015 Nathan Park (Carlton College Undergraduate), Carlton Summer Fellowship recipient

2016 summer Don White (University of Arkansas undergraduate), Cancer Center Summer Fellows program

2015-2017 Matthias Leon, CU Denver Undergraduate

2016- Joseph Soukup, CU Denver Undergraduate

2016-2017 Jasmine (Yoo) Lee, CU Denver Undergraduate

2017 Sahana Duff, CU Denver Undergraduate

2017-2020 Ira Tandon, CU Denver Undergraduate (RaCAS Fellowship & Oral Presentation Award, UROP Fellowship)

2017 summer Molly Kubesh, Colorado Mesa University Undergraduate, Cancer Center Summer Fellow’s Program (St. Baldrick Fellow)

2017-2018 Luisa Wingert, Ralston Valley High School Student, summers

2018 summer Arushi Raval, CU Boulder Undergraduate (St. Baldrick Fellow)

2019 summer Diego Minjares, CU Denver Undergraduate

2019 summer Claudia Reyes Leon, CU Denver Undergraduate

2020-2021 Kenneth Huynh CU Denver Undergraduate, BS/MD Program Trainee

2019-2021 Amy Hoang, CU Denver Undergraduate

2021 summer Elyse Smiley, Regis Undergraduate and Gates Scholar

2021-pres Sharal Raphael, CU Denver Undergraduate

2021-2024 Maddison Overlie, CU Denver Undergraduate

2022 summer Lindsey Smith, Colorado College Undergraduate and Gates Scholar

2023 Raseel Zmily, CU Denver Undergraduate

2023-2024 Lyin Ghadri, DU Undergradaute

2024 Lamar Marshall, Aurora Science & Technical Highschool intern

2025 Diego Corona, Aurora Science & Technical Highschool intern

2023-pres Sarah Issa, CU Denver Undergraduate (St. Baldrick’s Foundation Summer Fellow)

2025 summer Tasher Druck, Cherokee Trail High School

2025 summer Malika Haro, St. Mary’s Academy School

2025 summer Lucas Careirra, Mullen High School

2025 summer Tasher Druck,Cherokee Trail High School

2025 summer Tasher Druck,Cherokee Trail High School

2025-pres Maryam Awan, CU Denver Undergraduate

Graduate/Medical Students Mentored

Craig Jude 2005-2008 PhD

Diyong Xu 2006-2008 MS

Justin Gaudet\* 2003-2009 PhD (\*co-PI with Nancy Speck)

Erika Artinger 2006-2011 PhD

Tao Gan 2008-2014 PhD

Bin Li 2008-2014 PhD

Nithya Natrajan 2010 MD

Yufei Chen 2011-2017 PhD

Weiwei Yang 2013-2019 PhD

Perpetual Kyei 2024-pres PhD

Fellows Directly Trained

Bibhu P. Mishra, PhD 2010-2013

Florence Rabian, MD 2014 6-month master’s project

Tatsuro Watanabe, PhD 2015-2017

Kelly Faulk\*, MD 2017-2018 (\*co-mentor with Kathrin Bernt)

Weiwei Yang, PhD 2019

Ritsuko Iwanaga, PhD 2018-2022

Therese Vu, PhD 2019-pres.

Wenjuan Liao, PhD 2017-pres.