

Chao Lu, PhD

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COLUMBIA UNIVERSITY
MEDICAL CENTER

Education

- 2008-2013 University of Pennsylvania School of Medicine, Philadelphia, US
Ph.D. in Cell and Molecular Biology
- 2003-2007 National University of Singapore, Singapore
B.S. in Life Sciences

Academic Appointments & Professional Experience

- 2018-current Assistant Professor, Department of Genetics and Development and Herbert Irving Comprehensive Cancer Center, Columbia University Medical Center
- 2013-2017 Postdoctoral Fellow, The Rockefeller University, Laboratory of Chromatin Biology and Epigenetics (Advisor: C. David Allis, PhD)
- 2009-2013 Graduate Research Assistant, University of Pennsylvania and Memorial Sloan-Kettering Cancer Center (Advisor: Craig B. Thompson, MD)
- 2007-2008 Undergraduate Research Assistant, National University of Singapore, Department of Biochemistry (Advisor: Jeffrey S. Armstrong, PhD)

Honors & Awards

- 2023 Schaefer Research Scholar, Columbia Vagelos College of P&S
- 2022 Irma T. Hirschl Career Scientist Award
- 2020 V Scholar Award for Cancer Research
- 2020 Maximizing Investigators' Research Award (MIRA) for Early-Stage Investigators, NIGMS
- 2019 Pew-Stewart Scholar for Cancer Research
- 2018 AACR Gertrude B. Elion Cancer Research Award
- 2017 Damon Runyon-Dale F. Frey Award for Breakthrough Scientists
- 2017 Winner, Blavatnik Regional Award for Young Scientists
- 2017 Scholar-in-Training Awards, American Association of Cancer Research (AACR)
- 2016-2021 Pathway to Independence Award, National Cancer Institute (NCI)
- 2014-2016 Postdoctoral Fellowship Award, Damon Runyon Cancer Research Foundation
- 2007 Honor's Degree, National University of Singapore
- 2004-2005 Dean's List, National University of Singapore

Invited / Selected Seminar Presentations (since 2018)

- 11/2023 Department of Biochemistry and Molecular Biology, UT Health Houston, TX
- 11/2023 EpiCypher Conference: Biological & Clinical Frontiers in Epigenetics, Cancún, Mexico
- 10/2023 Department of Pharmacology and Cancer Biology, Duke University, Durham, NC
- 09/2023 Cancer Epigenetics Institute, Fox Chase Cancer Center, Philadelphia, PA
- 06/2023 Gordon Research Conference: Histone and DNA Modifications, Smithfield, RI
- 05/2023 New York University Perlmutter Cancer Center, New York, NY
- 05/2023 CSHL meeting: Mechanisms of Metabolic Signaling, Cold Spring Harbor, NY
- 03/2023 Department of Cell Biology and Anatomy, New York Medical College (virtual)
- 10/2022 Department of Genetics and Genomics, Mount Sinai School of Medicine, New York, NY
- 09/2022 Congress of Asian Society for Pediatric Research (virtual)

04/2022	New York Academy of Sciences Genome Integrity Discussion Group (virtual)
11/2021	EpiCypher Conference: Biological & Clinical Frontiers in Epigenetics, Clearwater, FL
09/2021	Penn Epigenetics Institute, University of Pennsylvania, Philadelphia, PA
07/2021	Social DNAing Webinar (virtual)
11/2020	Tatton Brown Rahman Syndrome Collaborative Research Network Conference (virtual)
01/2020	Keystone Symposia on Cancer Epigenetics, Keystone, CO
06/2019	NYGC Research Network Meeting, New York Genome Center, New York, NY
04/2019	Gordon Research Conference: Cancer Genetics and Epigenetics, Lucca, Italy
04/2019	Gertrude Elion Lecture, AACR Annual Meeting, Atlanta, GA
11/2018	EpiCypher Conference: Biological & Clinical Frontiers in Epigenetics, Nassau, Bahamas
05/2018	International Target and Drug Discovery Summit, Chengdu, China
04/2018	AACR Annual Meeting, Chicago, IL
03/2018	Keystone Symposia on Gene Control in Development and Disease, Whistler, BC, Canada
03/2018	AACR Conference on Targeting DNA Methylation and Chromatin for Cancer Therapy, Atlanta, GA

Professional Organization & Service

- Ad hoc Study Section Member: Molecular Genetics B study section, NIH, June 2020
- Professional Membership: New York Academy of Sciences, American Association of Cancer Research
- Ad hoc Journal Reviewer: *Cancer Cell*, *Cancer Letters*, *Cell*, *Cell Diff & Disease*, *Cell Reports*, *Journal of Carcinogenesis*, *Journal of Neuro-oncology*, *Leukemia Research*, *Molecular Cell*, *Nature*, *Nature Cell Biology*, *Nature Genetics*, *Nature Review Molecular and Cell Biology*, *Science Advance*

Publications

(Google Scholar total citations: 13,992; H-index: 39)

Key Contribution

1. Krug B, Hu B, Chen H, Ptack A, Chen X, Gretarsson KH, Deshmukh S, Kabir N, Faria Andrade A, Jabbour E, Harutyunyan AS, Lee J, Hulswit M, Faury D, Russo C, Xu X, Johnston MJ, Baguette A, Dahl NA, Weil AG, Ellezam B, Dali R, Blanchette M, Wilson K, Garcia BA, Soni RK, Gallo M, Taylor MD, Kleinman CL, Majewski J[#], Jabado N[#], **Lu C**[#]. *bioRxiv* 2023. (# co-senior authors)
2. Li JJ, Vasciaveo A, Karagiannis D, Sun Z, Chen X, Socciarelli F, Frankenstein Z, Zou M, Pannellini T, Chen Y, Gardner K, Robinson BD, de Bono J, Abate-Shen C, Rubin MA, Loda M, Sawyers CL, Califano A, **Lu C**[#], Shen MM[#]. NSD2 maintains lineage plasticity and castration-resistance in neuroendocrine prostate cancer. *bioRxiv* 2023. (# co-senior authors)
3. Karagiannis D, Wu W, Li A, Hayashi M, Chen X, Yip M, Mangipudy V, Xu X, Sánchez-Rivera FJ, Soto-Feliciano YM, Ye J, Papagiannakopoulos T, **Lu C**. Metabolic Reprogramming by Histone Deacetylase Inhibition Selectively Targets NRF2-activated tumors. *Cell Reports* 2023 *In Press*.
4. Chen X, Li Y, Zhu F, Xu X, Estrella B, Pazos MA 2nd, McGuire JT, Karagiannis D, Sahu V, Mustafokulov M, Scuoppo C, Sánchez-Rivera FJ, Soto-Feliciano YM, Pasqualucci L, Ciccia A, Amengual JE, **Lu C**. Context-defined cancer co-dependency mapping identifies a functional interplay between PRC2 and MLL-MEN1 complex in lymphoma. *Nat Commun* 2023 14: 4259.
5. Li Y, Goldberg EM, Chen X, Xu X, McGuire JTM, Leuzzi G, Karagiannis D, Tate T, Farhangdoost N, Horth C, Dai E, Li Z, Zhang Z, Izar B, Que J, Ciccia A, Majewski J, Yoon AJ, Ailles L, Mendelsohn CL, **Lu C**. Histone methylation antagonism drives tumor immune evasion in squamous cell carcinomas. *Mol Cell* 2022 82: 3901-3918.
6. Weinberg DN, Rosenbaum P, Chen X, Barrows D, Horth C, Marunde MR, Popova IK, Gillespie ZB, Keogh M-C, **Lu C**[#], Majewski J[#], Allis CD[#]. Two competing mechanisms of DNMT3A recruitment regulate the dynamics of de novo DNA methylation at PRC1-targeted CpG islands. *Nature Genetics* 2021 53: 794-800. (# co-senior authors)

7. Sheikh TN, Chen X, Xu X, McGuire JT, Ingham M, **Lu C**[#], Schwartz GK[#]. Growth Inhibition and Induction of Innate Immune Signaling of Chondrosarcomas with Epigenetic Inhibitors. *Mol Cancer Ther* 2021 20: 2362-2371. (# co-senior authors)
8. Rajagopalan KN, Chen X, Weinberg DN, Chen H, Majewski J[#], Allis CD[#], **Lu C**[#]. Depletion of H3K36me2 recapitulates epigenomic and phenotypic changes induced by the H3.3K36M oncohistone mutation. *Proc Natl Acad Sci* 2021 118: e2021795118. (# co-senior authors)
9. Weinberg DN, Papillon-Cavanagh S, Chen H, Yue Y, Chen X, Rajagopalan KN, Horth C, McGuire JT, Xu X, Nikbakht H, Lemiesz AE, Marchione DM, Marunde MR, Meiners M, Cheek M, Keogh M-C, Bareke E, Djedid A, Harutyunyan AS, Jabado N, Garcia BA, Li H, Allis CD[#], Majewski J[#], **Lu C**[#]. The histone mark H3K36me2 recruits DNMT3A and shapes the intergenic DNA methylation landscape. *Nature* 2019 573: 281-286. (# co-senior authors)
10. Papillon-Cavanagh S*, **Lu C**^{*}, Gayden T, Mikael LG, Bechet D, Karamboulas C, Ailles L, Karamchandani J, Weinreb I, Goldstein D, Lewis PW, Dancu O, Dhaliwal S, Stecho W, Howlett CJ, Mymryk JS, Barrett JW, Nichols AC, Allis CD, Majewski J, Jabado N. Impaired H3K36 methylation defines a subset of head and neck squamous cell carcinomas. *Nat Genet* 2017 49: 180-185. (* co-first authors)
11. **Lu C**, Jain SU, Hoelper D, Bechet D, Molden RC, Ran L, Murphy D, Venneti S, Hameed M, Pawel BR, Wunder J, Dickson BC, Lundgren SM, Jani KS, De Jay N, Papillon-Cavanagh S, Andrulis IL, Sawyer SL, Grynspan D, Turcotte RE, Nadaf J, Fahiminiyah S, Muir TW, Majewski J, Thompson CB, Chi P, Garcia BA, Allis CD, Jabado N, Lewis PW. Histone H3K36 mutations promote sarcomagenesis through altered histone methylation landscape. *Science* 2016 352: 844-9.
12. **Lu C**, Ward PS, Kapoor GS, Rohle D, Turcan S, Abdel-Wahab O, Edwards CR, Khanin R, Figueroa ME, Melnick A, Wellen KE, O'Rourke DM, Berger SL, Chan TA, Levine RL, Mellinghoff IK, Thompson CB. IDH mutation impairs histone demethylation and results in a block to cell differentiation. *Nature* 2012 483: 474-78.
13. Figueroa ME*, Abdel-Wahab O*, **Lu C**^{*}, Ward PS, Patel J, Shih A, Li Y, Bhagwat N, Vasanthakumar A, Fernandez HF, Tallman MS, Sun Z, Wolniak K, Peeters JK, Liu W, Choe SE, Fantin VR, Paietta E, Löwenberg B, Licht JD, Godley LA, Delwel R, Valk PJ, Thompson CB, Levine RL, Melnick A. Leukemic IDH1 and IDH2 mutations result in a hypermethylation phenotype, disrupt TET2 function, and impair hematopoietic differentiation. *Cancer Cell* 2010 18: 553-67. (* co-first authors)

Collaborative Contribution

14. Li Z, Duan S, Hua X, Xu X, Li Y, Menolfi D, Zhou H, **Lu C**, Zha S, Goff SP, Zhang Z. Asymmetric distribution of parental H3K9me3 in S phase silences L1 elements. *Nature* 2023 623: 643-651.
15. Efe G, Dunbar KJ, Sugiura K, Cunningham K, Carcamo S, Karaiskos S, Tang Q, Cruz-Acuna R, Resnick-Silverman L, Peura J, **Lu C**, Hasson D, Klein-Szanto AJ, Taylor AM, Manfredi JJ, Prives C, Rustgi AK. P53 gain-of-function mutation induces metastasis via Brd4-dependent Csf-1 expression. *Cancer Discov* 2023 doi: 10.1158/2159-8290.CD-23-0601.
16. Li AM, He B, Karagiannis D, Li Y, Jiang H, Srinivasan P, Ramirez Y, Zhou MN, Curtis C, Gruber JJ, **Lu C**, Rankin EB, Ye J. Serine starvation silences estrogen receptor signaling through histone hypoacetylation. 2023 *Proc Natl Acad Sci* 2023 120: e2302489120.
17. Flashner S, Martin C, Matsuura N, Shimonosono M, Tomita Y, Morimoto M, Okolo O, Yu VX, Parikh AS, Klein-Szanto AJP, Yan K, Gabre JT, **Lu C**, Momen-Heravi F, Rustgi AK, Nakagawa H. Modeling Oral-Esophageal Squamous Cell Carcinoma in 3D Organoids. *J Vis Exp* 2022 190: 10.3791/64676.
18. Chen Q, Weng K, Lin M, Jiang M, Fang Y, Chung SSW, Huang X, Zhong Q, Liu Z, Huang Z, Lin J, Li P, El-Rifai W, Zaika A, Li H, Rustgi AK, Nakagawa H, Abrams JA, Wang TC, **Lu C**, Huang C, Que J.

SOX9 Modulates the Transformation of Gastric Stem Cells Through Biased Symmetric Cell Division. **Gastroenterology** 2023 164: 1119-1136.e12.

19. Abini-Agbomson S, Gretarsson K, Shih RM, Hsieh L, Lou T, De Ioannes P, Vasilyev N, Lee R, Wang M, Simon MD, Armache JP, Nudler E, Narlikar G, Liu S, **Lu C**, Armache KJ. Catalytic and non-catalytic mechanisms of histone H4 lysine 20 methyltransferase SUV420H1. **Mol Cell** 2023 83: 2872-2883.e7.

20. Thomas JF, Valencia-Sánchez MI, Tamburri S, Gloor SL, Rustichelli S, Godínez-López V, De Ioannes P, Lee R, Abini-Agbomson S, Gretarsson K, Burg JM, Hickman AR, Sun L, Gopinath S, Taylor HF, Sun ZW, Ezell RJ, Vaidya A, Meiners MJ, Cheek MA, Rice WJ, Svetlov V, Nudler E, **Lu C**, Keogh MC, Pasini D, Armache KJ. Structural basis of histone H2A lysine 119 deubiquitination by Polycomb repressive deubiquitinase BAP1/ASXL1. **Sci Adv** 2023 9: eadg9832.

21. Khazaei S, Chen CCL, Andrade AF, Kabir N, Azarafshar P, Morcos SM, França JA, Lopes M, Lund PJ, Danieau G, Worme S, Adnani L, Nzirorera N, Chen X, Yogarajah G, Russo C, Zeinieh M, Wong CJ, Bryant L, Hébert S, Tong B, Sihota TS, Faury D, Puligandla E, Jawhar W, Sandy V, Cowan M, Nakada EM, Jerome-Majewska LA, Ellezam B, Gomes CC, Denecke J, Lessel D, McDonald MT, Pizoli CE, Taylor K, Cocanougher BT, Bhoj EJ, Gingras AC, Garcia BA, **Lu C**, Campos EI, Kleinman CL, Garzia L, Jabado N. Single substitution in H3.3G34 alters DNMT3A recruitment to cause progressive neurodegeneration. **Cell** 2023 186: 1162-1178.

22. Dermawan JKT, Nafa K, Mohanty A, Xu Y, Rijo I, Casanova J, Villafania L, Benhamida J, Kelly CM, Tap WD, Boland PJ, Fabbri N, Healey JH, Ladanyi M, **Lu C**, Hameed M. Distinct IDH1/2-associated Methylation Profile and Enrichment of TP53 and TERT Mutations Distinguish Dedifferentiated Chondrosarcoma from Conventional Chondrosarcoma. **Cancer Res Commun** 2023 3: 431-443.

23. Biermann J, Melms JC, Amin AD, Wang Y, Caprio LA, Karz A, Tagore S, Barrera I, Ibarra-Arellano MA, Andreatta M, Fullerton BT, Gretarsson KH, Sahu V, Mangipudy VS, Nguyen TTT, Nair A, Rogava M, Ho P, Koch PD, Banu M, Humala N, Mahajan A, Walsh ZH, Shah SB, Vaccaro DH, Caldwell B, Mu M, Wünnemann F, Chazotte M, Berhe S, Luoma AM, Driver J, Ingham M, Khan SA, Rapisuwon S, Slingluff CL Jr, Eigentler T, Röcken M, Carvajal R, Atkins MB, Davies MA, Agustinus A, Bakhoun SF, Azizi E, Siegelin M, **Lu C**, Carmona SJ, Hibshoosh H, Ribas A, Canoll P, Bruce JN, Bi WL, Agrawal P, Schapiro D, Hernando E, Macosko EZ, Chen F, Schwartz GK, Izar B. Dissecting the treatment-naive ecosystem of human melanoma brain metastasis. **Cell** 2022 185: 2591-2608.

24. Chen H, Hu B, Horth C, Bareke E, Rosenbaum P, Kwon SY, Sirois J, Weinberg DN, Robison FM, Garcia BA, **Lu C**, Pastor WA, Majewski J. H3K36 dimethylation shapes the epigenetic interaction landscape by directing repressive chromatin modifications in embryonic stem cells. **Genome Res** 2022 32: 825-837.

25. Bao K, Shan CM, Chen X, Raiymbek G, Monroe JG, Fang Y, Toda T, Koutmou KS, Rangunathan K, **Lu C**, Berchowitz LE, Jia S. The cAMP signaling pathway regulates Epe1 protein levels and heterochromatin assembly. **PLoS Genet** 2022 18: e1010049.

26. Geis FK, Sabo Y, Chen X, Li Y, **Lu C**, Goff SP. CHAF1A/B mediate silencing of unintegrated HIV-1 DNAs early in infection. **Proc Natl Acad Sci** 2022 119: e2116735119.

27. Chaouch A, Berlandi J, Chen CCL, Frey F, Badini S, Harutyunyan AS, Chen X, Krug B, Hébert S, Jeibmann A, **Lu C**, Kleinman CL, Hasselblatt M, Lasko P, Shirinian M, Jabado N. Histone H3.3 K27M and K36M mutations de-repress transposable elements through perturbation of antagonistic chromatin marks. **Mol Cell** 2021 81: 4876-4890.e7.

28. Tate T, Xiang T, Wobker SE, Zhou M, Chen X, Kim H, Batourina E, Lin CS, Kim WY, **Lu C**, Mckiernan JM, Mendelsohn CL. Pparg signaling controls bladder cancer subtype and immune exclusion. **Nat Commun** 2021 12: 6160.

29. Panwalkar P, Tamrazi B, Dang D, Chung C, Sweha S, Natarajan SK, Pun M, Bayliss J, Ogrodzinski MP, Pratt D, Mullan B, Hawes D, Yang F, **Lu C**, Sabari BR, Achreja A, Heon J, Animasahun O, Cieslik M, Dunham C, Yip S, Hukin J, Phillips JJ, Bornhorst M, Griesinger AM, Donson AM, Foreman NK,

- Garton HJL, Heth J, Muraszko K, Nazarian J, Koschmann C, Jiang L, Filbin MG, Nagrath D, Kool M, Korshunov A, Pfister SM, Gilbertson RJ, Allis CD, Chinnaiyan AM, Lunt SY, Blüml S, Judkins AR, Venneti S. Targeting integrated epigenetic and metabolic pathways in lethal childhood PFA ependymomas. *Sci Transl Med* 2021 13: eabc0497.
30. Shan C-M, Kim J-K, Wang J, Bao K, Sun Y, Chen H, Yue J-X, Stirpe A, Zhang Z, **Lu C**, Schalch T, Liti G, Nagy PL, Tong L, Qiao F, Jia S. The histone H3K9M mutation synergizes with H3K14 ubiquitylation to selectively sequester histone H3K9 methyltransferase Ctr4 at heterochromatin. *Cell Rep* 2021 35: 109137.
31. Farhangdoost N, Horth C, Hu B, Bareke E, Chen X, Li Y, Coradin M, Garcia BA, **Lu C**, Majewski J. Chromatin dysregulation associated with NSD1 mutation in head and neck squamous cell carcinoma. *Cell Rep* 2021 34: 108769.
32. Cuella-Martin R, Hayward SB, Fan X, Chen X, Huang J-W, Tagliatalata A, Leuzzi G, Zhao J, Rabadan R, **Lu C**, Shen Y, Ciccia A. Functional interrogation of DNA damage response variants with base editing screens. *Cell* 2021 184: 1081-1097.
33. Shan C-M, Bao K, Diedrich J, Chen X, **Lu C**, Yates JR, Jia S. The INO80 Complex Regulates Epigenetic Inheritance of Heterochromatin. *Cell Rep* 2020 33: 108561.
34. Jain SU, Khazaei S, Marchione DM, Lundgren SM, Wang X, Weinberg DN, Deshmukh S, Juretic N, **Lu C**, Allis CD, Garcia BA, Jabado N, Lewis PW. Histone H3.3 G34 mutations promote aberrant PRC2 activity and drive tumor progression. *Proc Natl Acad Sci* 2020 117: 27354–27364.
35. Zhu GG, Ramirez D, Chen W, **Lu C**, Wang L, Frosina D, Jungbluth A, Ntiamoah P, Nafa K, Boland PJ, Hameed MR. Chromosome 3p loss of heterozygosity and reduced expression of H3K36me3 correlate with longer relapse-free survival in sacral conventional chordoma. *Hum Pathol* 2020 104: 73–83.
36. García-Carracedo D, Cai Y, Qiu W, Saeki K, Friedman RA, Lee A, Li Y, Goldberg EM, Stratikopoulos EE, Parsons R, **Lu C**, Efstratiadis A, Philipone EM, Yoon AJ, Su GH. *PIK3CA* and *p53* Mutations Promote 4NQO-Initiated Head and Neck Tumor Progression and Metastasis in Mice. *Mol Cancer Res* 2020 18: 822-834.
37. Mori M, Furuhashi K, Danielsson JA, Hirata Y, Kakiuchi M, Lin CS, Ohta M, Riccio P, Takahashi Y, Xu X, Emala CW, **Lu C**, Nakauchi H, Cardoso WV. Generation of functional lungs via conditional blastocyst complementation using pluripotent stem cells. *Nat Med* 2019 25: 1691-1698.
38. Liu C, Tate T, Batourina E, Truschel ST, Potter S, Adam M, Xiang T, Picard M, Reiley M, Schneider K, Tamargo M, **Lu C**, Chen X, He J, Kim H, Mendelsohn CL. Pparg promotes differentiation and regulates mitochondrial gene expression in bladder epithelial cells. *Nat Commun* 2019 10: 4589.
39. Chen X, Jiang Y, Gao F, Zheng W, Krock TJ, Stover NA, **Lu C**, Katz LA, Song W. Genome analyses of the new model protist *Euplotes vannus* focusing on genome rearrangement and resistance to environmental stressors. *Mol Ecol Resour* 2019 19: 1292–1308.
40. Harutyunyan AS, Krug B, Chen H, Papillon-Cavanagh S, Zeinieh M, De Jay N, Deshmukh S, Chen CCL, Belle J, Mikael LG, Marchione DM, Li R, Nikbakht H, Hu B, Cagnone G, Cheung WA, Mohammadnia A, Bechet D, Faury D, McConechy MK, Pathania M, Jain SU, Ellezam B, Weil AG, Montpetit A, Salomoni P, Pastinen T, **Lu C**, Lewis PW, Garcia BA, Kleinman CL, Jabado N, Majewski J. H3K27M induces defective chromatin spread of PRC2-mediated repressive H3K27me2/me3 and is essential for glioma tumorigenesis. *Nat Commun* 2019 10: 1262.
41. Bayliss J*, Mukherjee P*, **Lu C***, Jain SU, Chung C, Martinez D, Sabari B, Margol AS, Panwalkar P, Parolia A, Pekmezci M, McEachin RC, Cieslik M, Tamrazi B, Garcia BA, La Rocca G, Santi M, Lewis PW, Melnik A, Allis CD, Thompson CB, Chinnaiyan AM, Judkins AR, Venneti S. Lowered H3K27me3 and DNA hypomethylation define poorly prognostic pediatric posterior fossa ependymomas. *Sci Transl Med* 2016 8: 366ra161. (* co-first authors)

42. Yang S, Zheng X, **Lu C**, Li GM, Allis CD, Li H. Molecular basis for oncohistone H3 recognition by SETD2 methyltransferase. **Genes Dev** 2016 30: 1611-6.
43. Wang L, Zehir A, Nafa K, Zhou N, Berger MF, Casanova J, Sadowska J, **Lu C**, Allis CD, Gounder M, Chandhanayingyong C, Ladanyi M, Boland PJ, Hameed M. Genomic aberrations frequently alter chromatin regulatory genes in chordoma. **Genes Chromosomes Cancer** 2016 55: 591-600.
44. Sarungbam J, Agaram N, Hwang S, **Lu C**, Wang L, Healey J, Hameed M. Symplastic/pseudoanaplastic giant cell tumor of the bone. **Skeletal Radiol** 2016 45: 929-35.
45. Intlekofer AM, Dematteo RG, Venneti S, Finley LW, **Lu C**, Judkins AR, Rustenburg AS, Grinaway PB, Chodera JD, Cross JR, Thompson CB. Hypoxia Induces Production of L-2-Hydroxyglutarate. **Cell Metab** 2015 22: 304-11.
46. Bechet D, Gielen GG, Korshunov A, Pfister SM, Rouso C, Faury D, Fiset PO, Benlimane N, Lewis PW, **Lu C**, Allis CD, Kieran MW, Ligon KL, Pietsch T, Ellezam B, Albrecht S, Jabado N. Specific detection of methionine 27 mutation in histone 3 variants (H3K27M) in fixed tissue from high-grade astrocytomas. **Acta Neuropathol** 2014 128: 733-41.
47. Rampal R, Alkalin A, Madzo J, Vasanthakumar A, Pronier E, Patel J, Li Y, Ahn J, Abdel-Wahab O, Shih A, **Lu C**, Ward PS, Tsai JJ, Hricik T, Tosello V, Tallman JE, Zhao X, Daniels D, Dai Q, Ciminio L, Aifantis I, He C, Fuks F, Tallman MS, Ferrando A, Nimer S, Paietta E, Thompson CB, Licht JD, Mason CE, Godley LA, Melnick A, Figueroa ME, Levine RL. DNA Hydroxymethylation Profiling Reveals that WT1 Mutations Result in Loss of TET2 Function in Acute Myeloid Leukemia. **Cell Rep** 2014 9: 1841-55.
48. Ye J, Fan J, Venneti S, Wan YW, Pawel BR, Zhang J, Finley LW, **Lu C**, Lindsten T, Cross JR, Qing G, Liu Z, Simon MC, Rabinowitz JD, Thompson CB. Serine catabolism regulates mitochondrial redox control during hypoxia. **Cancer Discov** 2014 4: 1406-17
49. Chen C, Liu Y, **Lu C**, Cross JR, Morris JP 4th, Shroff AS, Ward PS, Bradner JE, Thompson C, Lowe SW. Cancer-associated IDH2 mutants drive an acute myeloid leukemia that is susceptible to Brd4 inhibition. **Genes Dev** 2013 27: 1974-85.
50. Gentile TL*, **Lu C***, Lodato PM, Tse S, Olejniczak S, Witze ES, Thompson CB, Wellen KE. DNMT1 is regulated by ATP-citrate lyase and maintains methylation patterns during adipocyte differentiation. **Mol Cell Biol** 2013 33: 3864-78. (* co-first authors)
51. Venneti S, Felicella MM, Coyne T, Phillips JJ, Gorovets D, Huse JT, Kofler J, **Lu C**, Tihan T, Sullivan LM, Santi M, Judkins AR, Perry A, Thompson CB. Histone 3 lysine 9 trimethylation is differentially associated with isocitrate dehydrogenase mutations in oligodendrogliomas and high-grade astrocytomas. **J Neuropathol Exp Neurol** 2013 72: 298-306.
52. Ward PS, **Lu C**, Cross JR, Abdel-Wahab O, Levine RL, Schwartz GK, Thompson CB. The potential for isocitrate dehydrogenase mutations to produce 2-hydroxyglutarate depends on allele specificity and subcellular compartmentalization. **J Biol Chem** 2013 288: 3804-15.
53. **Lu C**, Venneti S, Alkalin A, Fang F, Ward PS, Dematteo RG, Intlekofer AM, Chen C, Ye J, Hameed M, Nafa K, Agaram NP, Cross JR, Khanin R, Mason CE, Healey JH, Lowe SW, Schwartz GK, Melnick A, Thompson CB. Induction of sarcomas by mutant IDH2. **Genes Dev** 2013 27: 1986-98.
54. Turcan S, Rohle D, Goenka A, Walsh LA, Fang F, Yilmaz E, Campos C, Fabius AW, **Lu C**, Ward PS, Thompson CB, Kaufman A, Guryanova O, Levine R, Heguy A, Viale A, Morris LG, Huse JT, Mellinghoff IK, Chan TA. IDH1 mutation is sufficient to establish the glioma hypermethylator phenotype. **Nature** 2012 483: 479-83.
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59. **Lu C**, Zhang DW, Whiteman M, Armstrong JS. Is antioxidant potential of the mitochondrial targeted ubiquinone derivative MitoQ conserved in Cells lacking mtDNA? *Antioxid Redox Signal* 2008 10: 651-60.
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62. **Lu C**, Armstrong JS. Role of calcium and cyclophilin D in the regulation of mitochondrial permeabilization induced by glutathione depletion. *Biochem Biophys Res Commun* 2007 363: 572-77.

Reviews, previews and book chapters

63. Fang Y, Mangipudy VS, Jia S, **Lu C**, Chen X. Recognition of histone methylation and DNA by the PWWP domain: Mechanism and function. *Chromatin Readers in Health and Disease* 2024 Vol 35: 239-256. <https://doi.org/10.1016/B978-0-12-823376-4.00008-2>.
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