

BIOGRAPHICAL SKETCH

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NAME: De-Chen LIN

eRA COMMONS USER NAME (credential, e.g., agency login): DECHENLIN

POSITION TITLE: Assistant Professor

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Nanjing University, China	B.S.	06/05	Biology
Chinese Academy of Medical Sciences, China	Ph.D.	06/10	Cell Biology
Cedars-Sinai Medical Center, CA	Postdoctoral	12/14	Cancer Biology

A. Personal Statement

I have a broad background in cancer genetics and biology, with specific training and expertise in functional genomic study as well as transcriptional regulation. The major focus of my work is identifying key genomic and epigenomic abnormalities in human malignancies and translating these findings into novel clinical managements. To facilitate this research, I have established and developed a variety of functional genomic approaches as well as computational algorithms. With these tools and comprehensive biological studies, I have uncovered important genomic aberrations which promote malignant phenotypes, including gene amplifications [*Clin Cancer Res* 2011], deletions [*PNAS* 2013; *Cancer Res* 2015], somatic mutations [*Blood* 2012; *Nature Genetics* 2014a; *Nature Genetics* 2014b] as well as epigenetic lesions [*Gut* 2016].

B. Positions and Honors**Positions and Employment**

2010/2011 Postdoctoral Fellow, Cedars-Sinai Medical Center, Los Angeles, CA

2011/2014 Research Fellow, Cancer Science Institute of Singapore, National University of Singapore, Singapore

2015/Present Assistant Professor, Cedars-Sinai Medical Center, UCLA School of Medicine, Los Angeles, CA

Other Experience and Professional Memberships

2012 - Member, American Society of Hematology (ASH)

2012 - Member, American Association for Cancer Research (AACR)

Honors

- 2014 Incorporated Scholar-in-Training Award, AACR-Aflac
- 2015 Donna and Jesse Garber Awards for Cancer Research
- 2015 American Society of Hematology (ASH) Fellow Scholar Award
- 2015 MDS Young Investigator Award
- 2016 CURE:CTSI Pilot and Feasibility Award

C. Contribution to Science

Peer-reviewed Publications

- 1) **De-Chen Lin (Correspondence)**, Anand Mayakonda, Huy Q Dinh, Pinbo Huang, Lehang Lin, Xiaoping Liu, Ling-Wen Ding, Jie Wang, Benjamin Berman, Erwei Song, Dong Yin and H. Phillip Koeffler. Genomic and epigenomic heterogeneity of hepatocellular carcinoma. **Cancer Res** February 20 2017 DOI:10.1158/0008-5472.CAN-16-2822
- 2) Hao JJ, **De-Chen Lin (Correspondence)**, Dinh HQ, Mayakonda A, Jiang YY, Chang C, Jiang Y, Lu CC, Shi ZZ, Xu X, Zhang Y, Cai Y, Wang JW, Zhan QM, Wei WQ, Berman BP, Wang MR, Koeffler HP. Spatial intratumoral heterogeneity and temporal clonal evolution in esophageal squamous cell carcinoma. **Nat Genet.** 2016 Dec;48(12):1500-1507. PMID: 27749841
- 3) Hazawa M, **De-Chen Lin (Correspondence)**, Handral H, Xu L, Chen Y, Jiang YY, Mayakonda A, Ding LW, Meng X, Sharma A, Samuel S, Movahednia MM, Wong RW, Yang H, Tong C, Koeffler HP. ZNF750 is a lineage-specific tumour suppressor in squamous cell carcinoma. **Oncogene.** 2016 Nov 7. doi: 10.1038/onc.2016.377. PMID: 27819679
- 4) Jiang YY, **De-Chen Lin (Correspondence)**, Mayakonda A, Hazawa M, Ding LW, Chien WW, Xu L, Chen Y, Xiao JF, Senapedis W, Baloglu E, Kanojia D, Shang L, Xu X, Yang H, Tyner JW, Wang MR, Koeffler HP. Targeting super-enhancer-associated oncogenes in oesophageal squamous cell carcinoma. **Gut.** 2016 May 10. doi: 10.1136/gutjnl-2016-311818. PMID: 27196599
- 5) Sun H, **De-Chen Lin (Correspondence)**, Cao Q, Guo X, Marijon H, Zhao Z, Gery S, Xu L, Yang H, Pang B, Lee VK, Lim HJ, Doan N, Said JW, Chu P, Mayakonda A, Thomas T, Forscher C, Baloglu E, Shacham S, Rajalingam R, Koeffler HP. CRM1 Inhibition Promotes Cytotoxicity in Ewing Sarcoma Cells by Repressing EWS-FLI1-Dependent IGF-1 Signaling. **Cancer Res.** 2016 May 1;76(9):2687-97. PMID: 26956669
- 6) Sun H, **De-Chen Lin (Correspondence)**, Guo X, Masouleh BK, Gery S, Cao Q, Alkan S, Ikezoe T, Akiba C, Paquette R, Chien W, Müller-Tidow C, Jing Y, Agelopoulos K, Müschen M, H. Phillip Koeffler. Inhibition of IRE1 α -driven Pro-survival Pathways is a Promising Therapeutic Application in Acute Myeloid Leukemia. **Oncotarget.** 2016 Feb 25. doi: 10.18632/oncotarget.7702. PMID: 26934650
- 7) **De-Chen Lin (Correspondence)**, Xu L, Chen Y, Yan H, Hazawa M, Doan N, Said JW, Ding LW, Liu LZ, Yang H, Yu S, Kahn M, Yin D, Koeffler HP. Genomic and Functional Analysis of the E3 Ligase PARK2 in Glioma. **Cancer Res.** 2015 May 1;75(9):1815-27. PMID: 25877876
- 8) **De-Chen Lin (Correspondence)**, Hao JJ, Nagata Y, Xu L, Shang L, Meng X, Sato Y, Okuno Y, Varela AM, Ding LW, Garg M, Liu LZ, Yang H, Yin D, Shi ZZ, Jiang YY, Gu WY, Gong T, Zhang Y, Xu X, Kalid O, Shacham S, Ogawa S, Wang MR, Koeffler HP. Genomic and molecular characterization of esophageal squamous cell carcinoma. **Nat Genet.** 2014 May;46(5):467-73. PMID: 24686850
- 9) **De-Chen Lin (Correspondence)**, Meng X, Hazawa M, Nagata Y, Varela AM, Xu L, Sato Y, Liu LZ, Ding LW, Sharma A, Goh BC, Lee SC, Petersson BF, Yu FG, Macary P, Oo MZ, Ha CS, Yang H, Ogawa S, Loh KS, Koeffler HP. The genomic landscape of nasopharyngeal carcinoma. **Nat Genet.** 2014 Aug;46(8):866-71. PMID: 24952746
- 10) **De-Chen Lin (Correspondence)**, Xu L, Ding LW, Sharma A, Liu LZ, Yang H, Tan P, Vadgama J, Karlan BY, Lester J, Urban N, Schummer M, Doan N, Said JW, Sun H, Walsh M, Thomas CJ, Patel P, Yin D, Chan D, Koeffler HP. Genomic and Functional Characterizations of Phosphodiesterase 4D in Human Cancers. **Proc**

- 11) **De-Chen Lin (Correspondence)**, Yin T, Koren-Michowitz M, Ding LW, Gueller S, Gery S, Tabayashi T, Bergholz U, Kazi JU, Rönstrand L, Stocking C, Koeffler HP. Adaptor protein Lnk binds to and inhibits normal and leukemic FLT3. *Blood*. 2012 Oct 18;120(16):3310-7. PMID: 22942183
- 12) **De-Chen Lin**, Zhang Y, Pan QJ, Yang H, Shi ZZ, Xie ZH, Wang BS, Hao JJ, Zhang TT, Xu X, Zhan QM, Wang MR. PLK1 is transcriptionally activated by NF-Kappa B during cell detachment and enhances anoikis resistance through inhibiting Beta-catenin degradation in esophageal cancer. *Clin Cancer Res*; 17(13) July 1, 2011. PMID: 21610149
- 13) **De-Chen Lin (Correspondence)**, Wang MR and Koeffler HP. Targeting genetic lesions in esophageal cancer. *Cell Cycle*. 2014 Jun 5;13(13). PMID: 24901941
- 14) **De-Chen Lin**, Du XL, Wang MR. Protein alterations in ESCC and clinical implications: A review. *Dis Esophagus*. 2009;22(1):9-20. PMID: 18564170
- 15) Xu L, **De-Chen Lin (Correspondence)**, Yin D and Koeffler HP. An emerging role of PARK2 in cancer. *J Mol Med (Berl)*. 2014 Jan;92(1):31-42. PMID: 24297497
- 16) Feng YB1, **De-Chen Lin (Co-first)**, Shi ZZ, Wang XC, Shen XM, Zhang Y, Du XL, Luo ML, Xu X, Han YL, Cai Y, Zhang ZQ, Zhan QM, Wang MR. Overexpression of PLK1 is Associated with Poor Survival by Inhibiting Apoptosis via Enhancement of Survivin Level in Esophageal Squamous Cell Carcinoma. *Int J Cancer*. 2009 Feb 1;124(3):578-88. PMID: 19004025
- 17) **De-Chen Lin**, Shi ZZ, Xue LY, Chen W, Xu X, Han YL, Lv N, Wang MR. Expression of cell cycle related proteins cyclin D1, p53 and p21WAF1/Cip1 in esophageal squamous cell carcinoma. *Yi Chuan*. 2010 May;32(5):455-60. PMID: 20466633
- 18) Sun QY, Ding LW, Xiao JF, Chien W, Lim SL, Hattori N, Goodglick L, Chia D, Mah V, Alavi M, Kim SR, Doan NB, Said JW, Loh XY, Xu L, Liu LZ, Yang H, Hayano T, Shi S, Xie D, **De-Chen Lin** and Koeffler HP. SETDB1 accelerates tumorigenesis by regulating WNT signaling pathway. *J Pathol*. 2014 Nov 18. doi: 10.1002/path.4482. PMID: 25404354
- 19) Ding LW, Sun QY, **De-Chen Lin**, Chien W, Hattori N, Dong XM, Gery S, Garg M, Doan NB, Said JW, Xiao JF, Yang H, Liu LZ, Meng X, Huang RY, Tang K, Koeffler HP. LNK (SH2B3): paradoxical effects in ovarian cancer. *Oncogene*. 2014 Apr 7. doi: 10.1038/onc.2014.34. PMID: 24704825
- 20) Du XL, Hu H, **De-Chen Lin**, Xia SH, Shen XM, Zhang Y, Luo ML, Feng YB, Cai Y, Xu X, Han YL, Zhan QM, Wang MR. Proteomic profiling of proteins dysregulated in Chinese esophageal squamous cell carcinoma. *J Mol Med (Berl)*. 2007 Aug;85(8):863-75. PMID: 17318615
- 21) Du XL, Yang H, Liu SG, Luo ML, Hao JJ, Zhang Y, **De-Chen Lin**, Xu X, Cai Y, Zhan QM, Wang MR. Calreticulin promotes cell motility and enhances resistance to anoikis through STAT3-CTTN-Akt pathway in esophageal squamous cell carcinoma. *Oncogene*. 2009 Oct 22;28(42):3714-22. PMID: 19684620
- 22) Wang XC, Wu YP, Ye B, **De-Chen Lin**, Feng YB, Zhang ZQ, Xu X, Han YL, Cai Y, Dong JT, Zhan QM, Wu M, Wang MR. Suppression of anoikis by SKP2 amplification and overexpression promotes metastasis of esophageal squamous cell carcinoma. *Mol Cancer Res*. 2009 Jan;7(1):12-22. PMID: 19147533
- 23) Shi ZZ, Liang JW, Zhan T, Wang BS, **De-Chen Lin**, Liu SG, Hao JJ, Yang H, Zhang Y, Zhan QM, Zhang KT, Wang MR. Genomic alterations with impact on survival in esophageal squamous cell carcinoma identified by array comparative genomic hybridization. *Genes Chromosomes Cancer*. 2011 Jul;50(7):518-26. PMID: 21484929
- 24) Liu SG, Wang BS, Jiang YY, Zhang TT, Shi ZZ, Yang Y, Yang YL, Wang XC, **De-Chen Lin**, Zhang Y, Yang H, Cai Y, Zhan QM, Wang MR. Atypical protein kinase Ci (PKCi) promotes metastasis of esophageal squamous cell carcinoma by enhancing resistance to Anoikis via PKCi-SKP2-AKT pathway. *Mol Cancer Res*. 2011 Apr;9(4):390-402. PMID: 21310827
- 25) Zhang Y, Du XL, Wang CJ, **De-Chen Lin**, Ruan X, Feng YB, Huo YQ, Peng H, Cui JL, Zhang TT, Wang YQ, Zhang H, Zhan QM, Wang MR. Reciprocal activation between PLK1 and Stat3 contributes to survival and proliferation of esophageal cancer cells. *Gastroenterology*. 2012 Mar;142(3):521-530. PMID: 22108192

- 26) Koren-Michowitz M, Gery S, Tabayashi T, **De-Chen Lin**, Alvarez R, Nagler A, Koeffler HP. SH2B3 (LNK) mutations from Myeloproliferative Neoplasms patients have mild loss of function against wild type JAK2 and JAK2 V617F. *Br J Haematol.* 2013 Jun;161(6):811-20. PMID: 23590807
- 27) Shi ZZ, Shang L, Jiang YY, Hao JJ, Zhang Y, Zhang TT, **De-Chen Lin**, Liu SG, Wang BS, Gong T, Zhan QM, Wang MR. Consistent and differential genetic aberrations between esophageal dysplasia and squamous cell carcinoma detected by array comparative genomic hybridization. *Clin Cancer Res.* 2013 Nov 1;19(21):5867-78. PMID: 24009147
- 28) Jin S, Wang K, Xu K, Xu J, Sun J, Chu Z, **De-Chen Lin**, Koeffler PH, Wang J, Yin D. Oncogenic function and prognostic significance of protein tyrosine phosphatase PRL-1 in hepatocellular carcinoma. *Oncotarget.* 2014 Jun 15;5(11):3685-96. PMID: 25003523
- 29) Zhang H, Li W, Huang P, Lin L, Ye H, **De-Chen Lin**, Koeffler HP, Wang J, Yin D. Expression of CCN family members correlates with the clinical features of hepatocellular carcinoma. *Oncol Rep.* 2015 Mar;33(3):1481-92. doi: 10.3892/or.2015.3709. PMID: 25003523
- 30) Garg M, Nagata Y, Kanojia D, Mayakonda A, Yoshida K, Haridas Keloth S, Zang ZJ, Okuno Y, Shiraishi Y, Chiba K, Tanaka H, Miyano S, Ding LW, Alpermann T, Sun QY, **De-Chen Lin**, Chien W, Madan V, Liu LZ, Tan KT, Sampath A, Venkatesan S, Inokuchi K, Wakita S, Yamaguchi H, Chng WJ, Kham SK, Yeoh AE, Sanada M, Schiller J, Kreuzer KA, Kornblau SM, Kantarjian HM, Haferlach T, Lill M, Kuo MC, Shih LY, Blau IW, Blau O, Yang H, Ogawa S, Koeffler HP. Profiling of somatic mutations in acute myeloid leukemia with FLT3-ITD at diagnosis and relapse. *Blood.* 2015 Nov 26;126(22):2491-501. PMID: 26438511
- 31) Cao Q, Gearhart MD, Gery S, Shojaee S, Yang H, Sun H, **De-Chen Lin**, Bai JW, Mead M, Zhao Z, Chen Q, Chien WW, Alkan S, Alpermann T, Haferlach T, Müschen M, Bardwell VJ, Koeffler HP. BCOR regulates myeloid cell proliferation and differentiation. *Leukemia.* 2016 Feb 5. doi: 10.1038/leu.2016.2. PMID: 26847029
- 32) Sun QY, Ding LW, Tan KT, Chien W, Mayakonda A, **De-Chen Lin**, Loh XY, Xiao JF, Meggendorfer M, Alpermann T, Garg M, Lim SL, Madan V, Hattori N, Nagata Y, Miyano S, Yeoh AE, Hou HA, Jiang YY, Takao S, Liu LZ, Tan SZ, Lill M, Hayashi M, Kinoshita A, Kantarjian HM, Kornblau SM, Ogawa S, Haferlach T, Yang H, Koeffler HP. Ordering of mutations in acute myeloid leukemia with partial tandem duplication of MLL (MLL-PTD). *Leukemia.* 2016 Jul 8. doi: 10.1038/leu.2016.160. PMID: 27389053
- 33) Ding LW, Ikezoe T, Tan KT, Mori M, Mayakonda A, Chien W, **De-Chen Lin**, Jiang YY, Lill M, Yang H, Sun QY, Koeffler HP. Mutational profiling of a MonoMAC syndrome family with GATA2 deficiency. *Leukemia.* 2016 Sep 29. doi: 10.1038/leu.2016.256. PMID: 27680514
- 34) Ding L, Sun QY, Tan KT, Chien W, Thippeswamy AM, Eng Juh AY, Kawamata N, Nagata Y, Xiao JF, Loh XY, **De-Chen Lin**, Garg M, Lim SL, Liu LZ, Madan V, Jiang YY, Xu L, Sanada M, Fernández LT, Preethi H, Lill M, Kantarjian H, Kornblau SM, Miyano S, Ogawa S, Liang DC, Shih LY, Yang H, Koeffler HP. Mutational landscape of pediatric acute lymphoblastic leukemia. *Cancer Res.* 2016 Nov 21. pii: canres.1303.2016. PMID: 27872090
- 35) Xie J, **De-Chen Lin (Correspondence)**, Lee DH, Akunowicz J, Hansen M, Miller C, Sanada M, Kato M, Akagi T, Kawamata N, Ogawa S, Koeffler HP. Copy number analysis identifies tumor suppressive lncRNAs in human osteosarcoma. *Int J Oncol.* 2017 Mar;50(3):863-872. PMID: 28197627
- 36) Li CQ, Huang GW, Wu ZY, Xu YJ, Li XC, Xue YJ, Zhu Y, Zhao JM, Li M, Zhang J, Wu JY, Lei F, Wang QY, Li S, Zheng CP, Ai B, Tang ZD, Feng CC, Liao LD, Wang SH, Shen JH, Liu YJ, Bai XF, He JZ, Cao HH, Wu BL, Wang MR, **De-Chen Lin**, Koeffler HP, Wang LD, Li X, Li EM, Xu LY. Integrative analyses of transcriptome sequencing identify novel functional lncRNAs in esophageal squamous cell carcinoma. *Oncogenesis.* 2017 Feb 13;6(2):e297. PMID: 28194033
- 37) Ding LW, Sun QY, Mayakonda A, Tan KT, Chien W, **De-Chen Lin**, Jiang YY, Xu L, Garg M, Lao ZT, Lill M, Yang H, Yeoh AE, Koeffler HP. Mutational profiling of acute lymphoblastic leukemia with testicular relapse. *J Hematol Oncol.* 2017 Mar 2;10(1):65. doi: 10.1186/s13045-017-0434-y. PMID: 28253933

D. Research Support

1) ASH Fellow Scholar Award

07/01/2015 -06/30/2017 50% effort

Agency: American Society of Hematology

Title: Study the biology of normal and mutant ZRSR2 gene in MDS

The overall goal of the project is to investigate the biology of normal and mutant ZRSR2 gene in MDS

Role: PI

Direct cost per year: \$ 50,000

2) Donna and Jesse Garber Awards for Cancer Research

07/01/2015 -06/30/2016 20% effort

Agency: Cedars-Sinai Medical Center

Title: Identification of actionable kinases in liposarcoma through integrative functional genomic approaches

The overall goal of the project is to study both the genomic abnormalities and kinase activities in liposarcoma

Role: PI

Direct cost per year: \$ 50,000

3) MDS Young Investigator Grant

07/01/2015 -06/30/2017 20% effort

Agency: THE MDS FOUNDATION

Title: Investigation of aberrant mRNA splicing induced by ZRSR2 mutation in the pathogenesis of myelodysplastic syndromes

Role: PI

Direct cost per year: \$ 25,000

4) CURE:CTSI Pilot and Feasibility Award

03/01/2016 -02/28/2017

Agency: NIH/National Center for Advancing Translational Sciences, UL1TR000124

Title: Identification and Characterization of Super-Enhancer Driven Transcripts in Esophageal Cancer through Functional Genomic Approaches

Role: PI

Direct cost per year: \$ 25,000