

## **CURRICULUM VITAE**

**Huating Wang**

### **PERSONAL DATA**

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### **EDUCATION**

Ph.D., The Ohio State University (OSU), USA, 2004. Molecular Virology.  
Supervisor: Dr. Louis Mansky.  
B.S., Nanjing University, Nanjing, China, 1996 – 1999. Environmental Chemistry  
Supervisor: Dr. Xiao-rong Wang

### **PROFESSIONAL EXPERIENCE**

#### **Current Appointment**

- Professor, Department of Orthopaedics and Traumatology, Li Ka Shing Institute of Health Sciences, The Chinese University of Hong Kong (CUHK), 2019 – present

#### **Previous Appointments**

- Associate Professor, Department of Orthopaedics and Traumatology, Li Ka Shing Institute of Health Sciences, The Chinese University of Hong Kong (CUHK), 2015 – 2019
- Assistant Professor, Department of Obstetrics and Gynaecology, Li Ka Shing Institute of Health Sciences, The Chinese University of Hong Kong (CUHK), 2009 – 2015
- Postdoctoral Fellow, Division of Human Genetics, Comprehensive Cancer Center, OSU, 2004 - 2009
- Research Assistant, Department of Immunology, Virology and Medical Genetics, OSU, 2000 - 2004

### **MAIN RESEARCH INTERESTS**

- Intrinsic and extrinsic regulation of skeletal muscle stem cell regeneration.
- Mechanisms and therapeutics for skeletal muscle aging.

## **PUBLICATIONS**

### **Refereed Journal Papers from 2018-2023 (\* Corresponding author)**

1. Li Y, Li C, Sun Q, Liu X, Chen F, Cheung Y, Zhao Y, Xie T, Chazaud B, Sun H\*, **Wang H\***. Skeletal muscle stem cells modulate niche function in Duchenne muscular dystrophy mouse through YY1-CCL5 axis. *Nature Commun.* February 03: 1324 (2025). IF 17.7
2. Zhang Y, Zhao J, Chen X, Qiao Y, Kang J, Guo X, Yang F, Lyu K, Ding Y, Zhao Y, Sun H\*, Kwok C\*, **Wang H\***; DHX36 binding induces RNA structurome remodeling and regulates RNA abundance via m6A reader YTHDF1. *Nature Commun.* November 15: 9890 (2024). IF 17.7
3. Zhiming He, Xiaona Chen, Gexin Liu, Yuying Li, Feng Yang, Hao Sun\*, **Huating Wang\***. Sugt1 loss in skeletal muscle stem cells impairs muscle regeneration and causes premature muscle aging. *Life Medicine*, (2023) <https://doi.org/10.1093/lifemedi/Inad039>
4. Stephanie N. Oprescu, Nick Baumann, Xiyue Chen, Qiang Sun, Yu Zhao, Feng Yue, **Huating Wang** & Shihuan Kuang; Sox11 is enriched in myogenic progenitors but dispensable for development and regeneration of the skeletal muscle. *Skeletal Muscle*, (2023) 13:15.
5. Suyang Zhang, Feng Yang, Yile Huang, Liangqiang He, Yuying Li, Yi Ching Esther Wan, Yingzhe Ding, Kui Ming Chan, Ting Xie, Hao Sun & **Huating Wang**; ATF3 induction prevents precocious activation of skeletal muscle stem cell by regulating H2B expression. *Nature Communications* 2023
6. Yulong Qiao, Qiang Sun, Xiaona Chen, Liangqiang He, Di Wang, Ruibao Su, Yuanchao Xue, Hao Sun\*, **Wang H\***. Nuclear m6A reader YTHDC1 promotes muscle stem cell activation/proliferation by regulating mRNA splicing and nuclear export. *eLife*, 2023.
7. Yu Zhao, Yingzhe Ding, Liangqiang He, Qin Zhou, Xiaona Chen, Yuying Li, Maria Vittoria Alfonsi, Zhenguo Wu, Hao Sun\*, **Wang H\***. Multiscale 3D genome reorganization during skeletal muscle stem cell lineage progression and aging. *Science Advances* 2023.
8. Karl Kam Hei So, Yile Huang, Suyang Zhang, Yulong Qiao, Liangqiang He, Yuying Li, Xiaona Chen, Mai Har Sham, Hao Sun\*, **Wang H\***. seRNA PAM controls skeletal muscle satellite cell proliferation and aging through trans regulation of Timp2 expression synergistically with Ddx5. *Aging Cell*, 2022.
9. Di Liu, Kevin Y. Yang, Vicken W. Chan, Wenchu Ye, Charing C.N. Chong, Chi Chiu Wang, **Wang H**, Bin Zhou, Kenneth K.Y. Cheng, Kathy O. Lui\*; YY1 Regulates Glucose Homeostasis Through Controlling Insulin Transcription in Pancreatic  $\beta$ -Cells. *Diabetes* 2022.
10. Xiaona Chen, Guang Xue, Jieyu Zhao, Yuwei Zhang, Suyang Zhang, Wen Wang, Yang Li, Jie Yuan, Liangqiang He, Chun Yin Chan, Yan Liu, Wei Chen, Yu Zhao, Ping Hu, Hao Sun\*, Chun Kit Kwok\*, **Wang H\***. Lockd promotes myoblast proliferation and muscle regeneration via binding with DHX36 to facilitate 5' UTR rG4 unwinding and Anp32e translation. *Cell Reports*,

2022.

11. Lifang Han, Gang Wang, Shaopu Zhou, Chenghao Situ, Zhiming He, Yuying Li, Yudan Qiu, Yu Huang, Aimin Xu, Michael Tim Yun Ong, **Wang H**, Jianfa Zhang, Zhenguo Wu\*, Muscle satellite cells are impaired in type 2 diabetic mice by elevated extracellular adenosine. *Cell Reports*, 2022.
12. Liang C, Ke Q, Liu Z, Ren J, Zhang W, Hu J, Wang Z, Chen H, Xia K, Lai X, Wang Q, Yang K, Li W, Wu Z, Wang C, Yan H, Jiang X, Ji Z, Ma M, Long X, Wang S, **Wang H**, Sun H, Belmonte JCI, Qu J, Xiang AP, Liu GH\*. BMAL1 moonlighting as a gatekeeper for LINE1 repression and cellular senescence in primates. *Nucleic Acids Res.* 2022.
13. Hongye Wang, Yile Huang, Ming Yu, Yang Yu, Sheng Li, **Wang H**, Hao Sun, Bing Li, Guoliang Xu, Ping Hu\*. Muscle regeneration controlled by a designated DNA dioxygenase. *Cell Death Dis*, 2021.
14. Liangqiang He, Yingzhe Ding, Yu Zhao, Karl K. So, Xianlu L. Peng, Yuying Li, Jie Yuan, Zhiming He, Xiaona Chen, Hao Sun\*, **Wang H**\*. CRISPR/Cas9/AAV9-mediated in vivo editing identifies MYC regulation of 3D genome in skeletal muscle stem cell. *Stem Cell Reports*, 2021.
15. Xiaona Chen, Jie Yuan, Guang Xue, Silvia Campanario, Di Wang, Wen Wang, Xi Mou, Shiao Wei Liew, Mubarak Ishaq Umar, Joan Isern, Yu Zhao, Liangqiang He, Yuying Li, Christopher J. Mann, Xiaohua Yu, Lei Wang, Eusebio Perdiguero, Wei Chen, Yuanchao Xue, Yoshikuni Nagamine, Chun Kit Kwok, Hao Sun\*, Pura Muñoz-Cánoves\*, **Wang H**\*. Translational control by DHX36 binding to 5'UTR G-quadruplex is essential for muscle stem-cell regenerative functions. *Nat Commun*, 2021.
16. Yile Huang, Yulong Qiao, Yu Zhao, Yuying Li, Jie Yuan, Jiajian Zhou, Hao Sun\*, **Wang H**\*. Large scale RNA-binding proteins/LncRNAs interaction analysis to uncover lncRNA nuclear localization mechanisms, *Briefings in Bioinformatics*, 2021.
17. Kelahmetoglu Y, Jannig PR, Cervenka I, Koch LG, Britton SL, Zhou J, **Wang H**, Robinson MM, Nair KS, Ruas JL\*. Comparative Analysis of Skeletal Muscle Transcriptional Signatures Associated With Aerobic Exercise Capacity or Response to Training in Humans and Rats. *Front Endocrinol (Lausanne)*. 2020 Oct 26;11:591476.
18. Zhang M, Lai Y, Krupalnik V, Guo P, Guo X, Zhou J, Xu Y, Yu Z, Liu L, Jiang A, Li W, Abdul MM, Ma G, Li N, Fu X, Lv Y, Jiang M, Tariq M, Kanwal S, Liu H, Xu X, Zhang H, Huang Y, Wang L, Chen S, Babarinde IA, Luo Z, Wang D, Zhou T, Ward C, He M, Ibañez DP, Li Y, Zhou J, Yuan J, Feng Y, Arumugam K, Di Vicino U, Bao X, Wu G, Schambach A, **Wang H**, Sun H, Gao F, Qin B, Hutchins AP, Doble BW, Hartmann C, Cosma MP, Qin Y, Xu GL, Chen R, Volpe G, Chen L, Hanna JH, Esteban MA\*. 1.  $\beta$ -Catenin safeguards the ground state of mouse pluripotency by strengthening the robustness of the transcriptional apparatus. *Sci Adv*. 2020 Jul 17;6(29):eaba1593.
19. Fan F, Chen D, Zhao Y, **Wang H**, Sun H, Sun K\*. Rapid preliminary purity evaluation of tumor biopsies using deep learning approach. *Comput Struct Biotechnol J*. 2020 Jun 16;18:1746-1753.
20. Kun Sun, Lishi Li, Li Ma, Yu Zhao, Lin Deng, **Wang H**, Hao Sun. Msuite: A High-Performance

and Versatile DNA Methylation Data-Analysis Toolkit, *Patterns*,2020.

21. Gene Chi Wai Man, Jianzhang Wang, Yi Song, Jack Ho Wong, Yu Zhao, Tat San Lau, Kam Tong Leung, Tak Hang Chan, **Wang H**, Joseph Kwong, Tzi Bun Ng & Chi Chiu Wang\*. Therapeutic potential of a novel prodrug of green tea extract in induction of apoptosis via ERK/JNK and Akt signaling pathway in human endometrial cancer. *BMC Cancer*, 2020 20(1), 1-14.
22. Sun, K., **Wang H**, & Sun, H\*. NAMS webserver: coding potential assessment and functional annotation of plant transcripts. *Briefings in Bioinformatics*,2020.
23. Shen'ao Zhou, Wei Zhang, Gaihong Cai, Yingzhe Ding, Caixia Wei, Sheng Li, Yu Yang, Jie Qin, Dan Liu, Hao Zhang, Xiexiang Shao, Jianhua Wang, Hongye Wang, Wenjun Yang, **Wang H**, She Chen, Ping Hu\* & Liming Sun\*. Myofiber necroptosis promotes muscle stem cell proliferation via releasing Tenascin-C during regeneration. *Cell Research*,2020.
24. Yuying Li, Jie Yuan, Fengyuan Chen, Suyang Zhang, Yu Zhao, Xiaona Chen, Leina Lu, Liang Zhou, Ching Yan Chu, Hao Sun\*, **Wang H**\*. Long noncoding RNA SAM promotes myoblast proliferation through stabilizing Sugt1 and facilitating kinetochore assembly. *Nat Commun*,2020;11(1):2725.
25. Linlin Hou, Yuanjie Wei, Yingying Lin, Xiwei Wang, Yiwei Lai, Menghui Yin, Yanpu Chen, Xiangpeng Guo, Senbin Wu, Yindi Zhu, Jie Yuan, Muqddas Tariq, Na Li, Hao Sun, **Wang H**, Xiaofei Zhang, Jiekai Chen, Xichen Bao, Ralf Jauch\* Concurrent binding to DNA and RNA facilitates the pluripotency reprogramming activity of Sox2, *Nucleic Acids Research*. 2020;48(7):3869-3887.
26. Zhao Y, Zhou J, He L, Sun K, Chen X, Li Y, Bao X, Esteban MA, Sun H\* and **Wang H**\*. MyoD induced enhancer RNA interacts with hnRNPL protein via CAAA motif to activate target gene transcription during myogenic differentiation. *Nature Commun*. 2019 Dec.
27. Li Y, Yuan J, Chen F, Zhang S, Zhao Y, Chen X, Lu L, Zhou L, Chu HY, Sun H \*and **Wang H**\*. Long noncoding RNA SAM promotes myoblast proliferation and skeletal muscle regeneration through stabilizing Sugt1 and facilitating kinetochore assembly. *Nature Commun*. 2019.
28. Malik V, Glaser LV, Zimmer D, Velychko S, Weng M, Holzner M, Arend M, Chen Y, Srivastava Y, Veerapandian V, Shah Z, Esteban MA, **Wang H**, Chen J, Scholer HR, Hutchins AP, Meijssing SH, Pott S, Jauch R\*. Pluripotency reprogramming by competent and incompetent POU factors uncovers temporal dependency for Oct4 and Sox2. *Nat Commun*. 2019 Aug 2;10(1):3477.
29. Zhou J, So KK, Li Y, Li Y, Yuan J, Ding Y, Chen F, Huang Y, Liu J, Lee W, Li G, Ju Z, Sun H\*, **Wang H**\*. Elevated H3K27ac in aged skeletal muscle leads to increase of extracellular matrix and fibrogenic conversion of muscle satellite cells. *Aging Cell*. 2019 Jul 20:e12996.
30. Chen F, Zhou J, Li Y, Zhao Y, Yuan J, Cao Y, Wang L, Zhang Z, Zhang B, Wang CC, Cheung TH, Wu Z, Wong CC, Sun H\*, **Wang H**\*. YY1 regulates skeletal muscle regeneration

through controlling metabolic reprogramming of satellite cells. *EMBO J*. 2019 May 15;38(10).

31. Peterson JM, Wang DJ, Shettigar V, Roof SR, Canan BD, Bakkar N, Shintaku J, Gu JM, Little SC, Ratnam NM, Londhe P, Lu L, Gaw CE, Petrosino JM, Liyanarachchi S, **Wang H**, Janssen PML, Davis JP, Ziolo MT, Sharma SM, Guttridge DC\*. NF-kappaB inhibition rescues cardiac function by remodeling calcium genes in a Duchenne muscular dystrophy model. *Nat Commun*. 2018 Aug 24;9(1):3431.
32. Yuan J, Zhou J, **Wang H\***, Sun H\*. SKmDB: an integrated database of next generation sequencing information in skeletal muscle. *Bioinformatics*. 2019 Mar 1;35(5):847-855.
33. Sun K, Wang J, **Wang H\***, Sun H\*. GeneCT: a generalizable cancerous status and tissue origin classifier for pan-cancer biopsies. *Bioinformatics*. 2018 Dec 1; 34(23):4129-4130.
34. Yao M, Zhou X, Zhou J, Gong S, Hu G, Li J, Huang K, Lai P, Shi G, Hutchins AP, Sun H, **Wang H** and Yao H\*. PCGF5 is required for neural differentiation of embryonic stem cells. *Nat Commun*. 2018 May 15;9(1):1463.
35. Zhou J, Huang Y, Ding Y, Yuan J, **Wang H\***, Sun H\*. IncFunTK: A toolkit for functional annotation of long noncoding RNAs. *Bioinformatics*. 2018 Oct 1;34(19):3415-3416.
36. Bao X\*, Guo X, Yin M, Tariq M, Lai Y, Kanwal S, Zhou J, Li N, Lv Y, Pulido-Quetglas C, Wang X, Ji L, Khan MJ, Zhu X, Luo Z, Shao C, Lim DH, Liu X, Li N, Wang W, He M, Liu YL, Ward C, Wang T, Zhang G, Wang D, Yang J, Chen Y, Zhang C, Jauch R, Yang YG, Wang Y, Qin B, Anko ML, Hutchins AP, Sun H, **Wang H**, Fu XD, Zhang B\*, and Esteban MA\*. Capturing the interactome of newly transcribed RNA. *Nat Methods*. 2018 Mar;15(3):213-220.
37. Li Y, Chen X, Sun H\*, **Wang H\***. Long non-coding RNAs in the regulation of skeletal myogenesis and diseases. *Cancer Lett*. 2018 Mar 28; 417:58-64.

#### **Refereed Journal Papers from 2009 – 2017**

38. So KK, Peng XL, Sun H\*, **Wang H\***. Whole Genome Chromatin IP-Sequencing (ChIP-Seq) in Skeletal Muscle Cells. *Methods Mol Biol*. 2017; 1668:15-25.
39. Zhang J, Jiang Y, Zhao Y, Wang W, Xie Y, **Wang H**, Yang Y\*. Downregulation of tyrosine threonine kinase inhibits tumor growth via G2/M arrest in human endometrioid endometrial adenocarcinoma. *Tumour Biol*. 2017 Jul;39(7):1010428317712444.
40. Sun K, **Wang H\***, Sun H\*. mTFkb: a knowledgebase for fundamental annotation of mouse transcription factors. *Sci Rep*. 2017 Jun 8; 7(1):3022.
41. An Y, Wang G, Diao Y, Long Y, Fu X, Weng M, Zhou L, Sun K, Cheung TH, Ip NY, Sun H, **Wang H**, Wu Z\*. A Molecular Switch Regulating Cell Fate Choice between Muscle Progenitor Cells and Brown Adipocytes. *Dev Cell*. 2017 May 22;41(4):382-391.e5.

42. Peng X, So KK, He L, Zhao Y, Zhou J, Li Y, Yao M, Xu B, Zhang S, Yao H, Hu P, Sun H\*, **Wang H\***. MyoD- and FoxO3-mediated hotspot interaction orchestrates super-enhancer activity during myogenic differentiation. *Nucleic Acids Res.* 2017 Sep 6;45(15):8785-8805.
43. Zhou J, Zhang S, **Wang H\***, Sun H\*. LncFunNet: an integrated computational framework for identification of functional long noncoding RNAs in mouse skeletal muscle cells. *Nucleic Acid Res.* 2017 Jul 7;45(12): e108.
44. Chen X, He L, Zhao Y, Li Y, Zhang S, Sun K, So K, Chen F, Zhou L, Lu L, Wang L, Zhu X, Bao X, Esteban MA, Nakagawa S, Prasanth KV, Wu Z, Sun H\*, **Wang H\***. Malat1 regulates myogenic differentiation and muscle regeneration through modulating MyoD transcriptional activity. *Cell Discov.* 2017 Mar 14; 3:17002.
45. Peng X, Sun K, Zhou J, Sun H\*, **Wang H\***. Bioinformatics for Novel Long Intergenic Noncoding RNA (lincRNA) Identification in Skeletal Muscle Cells. Peng X, Sun K, Zhou J, Sun H, Wang H. *Methods Mol Biol.* 2017;1556:355-362.
46. Stunnenberg HG\*, International Human Epigenome Consortium, Hirst M\*. The International Human Epigenome Consortium: A Blueprint for Scientific Collaboration and Discovery. *Cell* 2016 Nov 17;167(5):1145-1149.
47. Tsang DP, Wu WK, Kang W, Lee YY, Wu F, Yu Z, Xiong L, Chan AW, Tong JH, Yang W, Li MS, Lau SS, Li X, Lee SD, Yang Y, Lai PB, Yu DY, Xu G, Lo KW, Chan MT, **Wang H**, Lee TL, Yu J, Wong N, Yip KY, To KF, Cheng AS\*. Yin Yang 1-mediated epigenetic silencing of tumour-suppressive microRNAs activates nuclear factor-KB in hepatocellular carcinoma. *J Pathol.* 2016 Apr;238(5):651-64.
48. Zhu H, Xiao F, Wang G, Wei X, Jiang L, Chen Y, Zhu L, **Wang H**, Diao Y, Wang H, Ip NY, Cheung TH, Wu Z\*. STAT3 Regulates Self-Renewal of Adult Muscle Satellite Cells during Injury-Induced Muscle Regeneration. *Cell Rep.* 2016 Aug 23;16(8):2102-15.
49. Zhao Y, Sun H\*, **Wang H\***. Long noncoding RNAs in DNA methylation: new players stepping into the old game. *Cell Biosci.* 2016 Jul 11; 6:45.
50. Sun K, Zhou L, Zhao Y, **Wang H\***, Sun H\*. Genome-wide RNA-seq and ChIP-seq reveal Linc-YY1 function in regulating YY1/PRC2 activity during skeletal myogenesis. *Genomics Data.* 2016, Mar;7:247-249.
51. Zhou L, Sun K, Zhao Y, Zhang S, Wang X, Li Y, Lu L, Chen X, Chen F, Bao X, Zhu X, Wang L, Tang LY, Esteban MA, Wang R, Jauch R, Sun H\*, **Wang H\***. \*. Linc-YY1 promotes myogenic differentiation and muscle regeneration through an interaction with the transcription factor YY1. *Nat Commun.* 2015, Dec 11;6:10026.
52. Fu X, Xiao J, Wei Y, Li S, Liu Y, Yin J, Sun K, Sun H, **Wang H**, Zhang Z, Zhang BT, Sheng C, Wang H\*, Hu P\*. Combination of Inflammation-related Cytokines Promotes Long-term Muscle Stem Cell Expansion. *Cell Res.* 2015 Jun; 25(6):655-673.

53. Wang L, Zhao Y, Bao X, Zhu X, Kwok YK, Sun K, Chen X, Huang Y, Jauch R, Esteban MA, Sun H\*, **Wang H\***. LncRNA Dum Interacts with Dnmts to Regulate Dppa2 Expression during Myogenic Differentiation and Muscle Regeneration. *Cell Res.* 2015 Mar; 25(3):335-350.
54. Fu X, **Wang H**, Hu P\*. Stem Cell Activation in Skeletal Muscle Regeneration. *Cellular and Molecular Life Sciences.* 2015 May; 72(9):1663-1677.
55. Bao X\*, Wu H, Zhu X, Guo X, Hutchins AP, Luo Z, Song H, Chen Y, Lai K, Yin M, Xu L, Zhou L, Chen J, Wang D, Qin B, Frampton J, Tse HF, Pei D, **Wang H**, Zhang B, Esteban MA\*. The p53-induced LincRNA-p21 Derails Somatic cell Reprogramming by Sustaining H3K9me3 and CpG Methylation at Pluripotency Gene Promoters. *Cell Res.* 2015 Jan; 25(1):80-92.
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**Refereed Journal Papers Before Joining CUHK (1997 – 2008)**

77. **Wang H**, Garzon R, Sun H, Ladner KJ, Singh R, Dahlman J, Cheng A, Hall BM, Qualman S J, and Chandler DS, Croce CM, Guttridge DC\*. NF-[kappa] B-YY1-miR-29 Regulatory Circuitry in Skeletal Myogenesis and Rhabdomyosarcoma. *Cancer Cell*. 2008, 14, 369-381.
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81. Dorweiler IJ, Ruone SJ, **Wang H**, Burry RW, Mansky LM\*. Role of the human T-cell leukemia virus type 1 PTAP motif in Gag targeting and particle release. *J Virol*. 2006, 80 (7): 3634-3643.
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85. **Wang H**, Norris KM, and Mansky LM\*. Involvement of the matrix and nucleocapsid domains of the bovine leukemia virus Gag polyprotein precursor in viral RNA packaging. *J Virol*. 2003, 77, 9431-9438.
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88. Sun H, Wang X, Wang Q, **Wang H**, Wang L\*. The Effects of Chemical Species on Bioaccumulation of Rare Earth Elements in Wheat Grown in Nutrient Solution. *Chemosphere*. 1997, 35(8), 1699-1707.

### **Books Authored**

89. So, K.K., Peng, X, Sun H, **Wang H.** (2017). Whole Genome chromatin IP-Sequencing (ChIP-seq) in Skeletal Muscle Cells. *Skeletal Muscle Development* Volume: 1668 Pages: 15-25. DOI: 10.1007/978-1-4939-7283-8\_2
90. Peng X, Sun K, Zhou J, Sun H, **Wang H.** (2017) Bioinformatics for Novel Long intergenic Noncoding RNA (lincRNA) Identification in Skeletal Muscle Cells. *Methods Mol Biol.* 2017;1556:355-362. doi: 10.1007/978-1-4939-6771-1\_20.

## **EXTERNAL GRANTS AS PI OR CO-PI**

### **2009-Present (\* on-going)**

1. **RGC/GRF 2023 \*(PI).** Mechanistic dissection of alternative promoter usage in skeletal muscle stem cells using Runx1 as a paradigm. HK\$ 1,600,000
2. **RGC/GRF 2022 \*(PI).** YY1 deficiency in satellite cell exacerbates fibrosis in dystrophic muscle: elucidation of satellite cell/macrophage/fibro-adipogenic progenitor crosstalk in Duchenne muscular dystrophy mice. HK\$ 1,394,799
3. **RGC/GRF 2021 \*(PI).** Functional characterization of Atf3 in skeletal muscle stem cells and muscle regeneration. HK\$ 1,525,732
4. **RGC/GRF 2020 \*(PI).** Elucidation of post-transcriptional regulatory functions of Dhx36 in skeletal muscle stem cells and muscle regeneration. HK\$ 1,111,376
5. **RGC/GRF 2019 (PI).** Mechanistic investigation of Linc-p27 function in skeletal muscle satellite cell and muscle regeneration. HK\$ 970,697.
6. **RGC/GRF 2018 (PI).** Functional dissection of lncRNA SAM in skeletal muscle stem cells and muscle regeneration. HK\$1,232,466
7. **RGC/GRF 2017 (PI).** Mechanistic exploration of super-enhancer associated seRNA function in skeletal muscle cells. HK\$ 922,171
8. **RGC/GRF 2016 (PI).** Functional characterization of YY1 in skeletal muscle stem cells and muscle regeneration. HK\$ 1,182,869
9. **RGC/GRF 2015 (PI).** Functional characterization of Malat1 in skeletal muscle stem cells and muscle regeneration. HK\$ 1,086,500
10. **RGC/GRF 2014 (PI).** Functional Characterization of a Large Intergenic Non-coding RNA (lincRNA) in Muscle Stem Cells and Muscle Regeneration. HK\$ 1,039,239
11. **RGC/GRF 2011 (PI).** The role of Transcripts of Ultra-conserved Regions (T-UCRs) in Skeletal Myogenesis. HK\$ 1,200,000
12. **RGC/GRF 2010 (PI).** The role of miR-29 in Duchenne muscular dystrophy. HK\$ 890,852
13. **China/NSFC 2022 \*(PI).** Dhx36 在骨骼肌干细胞中基因调控的机制研究. RMB\$ 560,000
14. **China/NSFC 2019 (PI).** 长链非编码 RNA Linc-Cdkn1b 对骨骼肌干细胞及肌肉再生的的调控及其分子机制研究. RMB\$ 600,000

15. **FHB/HMRF 2022 \*(PI).** Stem cell senescence in skeletal muscle ageing: mechanism and treatment for sarcopenia. HK\$1,491,150
16. **FHB/HMRF 2021 \*(PI).** Elucidation of intrinsic and extrinsic alterations regulating skeletal muscle stem cell aging: mechanisms for sarcopenia. HK\$ 1,496,150
17. **FHB/HMRF 2014 (PI).** Functional Characterization of PCDH10 in Endometrioid Endometrial Adenocarcinoma. HK\$ 882,866
18. **RGC/Procore Joint Research Scheme 2018 (PI).** Investigate the role of satellite cell derived M-CSF in regulating macrophage function during skeletal muscle regeneration. HK\$ 86400
19. **China/MOST 2023 (Co-PI)\*.** 代谢微环境紊乱对骨骼肌疾病和稳态维持的功能及干预策略。 RMB 3,840,000.
20. **ITC/InnoHK 2022 (Co-PI)\*.** Epigenomics study of aging skeletal muscle stem cells: Biology and interventions for sarcopenia. HK\$ 10,200,000
21. **China/MOST 2024 (Co-PI)\*.** 代谢微环境紊乱对骨骼肌疾病和稳态维持的功能及干预策略。 RMB 1,600,000.
22. **RGC/TRS 2022 (Co-PI)\*.** Stem Cell-Niche Interactions in Tissue Maintenance and Engineering. HK\$4,000,000.
23. **RGC/CRF 2022 (Co-PI)\*.** Mechanism of an Effective Combination Treatment Targeting Neuromuscular Junction Degeneration and Myosteatorsis to Combat Sarcopenia. HK\$1,000,000
24. **RGC/CRF 2020 (Co-PI)\*.** Molecular regulation of quiescence and early activation in muscle stem cells. HK\$ 2,000,000
25. **RGC/CRF 2015 (Co-PI).** Elucidation of the role of Pax7 in muscle stem cells. HK\$ 2,000,000

#### **Prior to 2009**

1. **USA/F32 Postdoctoral Fellowship 2006.** The roles of NF-kB-YY1 regulatory axis in skeletal muscle stem cell and muscle regeneration. USD 120,000

#### **AWARDS AND HONORS**

1. High Impact Publication Award, CUHK, 2024, 2023, 2022, 2021, 2020
2. Strategic Seed Funding for Collaborative Research Scheme, CUHK, 2022
3. Best Short Talk, FASEB Science Research Conference: Skeletal Muscle Satellite Cells and Regeneration. 2018
4. Staff Development Grant, CUHK, 2018
5. NIH Ruth L. Kirschstein National Research Service Award, USA, 2006-2009
6. Cancer Center Postdoctoral Fellowship, OSU, USA, 2005-2006

7. Participation Support Award for Symposium on Antiviral Drug Resistance, USA, 2003
8. Graduate and Postgraduate Research Day Award, OSU, USA, 2003
9. Professional Development Fellowship, OSU, USA, 2002
10. Travel Fellowship, MCDB Program, OSU, USA, 2001

## **INVITED PRESENTATIONS/ LECTURES**

### **2015-Present**

1. DHX36-RNA interplay in skeletal muscle stem cells and muscle regeneration. *Genome Institute of Singapore-Cancer Science Institute of Singapore (GIS-CSI) RNA Conference 2022*. 11/2022
2. Multiscale 3D Genome Reorganization during Skeletal Muscle Stem Cell Lineage Progression and Muscle Aging. *7th China Muscle Society Annual Meeting organized by China Muscle Society, China*. 12/2021.
3. mRNA translation control by DHX36 binding to 5'UTR G-quadruplex structures is essential for skeletal muscle stem cell regenerative functions. *G4 Webinar*. 12/2021.
4. Non-coding RNA and enhancer regulation in skeletal muscle stem cells and muscle regeneration. *Croucher ASI-Aging Symposium, HKU, HK*. 05/2019
5. CRISPR/Cas9/AAV9-sgRNA Mediated Genomic Editing of Key Transcription Factors in Vivo. *5th Symposium on Skeletal Muscle Biology, HKUST, HK*. 04/2019
6. Investigation of gene regulatory mechanisms in skeletal muscle stem cells and muscle regeneration. *5th International Symposium of Musculoskeletal Regeneration Research Network, Odense, Denmark*. 04/2019
7. Mechanisms of eRNA function and localization. *Annual meeting of Epigenomics Society of HK, HK*. 02/2019
8. eRNA function in myoblast differentiation. *Keystone RNA-Protein Interactions, Whistler, Canada*. 02/2019
9. Mechanistic investigation of Linc-p27 function in skeletal muscle satellite cell and muscle regeneration. *Institute of Neuromyogene, INSERM, Lyon, France*. 11/2018
10. Mechanistic investigation of Linc-p27 function in skeletal muscle satellite cell and muscle regeneration. *Imperial College of London, UK*. 11/2018
11. Functional study of long non-coding RNA SAM in skeletal muscle satellite cell and muscle regeneration. *NCKU-CUHK Symposium, Tainan, Taiwan*. 10/2018
12. Mechanistic investigation of Linc-p27 function in skeletal muscle satellite cell and muscle regeneration. *CUHK-MPI-GIBH Symposium, CUHK*. 10/018

13. MyoD induced enhancer RNA interacts with hnRNPL protein via CAAA motif to activate target gene transcription during skeletal myoblast differentiation. *International Epigenomics Consortium Meeting, HKUST, HK, 10/ 2018*
14. Functional study of long non-coding RNA SAM in skeletal muscle satellite cell and muscle regeneration. *Jinan University, Guangzhou, China. 09/2018*
15. MyoD induced enhancer RNA interacts with hnRNPL protein via CAAA motif to activate target gene transcription during myogenic differentiation. *FASEB Skeletal Muscle Satellite Cells and Regeneration, Steamboat, Colorado, USA. 07/2018.*
16. Study of lncRNAs and enhancers in skeletal muscle. *iTERM 1st Symposium, CUHK. 06/2018*
17. Mechanistic investigation of Linc-p27 function in skeletal muscle satellite cell and muscle regeneration. *The 4th China Muscle Society Symposium, China. 05/2018*
18. Mechanistic investigation of Linc-p27 function in skeletal muscle satellite cell and muscle regeneration. *Sino-German Symposium, Chongqing Medical University, China. 02/2018.*
19. Enhancer regulation in skeletal muscle. *Chinese Society for Cell Biology 2017 Annual Meeting, Xiamen, China. 09/2017.*
20. Deletion of YY1 in muscle satellite cells reveals its function in regulating satellite cell metabolism. *International Symposium on Genomics and Regenerative Medicine organized by HKUST, HK and NSFC, Hong Kong. 08/2017.*
21. Enhancer regulation in skeletal muscle. *EpiHK 1st Symposium organized by International Human Epigenome Consortium, Hong Kong. 07/2017*
22. Enhancer study in skeletal muscle cells. *3<sup>rd</sup> Symposium of Chinese Society for Muscle Biology,*
23. *Nanjing, China. 06/2017.*
24. Deletion of YY1 in satellite cells reveals its function in regulating satellite cell metabolism. *8th Annual Meeting of Chinese Society for Development Biology, Nanjing, China. 05/2017.*
25. Functional study of Yy1 in skeletal muscle regeneration. *2<sup>nd</sup> Symposium of Chinese Society for Muscle Biology, Shanghai, China. 12/2016.*
26. Non-coding RNAs in Skeletal Muscle. *School of Life Science, Nanjing University, China. 12/2016.*
27. Deletion of YY1 in satellite cells reveals its function in regulating satellite cell metabolism. *Model Animal Research Center, Nanjing University, China. 12/2016.*
28. Deletion of YY1 in satellite cells reveals its function in regulating satellite cell metabolism. *6th CUHK International Symposium on Stem Cell Biology and Regenerative Medicine, CUHK, Hong Kong. 11/2016.*
29. Deletion of YY1 in satellite cells reveals its function in regulating satellite cell metabolism. *Joint Symposium of Guangzhou Institutes of Biomedicine and Health (GIBH) and Spain, GIBH, CAS, China. 10/2016.*

30. Deletion of YY1 in satellite cells reveals its function in regulating satellite cell metabolism in Skeletal Muscle Satellite Cells and Regeneration. *FASEB Science Research Conferences, Steamboat, Colorado, USA*. 07/2016.
31. An Enhancer and eRNA Exploration in Skeletal Muscle Cells. *3rd non-coding RNA and epigenetics workshop, GIBH, CAS, China*, 06/2016.
32. Identification and Functional Characterization of lncRNAs. *Department of Clinical Science, University of Bergen, Bergen, Norway*. 06/2016.
33. An enhancer exploration in skeletal muscle cells. *Institute of Biochemistry and Cell Biology, Chinese Academy of Sciences, Shanghai, China*. 05/2016.
34. Functional Characterization of seRNAs in Skeletal Muscle Cells. *Frontiers in Stem Cell Research, HKUST, Hong Kong*. 01/2016.
35. Study of non-coding RNAs in Development and Disease. *Guilin Medical University, Guangxi, China*. 01/2016.
36. Functional Characterization of Malat1 in Skeletal Muscle Cells. *8th International Conference on Stem Cells and Regenerative Medicine, GIBH, Guangzhou, China*. 12/2015.
37. Functional Characterization of Malat1 in Skeletal Muscle Cells. 5th CUHK International Symposium on Stem Cell Biology and Regenerative Medicine, *Department of Orthopaedics and Traumatology, CUHK, Hong Kong*. 11/2015.
38. Functional study of long ncRNAs in skeletal muscle cells. *Guangzhou Institutes of Biomedicine and Health, Chinese Academy of Science, China*. 08/2015.

## 2009 – 2014

1. Identification and Functional Characterization of LincRNAs in Muscle Differentiation and Muscle Regeneration, *The Ohio State University, Ohio, USA*. 03/2014
2. Identification and Characterization of LincRNAs in Muscle Cells, *Guangzhou Institute of Biomedicine and Health, Guangzhou, China*, 12/2013
3. Identification and Characterization of Long Non-coding RNA in Skeletal Myogenesis, the 3rd CUHK International Symposium on Stem Cell Biology & Regenerative Medicine, SMART Program, *Lui Che Woo Institute of Innovative Medicine, Faculty of Medicine, The Chinese University of Hong Kong*, 11/2013
4. Genome-wide survey of ChIP-Seq reveals YY1 regulating lincRNAs in skeletal myogenesis, *Joint Meeting on Muscle and Tendon Study, Hangzhou, China*, 10/2013
5. Identification and Characterization of LincRNAs in Muscle Cells, *Institute of Biochemistry and Cell Biology, Shanghai Institute for Biological Sciences, Shanghai, China*, 10/2013

6. Genome-wide Survey by ChIP-seq Reveals YY1 Regulation of LincRNAs in Skeletal Myogenesis, Illumina Taiwan User's Group Meeting organized by Illumina, 06/2013
7. Genome-wide survey of ChIP-Seq reveals YY1 regulating lincRNAs in skeletal myogenesis, *Society for Muscle Biology-Frontiers in Myogenesis, New York University, USA*, 06/2012
8. Non-coding RNAs in muscle stem cell and muscle diseases, Research Seminar, *Department of Chemical Pathology, CUHK*, 01/2012
9. The Role of miR-29 in Duchenne Muscular Dystrophy, *Institute of Basic Medical Science, Chinese Academy of Medical Sciences, Beijing*, 06/2011
10. YY1 Functions as An Oncogene in Endometrial Endometroid Carcinoma (EEC), *2nd OGSHK Annual Scientific Meeting, 50th Anniversary OGSHK, The Obstetrical and Gynaecological Society of Hong Kong*, 06/2011
11. Long Non-Coding RNAs: Insights into Functions, Departmental Research Seminar, *Department of Obstetrics and Gynaecology, The Chinese University of Hong Kong* 05/2011
12. The Role of miR-29 in Duchenne Muscular Dystrophy, *Faculty Research Day, School of Biomedical Sciences, The Chinese University of Hong Kong*, 05/2011
13. The Role of miR-29 in Duchenne Muscular Dystrophy, *Department of Orthopaedics and Traumatology Research Day, The Chinese University of Hong Kong*, 03/2011
14. The role of miRNA in skeletal muscle differentiation and muscle diseases, *Faculty Research Day, Faculty of Medicine, CUHK*, 08/2009
15. Role of miR-29 in Skeletal Muscle Differentiation and Muscle Diseases, *The Fifth Asia Pacific Multidisciplinary Meeting for Cancer Research, HK*, 03/2009
16. Role of miR-29 in Skeletal Muscle Differentiation and Muscle Diseases, *Department of Biology, HKUST; International Academy of Pathology; School of Biological Sciences, HKU*, 03/2009

### **COURSE TAUGHT AT CUHK**

1. Medicine year 4 Selected Study Modules (SSM) 2022, 2023
2. Joint Course Offered under HKU-CUHK-HKUST Centre for Advanced Study, 2015-present.
3. SBMS 6001, Advances in Biomedical Sciences, 2012-present.
4. SBMS 3104, History of Medicine, 2019
5. BMEG 3120, Bioinformatics, 2014-2019
6. LLSK1-11, How to Compose Library and Electronic Searches, 2011-2013.

## **POSTGRADUATE/STAFF MENTORING**

Graduated PhD students: 28

Graduated MPhil students: 2

Mentored Postdoctoral Fellow (PDF): 8

Current PhD Students: 8

Current PDF: 6

Current Research Assistant Professor: 1

## **PROFESSIONAL SOCIETIES**

- Member, Chinese Society for Aging Biology, China
- Member, Hong Kong RNA Club
- Member, RNA Society
- Founder and Member, China Muscle Society
- Member, Hong Kong Orthopaedics Association
- Member, Hong Kong Scholar Society
- Member, Hong Kong Society for Cell Biology
- Member, Chinese Society for Development Biology, China
- Member, International Human Epigenome Consortium (IHEC)
- Board Member, Epigenetics Society
- Member, Institute for Tissue Engineering and Regenerative Medicine(iTERM), CUHK
- Member, Associate Faculty Member, School of Biomedical Sciences, CUHK
- Member, Advanced Association of American Science (AAAS)
- Member, The American Society for Biochemistry and Molecular Biology (ASBMB)
- Member, American Society of Gene and Cell Therapy (ASGCT)