

## Wen Xue, Ph.D.

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Lab Home page: <http://www.umassmed.edu/xuelab/>

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### Education

Ph.D., Stony Brook University, The State University of New York, Stony Brook, NY Thesis: Tumor suppressor gene networks in liver cancer    Advisor: Dr. Scott Lowe	2004-2009
M.S., Biochemistry, Nanjing University, China Thesis: Transcriptional regulation in eukaryotes    Advisor: Dr. Jin Wang	2002-2004
B.S., Biochemistry, Nanjing University, China	1998-2002

### Appointments

Assistant Professor, RNA Therapeutics Institute, Program of Molecular Medicine, and MCCB University of Massachusetts Medical School, Worcester, MA	2014-present
Postdoctoral Research Koch Institute, MIT, Cambridge, MA    Advisor: Dr. Tyler Jacks	2009-2014

### Honors and Awards

• NIH Director's New Innovator Award	2016-2021
• American Cancer Society Research Scholars Grant	2016-2020
• The Lung Cancer Research Foundation Scientific Merit Award	2015
• Worcester Foundation Award	2015
• NCI-K99 Pathway to Independence Award	2012-2017
• The Leukemia & Lymphoma Society Career Development Program Award	2011-2012
• American Association for Cancer Research (AACR) Pre-doctoral Fellowship	2008-2011

### Professional Memberships and Activities

• Member, American Society of Gene & Cell Therapy (ASGCT)	2018-present
• Member, American Association for Cancer Research (AACR)	2008-present
• Member, International Liver Cancer Association (ILCA)	2016-present
• Consultant, Cystic Fibrosis Foundation Therapeutics lab, Lexington, MA	2017-present
• Consultant, LEK consulting, Boston, MA	2018-present
• <i>Ad hoc</i> consultant for other companies	2017-present

### Outside Service / Peer Review Activities

**Editorial Board:** *Human Gene Therapy* (2015-now), *FASEB* (2019-now)

**Guest editor:** 2019 *Theranostics* special issue: *Progress in Gene Editing Nanotheranostics*

**Referee (ad hoc)** for the following journals (>10 review per year): *Nature, Nature biotechnology, Nature Genetics, Nature Methods, Nature Materials, Cancer Cell, Cancer Discovery, Gastroenterology, Nature Communications, eLIFE, Genome Biology, Human Gene Therapy, Cancer Letters, FEBS, Trends in Cancer, Mol Therapy, etc*

2014-present

**Referee of grants for funding agencies:**

*UPenn Orphan Disease Center Pilot Grant 2017*

## Educational Activities

### Teaching Activities (classroom hours)

2019 Instructor, UMMS Cancer Bio BBS 725, (2 hours, March)\*  
2018 Instructor, UMMS Foundation course, cancer module (6 hours, Oct)  
2018 Instructor, UMMS Foundation course, cancer module (6 hours, Jan)  
2018 Instructor, UMMS Regulatory RNA Biology (BBS 718) (2 hours)  
2017 Instructor, UMMS Foundation course (6 hours)  
2017 Instructor, UMMS cancer bio BBS 725 (6 hours)  
2016 Instructor, UMMS Foundation course (3 hours)  
2015 Instructor, UMMS Regulatory RNA Biology (BBS 718) (2 hours)  
2015 Instructor, UMMS Core Course RAPS (2 hours)  
2014 Instructor, UMMS Core Course RAPS (2 hours)  
2014 Instructor, UMMS Ethics Course (2 hours)  
2010 Instructor, MIT Advanced Undergraduate Course (15 hours)

### Advising, Mentoring & Supervision:

#### Current postdoc and students:

1. Chunqing Song, Postdoc, Joint mentor with Dr. Craig Mello	2015-present
2. SuetYan Kwan, Postdoc	2016-present
3. Tingting Jiang, Postdoc	2017-present
4. Shunqing Liang, Postdoc	2018-present
5. Zachary Kennedy, Neuroscience PhD student, Joint mentor with Dr. Robert Brown	2015-present
6. Ankur Sheel, MD/PhD student (NCI F30 2018-2022)	2016-present
7. Jordan Smith, MD/PhD student (NCI F30 2019-2023, UMass T32 2017-2018)	2017-present

#### Former postdoc and students:

Haiwei Mou, Postdoc. Current: postdoc, Cold Spring Harbor Labs	2014-2018
Yingxiang Li, Visiting PhD student with Dr. Zhiping Weng. Current: Senior Bioinformatics Engineer at WeGene, China	2015-2016

## Grants

**Current**

NIH/NHLBI	DP2HL137167	Xue	2016-2021
CRISPR-based modular therapy for precision medicine			
Description: To develop Cas9 delivery modules for precision genome editing			
Total Award: \$2,512,500 (direct =\$300,000 / year)			
PI: 25% effort			
NIH/NHLBI	P01HL131471	Flotte	2016-2021
New Approaches to Gene Therapy for Alpha-1 Antitrypsin Deficiency			
Project 3: Liver-directed somatic gene correction rAAV system of regulatable Cas9/sgRNA			
Description: To establish a pre-clinical paradigm for CRISPR-mediated correction of AAT deficiency in the mouse			
Total Award: ~\$2,500,000 (direct =~\$300,000 / year)			
co-I, PI of Project 3: 20% effort			
American Cancer Society	129056-RSG-16-093	Xue	2016-2020
An integrative approach to study KRAS inhibition in lung cancer			
Description: To elucidate the function of oncogenic <i>KRAS</i> in lung tumor maintenance			
Total Award: \$791,000 (direct =\$165,000 / year)			
PI: 10% effort			
Lung Cancer Research Foundation		Xue	2016-2019
Targeting NF-κB as an Achilles' heel in KRAS-mutant lung cancer			
Description: To identify mechanisms of NF-κB signaling in lung cancer.			
Total Award: \$150,000			
PI: 1% effort			
UMass CCTS pilot award program		Sontheimer	2018-2019
All-in-one AAV Delivery of a Compact Cas9 Ortholog in the Central Nervous System			
Description: To develop AAV delivery of a Compact Cas9 Ortholog			
Total Award: \$60,000 (~\$15,000 Xue lab)			
co-I: 5% effort			
NIH/NHLBI	UG3HL147367	Gao/Anderson/Xue	2018-2021
Develop combinatorial non-viral and viral CRISPR delivery for lung diseases			
Description: To develop new CRISPR delivery toolkits for lung diseases			
Total Award: direct =\$166,000 / year for Xue lab			
co-PI: 10% effort			

**Completed** (total grant, role, % effort)

Hyundai Pediatric Cancer Grant (2016-2018)	\$250,000	PI: 10%
ALS Association Robert Brown (2017-2018)	\$169,000	co-I: 1%
NIH/NCI R00CA169512 (2014-2017)	\$747,000	PI: 20%
UMass CCTS Pilot Project Program (2016-2017)	\$50,000	PI: 5%
UMass President's S&T Fund (2015-2016)	\$25,000	co-PI: 1%
Lung Cancer Research Foundation (2015-2016)	\$75,000	PI: 5%
Worcester Foundation (2015-2016)	\$35,000	PI: 1%

**Technology Development****Patent applications:**

Structure-guided chemical modification of guide RNA and its applications  
Yin H, Anderson DG, Langer R, **Xue W**, Song CQ  
PCT Application No: 16/256,003 filed on 01/24/2019

Delivery systems and kits for gene editing  
Yin H, **Xue W**, Anderson DG, Dorkin J, Jacks T.  
US patent No. 10,047,355, issued on 08/14/2018

Methods for in vivo genome editing  
Yin H, **Xue W**, Bogorad RL, Anderson DG, Jacks T.  
PCT Application No: PCT/ US2015/017246. Priority date Feb 24, 2014

Methods and products related to lung cancer US20,150,150,892  
TE Jacks, **W Xue**, E Meylan, TG Oliver, D Feldser, M Winslow. 2015

Cooperating oncogenes in cancer US20110035814, EP2027294, WO2007139985A9  
L Zender, SW Lowe, MS Spector, **W Xue** 2011

Oncogenomics-based rna screen and use thereof to identify novel tumor suppressors  
US20100273660  
L Zender, **W Xue**, S Powers, SW Lowe 2009

Orthotopic, controllable, and genetically tractable non-human animal model for cancer  
US20090022685, WO2008021393  
R Dickins, GJ Hannon, SW Lowe, **W Xue**, L Zender 2008

## Publications

Please access Google Scholar. In March 2019, my H-index is 28 and total citation is 9,924.

<https://scholar.google.com/citations?user=oANsQ4YAAAAJ&hl=en&oi=ao>

### A. Publications from work at UMassmed

**Total publications at UMass: 30 (24 primary papers including 11 corresponding + 6 reviews).**

**A1. Peer-reviewed corresponding author** (# Co-corresponding, \* Co-first)

1. Mou H\*, Ozata D\*, Smith J\*, et al, **Xue W**#. CRISPR-SONIC: targeted somatic oncogene knock-in enables rapid *in vivo* cancer modeling. Genome Medicine 2019. in press.
2. Song C-Q\*, Jiang T\*, et al, Liu D#, Yin H#, **Xue W**#. Adenine base editing in an adult mouse model of tyrosinemia. Nature Biomedical Engineering. 2019. doi.org/10.1038/s41551-019-0357-8
3. Wang D, Li J, Song C-Q, et al, Zamore PD#, **Xue W**#, and Gao G#. Repairing recessive compound heterozygous mutations in vivo via cas9-mediated allelic exchange. Nat Biotechnology. 2018. 36:839–842
4. Song C-Q, Wang D, et al, Terence R#, **Xue W**#. *in vivo* genome editing partially restores alpha1-antitrypsin in a murine model of AAT deficiency. Hum Gene Therapy 2018. 29 (8):853-860
5. Yin H\*, Song C-Q\*, et al, **Xue W**#, Langer R#, Anderson DG#. Partial DNA-guided Cas9 enables efficient genome editing with reduced off-target activity. Nature Chemical Biology 2018. 14: 311–316
6. Mou H\*, Smith J\*, et al, Moore M#, Weng Z#, **Xue W**#. CRISPR-mediated genome editing induces exon skipping by alternative splicing or exon deletion. Genome Biology 2017. 18:108
7. Mou H\*, Moore J\*, Malonia SK\*, Li Y, Ozata DM, Hough S, Song CQ, Smith JL, Fischer A, Weng Z, Green MR#, **Xue W**#. Genetic disruption of oncogenic Kras sensitizes lung cancer cells to Fas receptor-mediated apoptosis. Proc Natl Acad Sci U S A 2017. 114(14):3648-3653
8. Song C-Q\*, Li Y\*, Mou H, Moore J, Park A, Pomyen Y, Hough S, Kennedy Z, Fischer A, Yin H, Anderson DG, Conte Jr D, Zender L, Wang XW, Thorgeirsson S, Weng Z#, **Xue W**#. Genome-wide CRISPR Screen Identifies Regulators of Mitogen-Activated Protein Kinase as Suppressors of Liver Tumors in Mice. Gastroenterology. 2017. 152(5):1161-1173.e1
9. Yin H, Song CQ, Dorkin JR, Zhu LJ, Li Y, Wu Q, Park A, Yang J, Suresh S, Bizhanova A, Gupta A, Bolukbasi MF, Walsh S, Bogorad RL, Gao G, Weng Z, Dong Y, Koteliansky V, Wolfe SA, Langer R, **Xue W**#, Anderson

DG#. Therapeutic genome editing by combined viral and non-viral delivery of CRISPR system components to the mouse liver. Nat Biotechnology 2016. 34: 328-333.

10. Wang D\*, Mou H\*, Li SY\*, Li Y, Hough S, Tran K, Li J, Yin H, Anderson DG, Sontheimer EJ, Weng Z#, Gao G#, **Xue W#**. Adenovirus-mediated somatic genome editing of Pten by CRISPR/Cas9 in mouse liver in spite of Cas9-specific immune responses. Human Gene Therapy 2015. 26:432-42.
11. Li Y\*, Park A\*, Mou H\*, Colpan C, Bizhanova A, Akama-Garren E, Joshi N, Hendrickson EA, Feldser D, Yin H, Anderson DG, Jacks T, Weng Z#, **Xue W#**. A versatile reporter system for CRISPR-mediated chromosomal rearrangements. Genome Biology 2015. 16(1):111.

### **A2. Peer-reviewed co-author**

12. Wang W, Yang J, Edin ML, Wang Y, Luo Y, Wan D, Yang H, Song CQ, **Xue W**, et al, Zhang G. Targeted metabolomics identifies the cytochrome P450 monooxygenase eicosanoid pathway as a novel therapeutic target of colon tumorigenesis. Cancer Res. 2019 doi: 10.1158/0008-5472.CAN-18-3221.
13. Moon S-H, Huang C-H, Houlihan SL, Regunath K, Freed-Pastor WA, Morris JPIV, Tschaharganeh DF, Kastenhuber ER, Barsotti AM, Culp-Hill R, **Xue W**, et al, Lowe SW, Prives C. p53 Represses the Mevalonate Pathway to Mediate Tumor Suppression. Cell. 2019. 176:564-580
14. Edraki A, Mir A, Ibraheim R, Gainetdinov I, Yoon Y, Song C-Q, Cao Y, Gallant J, **Xue W**, Rivera-Pérez JA, Sontheimer EJ. A Compact, High-Accuracy Cas9 with a Dinucleotide PAM for In Vivo Genome Editing. Molecular Cell. 2019. 73: 714-726
15. Ibraheim R, Song CQ, Mir A, Amrani N, **Xue W**, Sontheimer EJ. All-in-one adeno-associated virus delivery and genome editing by *Neisseria meningitidis* Cas9 in vivo. Genome Biology 2018. 19:137
16. Zhang XO, Fu Y, Mou H, **Xue W**, Weng Z. The temporal landscape of recursive splicing during Pol II transcription elongation in human cells. PLoS Genetics. 2018. doi.org/10.1371/journal.pgen.1007579
17. Yin H, Song CQ, et al, **Xue W**, Langer R, Anderson DG. Structure-guided chemical modification of guide RNA enables potent non-viral Cas9-mediated genome editing in vivo. Nat Biotechnology. 2017. 35:1179-1187
18. Dang H, Takai A, Forgues M, Pomyen Y, Mou H, **Xue W**, Ray D, Ha KCH, Morris QD, Hughes TR, Wang XW. Oncogenic Activation of the RNA Binding Protein NELFE and MYC Signaling in Hepatocellular Carcinoma. Cancer Cell. 2017 32:101-114
19. Tammela T, Sanchez-Rivera, et al, **Xue W**, Katajisto P, Bhutkar A, Jacks T. A Wnt-producing niche drives proliferative potential and progression in lung adenocarcinoma. Nature. 2017 545:355-359
20. Yin H, Bogorad RL, Barnes C, et al, **Xue W**, Zerial M, Langer R, Anderson DG, and Koteliensky V. Control of liver size by RNAi-mediated multiplex knockdown and its application for discovery of regulatory mechanisms. J Hepatology, 2016. 64:899-907
21. Akama-Garren EH\*, Joshi NS\*, Tammela T, et al, **Xue W**, and Jacks T. A modular assembly platform for rapid generation of DNA constructs. Scientific Reports. 2016. 6:16836
22. Li J, Chanrion M, Sawey E, Wang T, Chow E, Tward A, Su Y, **Xue W**, Lucito R, Zender L, Lowe SW, Bishop JM, Powers S. Reciprocal Interaction of Wnt and RXR- $\alpha$  Pathways in Hepatocyte Development and Hepatocellular Carcinoma. PLoS One. 2015 10:e0118480
23. Khan OF, Zaia EW, Jhunhunwala S, **Xue W**, et al, Jacks T, Langer R, Anderson DG. Dendrimer-inspired nanomaterials for the in vivo delivery of siRNA to lung vasculature. Nano Lett. 2015 15:3008-16
24. Sánchez-Rivera F, Papagiannakopoulos T, Romero R, et al, **Xue W** and Jacks T. Rapid modeling of cooperating genetic events in cancer through somatic genome editing. Nature, 2014 516:428-31

### **A3. Peer-reviewed reviews and editorial**

25. Yin H#, **Xue W#**, and Anderson DG#. CRISPR-Cas: a tool for cancer research and therapeutics. Nature Reviews Clinical Oncology, 2019. doi: 10.1038/s41571-019-0166-8
26. Smith JL, Mou H and **Xue W#**. Understanding and repurposing CRISPR-mediated alternative splicing. Genome Biology 2018 19:184
27. Song C-Q, **Xue W#**. CRISPR-Cas-related technologies in basic and translational liver research. Nature Reviews Gastroenterology & Hepatology. 2018 15:251-252
28. Ankur Sheel and **Xue W#**. Genomic amplifications cause false positives in CRISPR screens. Cancer Discovery. 2016 6: 824 ("in the spotlight" article)
29. Mou H, Kennedy Z, Anderson DG, Yin H#, and **Xue W#**. Precision cancer mouse models through genome editing with CRISPR-Cas9. Genome Medicine, 2015 7:53

30. **Xue W<sup>#</sup>**, Wang XW<sup>#</sup>. The search for precision models clinically relevant to human liver cancer. Hepatic Oncology. 2015 2: 315-319. (Editorial)

**B. Peer-reviewed publications from work prior to UMass (as postdoc and PhD, 18 papers in total)  
(First/co-first authors: 2 Nature, 2 Cell, 1 Nat Biotech, 1 Cancer Discovery, 1 G&D, 2 PNAS)**

31. **Xue W**, Wang J, Shen Z and Zhu H. Enrichment of Transcriptional Regulatory Sites in the non-coding genomic region. Bioinformatics, 20: 569-575 (2004).
32. Zender L, Spector MS, **Xue W**, Flemming P, Cordon-Cardo C, Silke J, Fan ST, Luk JM, Wigler M, Hannon GJ, Mu D, Lucito R, Powers S and Lowe SW. Identification and validation of oncogenes in liver cancer using an integrative oncogenomic approach. Cell, 125:1253-67 (2006).
33. Lakshmi B, Hall IM, Egan C, Alexander J, Leotta A, Healy J, Zender L, Spector MS, **Xue W**, Lowe SW, Wigler M, Lucito R. Mouse genomic representational oligonucleotide microarray analysis: detection of copy number variations in normal and tumor specimens. Proc Natl Acad Sci U S A., 103:11234-9 (2006).
34. **Xue W<sup>\*</sup>**, Zender L<sup>\*</sup>, Miething C, Dickins RA, Hernando E, Krizhanovsky V, Cordon-Cardo C, and Lowe SW. Senescence and tumour clearance is triggered by p53 restoration in murine liver carcinomas. Nature, 445:656-60 (2007).
35. He L, He X, Lim LP, de Stanchina E, Xuan Z, Liang Y, **Xue W**, Zender L, Magnus J, Ridzon D, Jackson AL, Linsley PS, Chen C, Lowe SW, Cleary MA and Hannon FJ. A microRNA component of the p53 tumour suppressor network. Nature, 447:1130-4 (2007).
36. Burgess DJ, Doles J, Zender L, **Xue W**, Ma B, McCombie WR, Hannon GJ, Lowe SW and Hemann MT. Topoisomerase levels determine chemotherapy response in vitro and in vivo. Proc Natl Acad Sci U S A., 105:9053-8 (2008).
37. Gyrd-Hansen M, Darding M, Miasari M, Santoro MM, Zender L, **Xue W**, Tenev T, da Fonseca PC, Zvelebil M, Bujnicki JM, Lowe S, Silke J and Meier P. IAPs contain an evolutionarily conserved ubiquitin-binding domain that regulates NF-kappaB as well as cell survival and oncogenesis. Nat Cell Biol., 10:1309-17 (2008).
38. **Xue W**, Krasnitz A, Lucito R, Sordella R, Vanaelst L, Cordon-Cardo C, Singer S, Kuehnel F, Wigler M, Powers S, Zender L and Lowe SW. DLC1 is a chromosome 8p tumor suppressor whose loss promotes hepatocellular carcinoma. Genes Dev., 22:1439-44 (2008).
39. Zender L<sup>\*</sup>, **Xue W<sup>\*</sup>**, Zuber J, Semighini C, Krasnitz A, et al., An oncogenomics-based *in vivo* RNAi screen identifies tumor suppressors in liver cancer. Cell, 135:852-64 (2008).
40. Liu LX, Lee NP, Chan VW, **Xue W**, Zender L, Zhang C, Mao M, Dai H, Wang XL, Xu MZ, Lee TK, Ng IO, Chen Y, Kung HF, Lowe SW, Poon RT, Wang JH and Luk JM. Targeting cadherin-17 inactivates Wnt signaling and inhibits tumor growth in liver carcinoma. Hepatology, 50(5):1453-63 (2009).
41. Oliver TG, Meylan E, Chang GP, **Xue W**, Burke JR, Humpton TJ, Hubbard D, Bhutkar A, and Jacks T. Caspase-2-Mediated Cleavage of Mdm2 Creates a p53-Induced Positive Feedback Loop. Mol Cell., 43(1):57-71 (2011).
42. **Xue W**, Meylan E, Oliver TG, Feldser DM, Winslow MM, Bronson R, Jacks T. Response and resistance to NF- $\kappa$ B inhibitors in mouse models of lung adenocarcinoma. Cancer Discovery, 1(3):236-247 (2011).
43. **Xue W<sup>\*</sup>**, Kitzing T<sup>\*</sup>, Roessler S, Zuber J, Krasnitz A, Schultz N, Revill K, Weissmueller S, Rappaport AR, Simon J, Zhang J, Luo W, Hicks J, Zender L, Wang XW, Powers S, Wigler M, and Lowe SW. A cluster of cooperating tumor-suppressor gene candidates in chromosomal deletions. Proc Natl Acad Sci U S A, 109(21):8212-7 (2012).
44. Yin H<sup>\*</sup>, **Xue W<sup>\*</sup>**, Chen S, Bogorad RL, Benedetti E, Grompe M, Koteliansky V, Sharp PA, Jacks T, and Anderson DG. Genome editing with Cas9 in adult mice corrects a disease mutation and phenotype. Nat Biotechnology, 32(6):551-3 (2014).
45. Shao D<sup>\*</sup>, **Xue W<sup>\*</sup>**, Krall EB, Bhutkar A, Piccioni F, Wang X, Schinzel, AC, Sood S, Rosenbluh H, Kim JW, Zwang Y, Roberts TM, Root DE, Jacks T, and Hahn W. KRAS and YAP1 converge to regulate EMT and tumor survival. Cell, 158(1):171-84 (2014).
46. Tschaharganeh D, **Xue W**, Calvisi DF, Evert M, Michurina TV, Dow LE, Banito, Katz SF, Kastenhuber ER, Weissmueller S, Huang CH, Lechel A, Andersen JB, Capper D, Zender L, Longerich T, Enikolopov G and Lowe SW. p53-dependent Nestin regulation couples tumor suppressive functions and cell fate decisions in liver cancer. Cell, 158(3):579-92 (2014).
47. **Xue W<sup>\*</sup>**, Dahlman J<sup>\*</sup>, Tammela T, Khan OF, Sood S, Dave A, Cai W, Chirino LM, Yang GR, Bronson R, Crowley DG, Sahay G, Schroeder A, Langer R, Anderson DG, and Jacks T. Small RNA combination therapy for lung cancer. Proc Natl Acad Sci U S A, 111(34):E3553-61 (2014).
48. **Xue W<sup>\*</sup>**, Chen S<sup>\*</sup>, Yin H<sup>\*</sup>, Tammela T, Papagiannakopoulos T, Joshi NS, Cai W, Yang G, Bronson R, Crowley DG, Zhang G, Anderson DG, Sharp PA, and Jacks T. CRISPR-mediated direct mutation of cancer genes in the mouse liver. Nature, 514(7522):380-4 (2014).

### C. Non-peer-reviewed publications

49. **Xue W**, Wang J, et al. Synergistic Activation of Eukaryotic Gene Transcription by Multiple Upstream Sites. Prog Biochem Biophys, 29: 510-513 (2002).
50. Zender L, **Xue W**, Cordon-Cardo C, Hannon GJ, Lucito R, Powers S, Flemming P, Spector MS and Lowe SW. Generation and analysis of genetically defined liver carcinomas derived from bipotential liver progenitors. Cold Spring Harb Symp Quant Biol. 70:251-61 (2005).
51. Krizhanovsky V, **Xue W**, Zender L, Yon M, Hernando E, and Lowe SW. Implications of Cellular Senescence in Tissue Damage Response, Tumor Suppression, and Stem Cell Biology. Cold Spring Harb Symp Quant Biol., 73:513-22 (2008).

### Books & Chapters

None

### Presentations & Abstracts

#### National/International Invited Presentations (\* Scheduled)

1. 2019.07 SCBA symposium, liver cancer session, Kunming, China\*
2. 2018.12 NIH Somatic Cell Genome Editing Kickoff Meeting, Bethesda, MD
3. 2018.11 SCBA Hepatology Symposium, San Francisco, CA
4. 2018.06 NIH High-Risk, High-Reward Research Symposium, Bethesda, MD
5. 2018.04 AACR annual meeting, Chicago, IL  
*Title "CRISPR-based liver cancer modeling and gene therapy"*
6. 2018.03 NHLBI/CFF Workshop on Gene Editing, Bethesda, MD
7. 2017.10 American Association for the Study of Liver Diseases (AASLD) meeting, Washington, DC  
*Title "Modeling Liver Diseases in Vivo with CRISPR/Cas9"*
8. 2017.09 Tango Therapeutics CRISPR summit, Cambridge, MA  
*Title "in vivo Genome Editing With CRISPR-Cas9"*
9. 2017.05 American Gastroenterological Association (AGA) Digestive Disease Week, Chicago, IL  
*Title "in vivo Genome Editing With CRISPR-Cas9"*
10. 2016.03 Fourth Symposium on Translational Genomics/NCI, Bethesda, MD  
*Title "CRISPR liver cancer models"*
11. 2016.02 CRISPR Congress, Boston, MA  
*Title "Precision Cancer Mouse Models Through Genome Editing with CRISPR-Cas9"*
12. 2015.11 The 18th SAPA-NE Scientific Symposium - The New Era of Gene Therapy, Boston, MA  
*Title "CRISPR-mediated direct mutation of cancer genes in the mouse liver"*
13. 2015.09 International Liver Cancer Association (ILCA) annual meeting, Paris, France, **Session co-chair**  
*Title "Animal models relevant to human liver cancer"*
14. 2015.09 Discovery on Target: Developing CRISPR-based Therapies, Boston, MA  
*Title "CRISPR-mediated direct mutation of cancer genes in the mouse liver"*

#### National/International Meetings (talk)

15. 2016.08 CSHL Meeting on Genome Engineering: the CRISPR/CAS Revolution, Cold Spring Harbor, NY  
*"in vivo CRISPR-Cas9 genetic screen for liver cancer"*
16. 2015.08 CSHL Meeting on Genome Engineering: the CRISPR/CAS Revolution, Cold Spring Harbor, NY  
*"CRISPR-mediated direct mutation of cancer genes in the mouse liver"*
17. 2008 CSHL Meeting on Mechanisms & Models of Cancer
18. 2007.04 97th AACR Annual Meeting
19. 2006.08 CSHL Meeting on Mechanisms & Models of Cancer

## Committee Assignments and Administrative Service

### Department, School, and University Service:

2014-2019 (annual service)

- I met with faculty candidates (RTI, MCCB, BSB, PMM, etc)
- I met with seminar speakers from RTI, MCCB, PMM, etc.
- Host lab visit of UMass Cancer Walk donors
- I interviewed PhD and MD/PhD applicants

2018

- I presented at a conference between Gene Therapy Center and Beam Therapeutics
- I presented at the UMass AAT patient meeting
- I hosted RTI seminar speakers Drs. Daniel Anderson (MIT) and Andrea Ventura (MSKCC)
- I met with candidate of UMassmed pediatric surgeon

2017

- I attended the alpha-1 society campus visit
- I attended MCCB meeting with the Dartmouth Cancer center
- Phone interview on “white paper” on UMass Cancer Center
- I presented at an MCCB In-house seminar
- I presented a seminar at the UMass PMM retreat

2016

- **Interview Committee for Chinese applicants (UMassmed GSBS)**
- I attended RTI Venture capital event in Cambridge, MA
- I presented a Cell and Developmental Biology seminar
- I presented a seminar at the MPM Ventures campus visit at UMass
- I attended UMass Gene Therapy Venture capital event in Cambridge, MA
- I presented at the UMass Wellstone center retreat (invited by Dr. Charles Emerson)

2015

- I hosted RTI seminar speaker Dr. Trudy Oliver (Utah)
- I presented a seminar at the UMass epigenetics club
- I presented at an MCCB In-house seminar
- I presented a seminar at the campus visit of Intellia Therapeutics
- I presented at the UMass PMM retreat

2014

- I co-organized a visit of the Werthein family to UMass (Gene Therapy)
- I presented seminars at MCCB and PMM
- I presented at the UMMS annual retreat

### Ph.D. THESIS COMMITTEES (Faculty advisor in parentheses):

#### Current:

Cansu Colpan (Phil Zamore) 2015-present Jooyoung Lee (Erik Sontheimer) 2017-present  
Orkan Ilbay (Victor Ambros) 2015-present Ye Duan (Victor Ambros) 2015-present  
Raed Abbasee (Erik Sontheimer) 2017- Dominic Gessler (Guangping Gao) 2018-

#### Previous:

Cearra Smith (Paul Gardner) 2015-2018



**QUALIFY EXAM**

Yongjin Lee (Phil Zamore) 2015      Zeyu Yao (Phil Zamore) 2018

**Ph.D. THESIS DEFENSE:**

Wei Wang (Phil Zamore) 2015      Samantha Burke (Victor Ambros) 2015

Alisha Gruntman (Terence Flotte) 2016