

## **QINGSHENG LI**

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Department of Microbiology and Immunology  
School of Medicine, University of Louisville  
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### **EDUCATION**

Postdoctoral	Tumor immunology	Mount Sinai School of Medicine	2000-2003
Ph.D.	Medicine	Shanghai Second Medical University	1994-1997
M.D.	Pediatric	SUN YAT-SEN Medical University	1988-1991
B.A.	Medicine	Wannan Medical College	1981-1986

### **PROFESSIONAL APPOINTMENTS**

#### **University of Louisville, Louisville, KY**

Assistant Professor Department of Microbiology and Immunology 2019 ~ present

#### **University of Louisville, Louisville, KY**

Research Assistant Professor Department of Microbiology and Immunology 2013 ~ 2018

#### **State University of New York, Buffalo, NY**

Research Assistant Professor Department of Microbiology and Immunology 2012 ~ 2013

#### **Roswell Park Cancer Institute, Buffalo, NY**

Research Scientist Department of Immunology 2003 ~ 2012

#### **Mount Sinai Medical School, New York, NY**

Postdoctoral Associate Institute for Gene Therapy 2000 ~ 2003

#### **Mie University School of Medicine, Mie, Japan**

Visiting Researcher Department of Pediatrics 1998 ~ 2000

#### **Xinhua Hospital, Shanghai Institute for Pediatric Research, Shanghai Second Medical University, Shanghai, China**

Attending Pediatrician Department of Pediatrics 1997 ~ 1998

#### **Guangzhou Women and Children's Medical Center, Guangzhou, China**

Attending Pediatrician NICU 1991 ~ 1994

#### **Chaohu Hospital, Anhui Medical University, Chaohu, China**

Pediatric Resident Department of Pediatric 1986 ~ 1988

## **AWARDS & HONORS**

- AAI early career faculty travel grant. The American Association of Immunologists Annual Meeting. 2018.
- AAI Trainee Abstract Awards. The American Association of Immunologists Annual Meeting. 2010.
- The second prize of Shanghai Medical Science & Technology progress awards: The first accomplisher for the study of neonatal clinical and experimental immunology. 2004
- Scholarship for the research thesis of Medical and Pharmacological health science of Shanghai Second Medical University and Chinese University of Hong Kong from September 1995 to July 1997
- Kuang AnKun Scholarship of Shanghai Second Medical University for the academic year from September 1996 to July 1997
- Scholarship for excellent graduate student of Shanghai Second Medical University from September 1995 to July 1996

## **MEMBERSHIP IN PROFESSIONAL SOCIETIES**

American Association of Immunologists (2004 ~ present)  
Advancing Science Serving Society (2007~2008)

## **PUBLICATIONS**

1. Mandal RK, Denny JE, Waide ML, **Li Q**, Bhutiani N, Anderson CD, Baby BV, Jala VR, Egilmez NK, Schmidt NW. Temporospatial shifts within commercial laboratory mouse gut microbiota impact experimental reproducibility. 2020. *BMC Biol.* 18(1):83.
2. Gu T, **Li Q**, Egilmez NK. IFN $\beta$ -producing CX3CR1+ macrophages promote Tregulatory cell expansion and tumor growth in the APCmin/+ / Bacteroides fragilis colon cancer model. 2019. *Oncolmmunology.* 8(12): e1665975
3. Bhutiani N, **Li Q**, Anderson CD, Gallagher HC, De Jesus M, Singh R, Jala VR, Fraig M, Gu T, Egilmez NK. Enhanced gut barrier integrity sensitizes colon cancer to immune therapy. 2018. *Oncolmmunology.* 7(11): e1498438
4. **Li Q**, Anderson CD, Egilmez NK. Inhaled IL-10 Suppresses Lung Tumorigenesis via Abrogation of Inflammatory Macrophage-Th17 Cell Axis. 2018. *J Immunol.* 201(9):2842-2850
5. **Li Q**, Egilmez NK. Ontogeny of Tumor-associated CD4+CD25+Foxp3+ T-regulatory Cells. 2016. *Immunol Invest.* 19:1-17.
6. **Li Q**, Harden JL, Anderson CD, Egilmez NK. Tolerogenic Phenotype of IFN- $\gamma$ -Induced IDO+ Dendritic Cells Is Maintained via an Autocrine IDO-Kynurenine/AhR-IDO Loop. 2016. *J Immunol.* 197(3): 962-70.
7. **Li Q**, Virtuoso LP, Anderson CD, Egilmez NK. Regulatory Rebound in IL-12-Treated Tumors Is Driven by Uncommitted Peripheral Regulatory T Cells. 2015. *J Immunol.* 195(3):1293-300.
8. Ozbilge H, LeVea C, Chung AY, **Li Q**, Egilmez NK. Modulating gut immunity and neoplasia with oral cytokine adjuvants. 2015. *Oncoimmunology.* 4(4): e1002724
9. Chung AY, **Li Q**, Blair SJ, De Jesus M, Dennis KL, LeVea C, Yao J, Sun Y, Conway TF, Virtuoso LP, Battaglia NG, Furtado S, Mathiowitz E, Mantis NJ, Khazaie K,

- Egilmez NK. Oral interleukin-10 alleviates polyposis via neutralization of pathogenic T-regulatory cells. 2014. Cancer Res. 74(19):5377-85
10. Huntoon KM, Russell L, Tracy E, Barbour KW, **Li Q**, Shrikant PA, Berger FG, Garrett-Sinha LA, Baumann H. A unique form of haptoglobin produced by murine hematopoietic cells supports B-cell survival, differentiation and immune response. 2013. Mol Immunol. 55(3-4): 345-354.
  11. Rao RR, **Li Q**, Gubbels Bupp MR, Shrikant PA. Transcription factor Foxo1 represses T-bet-mediated effector functions and promotes memory CD8(+) T cell differentiation. 2012. Immunity. 36(3): 374-87.
  12. **Li Q**, Rao RR, Vazzana J, Goedegebuure P, Gillanders W, Odunsi K and Shrikant PA. Regulating mammalian target of rapamycin to tune vaccination-induced CD8+ T cell responses for tumor immunity. 2012. J Immunol. 188(7): 3080-3087.
  13. **Li Q**, Rao RR, Araki K, Pollizzi K, Odunsi K, Powell JD, and Shrikant PA. 2011. A central role for mTOR in Homeostatic Proliferation (HP) induced CD8+ T cell memory and tumor immunity. Immunity 34(4): 541-53.
  14. Yeh N, Glosston NL, Wang N, Guindon L, McKinley C, Hamada H, **Li Q**, Dutton RW, Shrikant P, Zhou B, Brutkiewicz RR, Blum JS, Kaplan MH. 2010. Tc17 cells are capable of mediating immunity to vaccinia virus by acquisition of a cytotoxic phenotype. J Immunol 185(4):2089-98.
  15. Rao RR, **Li Q** and Shrikant PA. 2010. Fine-tuning CD8+ T cell functional responses: mTOR acts as a rheostat for regulating CD8+ T cell proliferation, survival and differentiation? (Review) Cell Cycle 9 (15): 2996-3001
  16. Rao RR, **Li Q**, Odunsi K, Shrikant PA. 2010. The mTOR kinase determines Effector versus Memory CD8(+) T Cell Fate by Regulating the Expression of Transcription Factors T-bet and Eomesodermin. Immunity 32: 67-78
  17. Shrikant PA, Rao RR, **Li Q**, Kesterson J, Eppolito C, Mischo A, Singhal P. 2010. Regulating functional cell fates in CD8 T cells (Review). Immunol Res. 46: 12-27
  18. **Li Q**, Eppolito C, Odunsi K, Shrikant PA. 2010. Antigen-induced Erk1/2 activation regulates Ets-1-mediated sensitization of CD8+ T cells for IL-12 responses J Leukoc Biol. 87: 257-263
  19. Mischo A, Eppolito C, **Li Q**, Shrikant PA. 2007. Characterizing host immune responses by monitoring fluorescently marked cells (Review). Immunol Invest 36: 791-805
  20. **Li Q**, Cheryl E, Odunsi K, and Shrikant PA. 2006. IL-12 programmed long-term CD8+ T cell responses require STAT4. J Immunol 177: 7618-7625
  21. Tao J, Segal BH, Eppolito C, **Li Q**, Dennis CG, Youn R, and Shrikant PA. 2006. *Aspergillus fumigatus* extract differentially regulates antigen specific CD4+ and CD8+ T cell response to promote tumor immunity. J Leukoc Biol 80: 529-537
  22. Huang B, Pan P-Y, **Li Q**, Sato AI, Levy DE, Bromberg J, Divino CM, Chen S-H. 2006. Gr-1+CD115+ immature myeloid suppressor cells mediate the development of tumor-induced T regulatory cells and T-cell anergy in tumor-bearing host. Cancer Res 66: 1123-1131
  23. Wang M-H, Chen T-X, Zhu Y-Z, **Li Q**. 2006. Effects of intravenous immunoglobulin upon the surface molecules on the neonatal umbilical cord blood monocytes/macrophags. Current Immunology 26(1): 56-59
  24. Zhao H-J, Hao Yi-qun, Chen Tong-Xin, Zhu Ya-Zhong, **Li Q**. 2006. Effects of intravenous immunoglobulin on IL-10 and TGF $\beta$  production in neonatal umbilical cord blood lymphocytes. Journal of Clinical Pediatrics. 24(5): 378-381
  25. Hao Yi-qun, Chen Tong-Xin, Zhu Ya-Zhong, **Li Q**. 2006. Mechanism of inhibitory effect of intravenous immunoglobulin on neonatal umbilical cord blood lymphocytes. Chin J Pediatr. 43(6): 438-443

26. Hao Yi-qun, Chen Tong-Xin, Zhu Ya-Zhong, **Li Q**. 2006. Effect of intravenous immunoglobulin on IFN $\gamma$  and IL-4 production of cord blood lymphocytes in neonates. Chin J Perinat Med 9(2): 112-116
27. Moroz A, Eppolito C, **Li Q**, Tao J, Clegg CH, and Shrikant PA. 2004. IL-21 enhances and sustains CD8+ T cell response to achieve durable tumor immunity: Comparative evaluation of IL-2, IL-15, and IL-21. J Immunol 173: 900-909
28. **Li Q**, Pan P-Y, Gu P, Xu D, Chen S-H. 2004. The role of immature myeloid Gr-1+ cells in the development of anti-tumor immunity. Cancer Res 64: 1130-1139
29. Xu D, Gu P, Pan Y-P, **Li Q**, Sato AI, Chen S-H. 2004. NK and CD8+ T cell-mediated eradication of poorly immunogenic B16-F10 melanoma by the combined action of IL-12 gene therapy and 4-1BB costimulation. Int J Cancer 109: 499-506
30. Pan P-Y, Gu P, **Li Q**, Xu D, Weber K, and Chen S-H. 2004. Regulation of dendritic cell function by NK cells: Mechanisms underlying the synergism in the combination therapy of IL-12 and 4-1BB activation. J Immunol 172: 4779-4789
31. Pan P-Y, Li Y, **Li Q**, Gu P, Martinet O, Thung S, and Chen S-H. 2004. In situ recruitment of antigen-presenting cells by intratumoral GM-CSF gene delivery. Cancer Immunol Immunother 53: 17-25
32. **Li Q**, Tanaka S, Kisenge RR, Toyoda H, Eiichi Azuma E and Komada Y. 2000. Activation-induced T cell death in G1A phase. Eur J Immunol 30: 3329-3337
33. Inaba H, Komada Y, **Li Q**, Zhang X-L, Tanaka S, Azuma E, Yamamoto H, and Sakurai M. 1999. mRNA expression of various Fas molecules in acute leukemia cells. Am J Hemtol 62: 150-158
34. Komada Y, Inaba H, **Li Q**, Azuma E, Zhou Y-W, Yamamoto H, and Sakurai M. 1999. Epitopes and functional response defined by a panel of anti-Fas (CD95) monoclonal antibodies. Hybridoma 18: 391-398
35. Zhang X-L, Komada Y, Chipeta J, **Li Q**, Inaba H, Azuma E, Yamamoto H, and Sakurai M. 2000. Intracellular cytokine profile of T cells from children with acute lymphoblastic leukemia. Cancer Immunol Immunother 49: 165-172
36. Wang M-H, Chen T-X, Zhu Y-Z, **Li Q**. 2005. Study on the effect of intravenous immunoglobulin on the phagocytosis of neonatal umbilical cord blood monocyte/macrophages. Chinese J Neonatology. 23(9): 630-633.
37. **Li Q**, Wu S, Ying D, and Lin Z. 1999. Modulation of intravenous immunoglobulin on the proliferation in neonatal mononuclear cell. China J Microbiol Immunol 19(1): 55-58
38. **Li Q**, Wu S, Ying D, and Lin Z. 1998. Intravenous immunoglobulin inhibitor the synthesis of immunoglobulin of cord blood B lymphocytes in vitro. Natl Med J China 78(11): 837-840
39. **Li Q**, Wu S, Lin Z, and Ying D. 1998. Modulation of intravenous immunoglobulin on the effect of expression of CD40 and CD40 ligand in neonatal lymphocyte. China J Pediatr 36(8): 468-472
40. **Li Q**, Wu S, Ying D. 1998. The regulatory effects on the expression of IL-2 and IL-4 mRNA in neonatal mononuclear cell by intravenous immunoglobulin. China J Microbiol Immunol. 18(5): 378-382
41. **Li Q**, Wu S, Ying D, and Lin Z. 1998. Mechanisms accounting for the inhibitory effects on the production of immunoglobulins in human cord blood B cell by intravenous immunoglobulin. Acta Universitatis Medicinalis Secundae Shanghai. 18(6): 444-450.
42. **Li Q**, Wu S, Ying D, and Lin Z. 1998. Cytokine regulation of immunoglobulin class switching in cord blood B cell. Progress Microbiol Immunol 26(2):11-15
43. **Li Q**, Wu S, Ying D, and Lin Z. 1998. Detection of IL-2 mRNA IL-4 mRNA in cord blood mononuclear cells. Shanghai Med J. 21(4): 209-212

44. **Li Q**, Wu S, Lin Z, and Ying D. 1998. Reverse enzyme-linked immunospot assay for measuring the number of immunoglobulin secreting cells by cord blood B cell. J Clin Lab Sci. 16(5): 266-270
45. **Li Q**, Wu S, Ying D. 1999. Progress in neonatal cellular immunology (*review*). Foreign medical sciences. Pediatric. 26: 23-27
46. **Li Q**, Wu S. 1998. Glucocorticoid and cytokine (*review*). Foreign medical sciences. Pediatric. 25(Suppl): 027-032
47. **Li Q**, Wu S. 1998. Methods of detecting intracellular cytokines (*review*). Foreign medical sciences. Pediatric. 25: 258-263
48. **Li Q**, Wu S, Ying D. 1997. The mechanism of low immunoglobulin isotype switching induced by functional immaturity of neonatal T lymphocytes (*review*). Foreign medical Sciences. Immunology. 20: 5-11
49. **Li Q**, Wu S. 1996. The roles of inflammatory mediators in neonatal necrotizing enterocolitis (NEC) (*review*). Foreign medical Sciences. Pediatric. 23: 146-151
50. **Li Q**, Wu S, Ying D, and Lin Z. 1996. Several functional regulations of intravenous immunoglobulin on lymphocytes in vitro (*review*). Foreign medical Sciences. Immunology. 19: 33-37
51. **Li Q**. 1994. Subcardiac anomalous pulmonary venous drainage: report of 2 cases. Shiyong Erke Linchung Zazhi. 9(2): 123-124
52. **Li Q**, Ji G-X. 1992. Congenital diaphragmatic hernia in neonate: report of 9 cases. Chinese J Neonatology: 7(2): 53-55
53. **Li Q**, Ji G-X. 1990. Congenital thiamine (vitamin B1) deficiency in neonates: report of 5 cases. Chinese J Neonatology: 5(2): 259-261

## **PRESENTATIONS AT SCIENTIFIC MEETINGS**

1. Asim Mohiuddin, **Qingsheng Li**, Nejat Egilmez. Effects of lung microbiota on lung tumorigenesis. Poster Presentation, Research! Louisville. 2018.
2. **Qingsheng Li**, Charles Anderson, Nejat K Egilmez. Inhaled IL-10 Suppresses Lung Tumorigenesis via Abrogation of Inflammatory Macrophage – Type 17 T-cell Axis. Poster Presentation, The American Association of Immunologists Annual Meeting. 2018.
3. Neal Bhutiani, **Qingsheng Li**, Charles D. Anderson, Tao Gu, Nejat K. Egilmez. Combined oral cytokine therapy effectively treats colon cancer in a murine model. Oral Presentation, (AACR) American Association for Cancer Research 2017 Annual Meeting, Washington, DC. Volume: #1605
4. **Qingsheng Li**, Lauren P Virtuoso, Charles Anderson, Tao Gu and Nejat K Egilmez. Regulatory Rebound in Interleukin-12-treated Tumors is driven by Uncommitted Peripheral Treg. Poster Presentation, The American Association of Immunologists Annual Meeting. 2015.
5. **Qingsheng Li**, Okyay M Kilinc, Lauren P Virtuoso, Jessica L Zourelis, Allen Chung, Sarah J Blair and Nejat K Egilmez. Reprogramming Regulatory T-cell Function for Enhanced Cancer Immune Therapy. Poster Presentation, Buffalo Immunology Conference. 2012.
6. Protul Shrikant, Rajesh Rao, and **Qingsheng Li**. FoxO1 represses mTOR dependent T-bet expression to facilitate CD8+ T cell memory. Poster Presentation, The American Association of Immunologists Annual Meeting. 2011.
7. **Qingsheng Li**, Rajesh Rao and Protul A. Shrikant. Transient mTOR Blockade Augments Vaccination Induced CD8+ T Cell Memory Response for Tumor Immunity.

- Poster Presentation, The American Association of Immunologists Annual Meeting. 2011.
8. **Qingsheng Li**, Rao Rajesh and Protul A. Shrikant. A central role for mTOR in Homeostatic Proliferation (HP) induced CD8+ T cell memory and tumor immunity. Oral presentation, The American Association of Immunologists Annual Meeting. 2010.
  9. Rejesh R. Rao, **Qingsheng Li**, and Protul A. Shrikant. Resveratrol enhances CD8+ T cell-mediated effector responses by inducing type 3 deacetylase-dependent mTOR kinase activity to promote T-bet expression. Poster Presentation, The American Association of Immunologists Annual Meeting. 2010.
  10. Cheryl Eppolito, **Qingsheng Li** and Protul A. Shrikant. IL-21 induced Bcl3 expression blocks type 1 effector differentiation of CD8+ T cells and enhances their tumor efficacy. Oral presentation, The American Association of Immunologists Annual Meeting. 2009.
  11. **Qingsheng Li**, Cheryl Eppolito, Kunle Odunsi and Protul A. Shrikant. Antigen strength regulated Erk1/2 activation “tunes” CD8+ T cells for IL-12 programmed effector and memory responses that promote tumor immunity. Poster Presentation. 8<sup>th</sup> Annual Buffalo Conference on Immunology. 2008.
  12. **Qingsheng Li**, Cheryl Eppolito, Kunle Odunsi, and Protul A. Shrikant. T-bet programs transition of IL-12 induced effector CD8 T cells for memory via IL-15. Poster Presentation. 15<sup>th</sup> Annual Meeting of the International Cytokine Society. 2007.
  13. Pankaj Singhal, Axel Mischo, **Qingsheng Li**, Cheryl. Eppolito, M. Tsuji, Moriya Franke, Shashikant Lele, Kunle Odunsi, and Protul A. Shrikant. The natural killer T cell ligand alpha-C-Galactosylceramide promotes ovarian cancer survival by dual regulation of the adoptive host immunity. Poster Presentation. 38<sup>th</sup> Annual meeting on women’s cancer. 2007
  14. Protul A. Shrikant, **Qingsheng Li**, Cheryl Eppolito. IL-12 conditions STAT4 depend CD8+ T cell memory. Poster Presentation. Keystone Symposia: Lymphocyte activation and signaling. 2006.
  15. Pankaj Singhal, **Qingsheng Li**, Cheryl. Eppolito, Kunle Odunsi, and Protul A. Shrikant. IL-12 is essential for a C Galactosylceramide induced tumor-antigen specific T cell response. Poster Presentation. The 6<sup>th</sup> joint meeting of international cytokine society. International society for interferon and cytokine research & European cytokine society. 2006
  16. **Qingsheng Li** and Protul A. Shrikant. T-bet and Hlx play essential but distinct roles in IL-12 programmed CD8+ T cell effector fate determination. Oral presentation, 9<sup>th</sup> Annual Upstate New York Immunology Conference. 2006.
  17. Pankaj Singhal, Axel Mischo, **Qingsheng Li**, C. Eppolito, M. Tsuji, M. Franke, Kunle Odunsi, and Protul A. Shrikant. The one-two punch by alpha-C-galctosylceramide promotes ovarian tumor immunity. Poster Presentation, 9<sup>th</sup> Annual Upstate New York Immunology Conference. 2006.
  18. Protul A. Shrikant, Cheryl Eppolito, **Qingsheng Li**. IL-12 conditions STAT4 dependent CD8+ T cell memory generation for durable tumor immunity. Poster presentation, The American Association of Immunologists Annual Meeting. 2006.
  19. **Qingsheng Li**, and Protul A Shrikant. T-bet and Hlx play essential but distinct roles in IL-12 programmed CD8+ T cell effector fate determination. Poster presentation, 6<sup>th</sup> Annual Buffalo Conference on Immunology. 2005.
  20. **Qingsheng Li**, and Protul A Shrikant. A differential role for STAT1 and STAT4 in IL-12 conditioned CD8+ T cell effector differentiation. Poster presentation, The American Association of Immunologists Annual Meeting. 2006.

21. Protul A Shrikant, **Qingsheng Li**, and Cheryl Eppolito. IL-12 conditions STAT4 dependent CD8+ T cell memory. Poster presentation, The American Association of Immunologists Annual Meeting. 2006.
22. Protul A Shrikant, **Qingsheng Li**, and Cheryl Eppolito. IL-12 conditions STAT4 dependent CD8+ T cell memory. Keystone Symposia: Lymphocyte Activation and Signaling. 2006.
23. **Qingsheng Li**, and Protul A Shrikant. IL-12 conditions antigen induced CD8+ T cell responses for homeostatic expansion in a STAT4 dependent manner. Poster Presentation, 5<sup>th</sup> Annual Buffalo Conference on Immunology. 2005.
24. **Qingsheng Li**, Cheryl Eppolito and Protul A. Shrikant. The plastic nature of CD8+ T cell differentiation. Poster presentation, Experimental biology: "Translating the Genome". 2004.
25. Ping-Ying Pan, Peidi Gu, **Qingsheng Li**, Dongping Xu, Kaare Weber and Shu-Hsia Chen. Regulation of dendritic cell function by NK cells: Mechanisms underlying the synergism between IL-12 and 4-1BB activation. Poster presentation. Keystone Symposia: DCs in Immunity and Tolerance. 2003
26. **Qingsheng Li**, Ping-Ying Pan, Peidi Gu, Qingsheng Li, Dongping Xu, and Shu-Hsia Chen. Poster Presentation. Keystone Symposia: Basic Aspects of Tumor Immunology. 2003.

## **GRANT SUPPORT**

01/01/2020-12/30/2023 P20-GM135004 (1P20GM135005-01)

Title: Center for Cancer Immunology and Immunotherapy

Sub-project title: Mechanisms of resistance to immune therapy in NSCLC

Supporting Agency: NIH/NIGMS (PI: Li, Qingsheng) (Mentor: Egilmez, Nejat K)

Performance Period: 01/01/2020-12/30/2023

Level of Funding: \$360,000/3 years

Co-investigator on the DOD grant

Title: Overcoming anti-PD-1 resistance in lung cancer.

Time Commitment: at 50% effort.

Supporting Agency: DOD (PI: Egilmez, Nejat K) (Co-PI: Li, Qingsheng)

Level of funding: \$350,000/3 years

Inhaled IL-10 for prevention and therapy of lung cancer

Kentucky Lung Cancer Research Program

OGMB160490 (PI: Li, Qingsheng) (Co-PI: Egilmez, Nejat K)

6/1/2016 – 5/31/2018

Modulation of functions of neonatal lymphocytes by intravenous immunoglobulin in vitro

The National Natural Science Foundation of China

Approval No: 39600156 (PI, Li, Qingsheng)

1/1997 ~ 12/1999.

Study of X-linked hyper-IgM syndrome with CD40 ligand mutation

The Research Foundation of Shanghai Municipal Education Commission

PI, Li, Qingsheng

4/1996 ~ 12/1999