

## **CURRICULUM VITAE**

### **MING LI, Ph.D.**

Assistant Professor in Medicine (Research)  
Laboratory of Retrovirology  
Division of Infectious Diseases  
Department of Medicine  
Alpert Medical School of Brown University

### **ADDRESS**

55, Claverick Street, Room 432  
Providence, RI 02903  
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### **EDUCATION**

1997 B.S.	Biology	Henan Normal University, Xinxiang, China
2000 M.S.	Genetics	Sun Yat-sen University, Guangzhou, China
2005 Ph.D.	Biological Sciences	Binghamton University (SUNY), Binghamton, NY

### **POSTGRADUATE TRAINING**

Postdoctoral Fellow in Medicine, Alpert Medical School of Brown University, Providence, RI  
2005-2009  
Postdoctoral Trainee in Medicine, National Institutes of Health (NIH)/ Alpert Medical School of  
Brown University, Providence, RI 2009-2011

### **ACADEMIC HONORS AND AWARDS**

Excellent Student Award, Henan Normal University, 1994-1997  
Excellent Trainee Teacher, Henan Normal University, 1997  
Guanghua Scholarship, Sun Yat-sen University, 1998-1999  
Graduate Student Exemplary Progress Award, Binghamton University, 2003  
Professional Development Award, Binghamton University, 2003  
Szymanski and Graduate School Travel Award, Binghamton University, 2004  
NIH National Research Service Award, Alpert Medical School of Brown University, 2009-2011  
Young Investigator Awards, 19<sup>th</sup> Conference on Retroviruses and Opportunistic Infections, 2012

### **ACADEMIC APPOINTMENTS**

Research/teaching Assistant, Binghamton University, 2000-2004  
Research Fellow, Alpert Medical School of Brown University, 2005-2011

Assistant Professor in Medicine (Research), Alpert Medical School of Brown University, 2012-

### **HOSPITAL APPOINTMENTS**

Research Associate, Rhode Island Hospital, 2005-2009

Research Fellow, The Miriam Hospital, 2009-2011

Research Scientist, Rhode Island Hospital, 2011-

### **MEMBERSHIP IN SOCIETIES**

Human Proteome Organization (HUPO) 2009-

International Society for Computational Biology (ISCB) 2010-2012

American Association for the Advancement of Science (AAAS) 2010-2013

International Society for Extracellular Vesicles (ISEV) 2011-

### **ORIGINAL PUBLICATIONS IN PEER-REVIEWED JOURNALS** (\* Corresponding Author)

1. **Li, M.**, Qiu, G., Xu, X., Xu, Y. and Li, B. The construction of plant expression vector containing multi-antifungal genes. *Acta Scientiarum Naturalium Universitatis Sunyatseni* 1999;38(5): 67-71
2. Li, J., Zhou, Y., Lu, S., **Li, M.**, Lu, L., and Ji, X. Analysis on the isozymes of superoxide dismutase (SOD) among soybean, cassia obtusifolia and maize seeds. *Journal of Henan Normal University (Natural Science)* 2002;30(2):116-119
3. **Li, M.**, Wan, W.N., Petrova, O., Huang, F., Zhou, Z., Boyd, P., Wilson, K. A. and Tan-Wilson, A. Applicability of multi-gene family-specific antibodies toward studies of the subtilases in *Arabidopsis thaliana*. *Anal Biochem.* 2009 Jan 1;384(1):114-22. doi: 10.1016/j.ab.2008.09.024. Epub 2008 Sep 20. PMID:18835234
4. **Li, M.**, Aliotta, J.M., Asara, J.M., Wu, Q., Dooner, M.S., Tucker, L., Wells, A., Quesenberry, P.J., and Ramratnam, B. Intercellular transfer of proteins as identified by SILAC. *J Biol Chem.* 2010 Feb 26;285(9):6285-97. doi: 10.1074/jbc.M109.057943. Epub 2009 Dec 21. PMID:20026604
5. Gao, J., Zhang, Y., **Li, M.**, Tucker, L., Machan, J., Quesenberry, P.J., Rigoutsos, I. and Ramratnam, B. Atypical transcription of microRNA gene fragments. *Nucleic Acids Res.* 2010 May;38(9):2775-87. doi: 10.1093/nar/gkp1242. Epub 2010 Jan 21. PMID:20097657
6. Tang, X., **Li, M.**, Tucker, L., and Ramratnam, B. Glycogen Synthase Kinase 3 Beta (GSK3 $\beta$ ) Phosphorylates the RNAase III Enzyme Drosha at S300 and S302. *PLoS One.* 2011;6(6):e20391. doi: 10.1371/journal.pone.0020391. Epub 2011 Jun 3. PMID:21674040
7. **Li, M.**, Patton, D.L., Cosgrove-Sweeney, Y., Ratner, D., Rohan, L.C., Cole, A.M., Tarwater, P., Gupta, P. and Ramratnam, B. Incorporation of an HIV-1 microbicide in a food product. *J Acquir Immune Defic Syndr.* 2011 Dec 1;58(4):379-84. doi: 10.1097/QAI.0b013e31823643fe. Epub 2011 Sept 15 PMID:21926631
8. Aliotta, J.M., Pereira, M., **Li, M.**, Amaral, A., Sorokina, A., Dooner, M.S., Sears, E.H., Ramratnam, B., Hixson, D.C. and Quesenberry, P.J. Stable cell fate change in marrow cells induced by lung-derived microvesicles. *J Extracell Vesicles.* 2012 Apr 16;1. doi: 10.3402/jev.v1i0.18163. eCollection 2012. PMID:24009878

9. **Li, M.**, Aliotta, J.M., Asara, J.M., Tucker, L., Quesenberry, P.J., Lally, M., and Ramratnam, B. Quantitative proteomic analysis of exosomes from HIV-1 infected lymphocytic cells. *Proteomics*. 2012 Jul;12(13):2203-11. doi: 10.1002/pmic.201100376. PMID:22807456
10. Tang, X., Zheng, D., Hu, P., Zeng, Z., **Li, M.**, Tucker, L., Monahan, R., Resnick, M.B., Liu, M. and Ramratnam, B. Glycogen Synthase Kinase 3 beta (GSK3-beta) inhibits microRNA-183/96/182 cluster via beta-Catenin/TCF/LEF1 pathway in gastric cancer cells. *Nucleic Acids Res*. 2014 Mar;42(5):2988-98. doi: 10.1093/nar/gkt1275. Epub 2013 Dec 13. PMID:24335145
11. **Li, M.\*** Proteomics in the investigation of HIV-1 interactions with host proteins. *Proteomics Clin Appl*. 2015 Feb;9(1-2):221-34 doi: 10.1002/prca.201400101. Epub 2014 Dec 19. PMID:25523935
12. **Li, M.\*** and Ramratnam, B. Proteomic characterization of exosomes from HIV-1 infected cells. *Methods Mol Biol*. 2016;1354:311-26. doi: 10.1007/978-1-4939-3046-3\_21. PMID: 26714721.
13. **Li, M.\***, Tucker, L., Asara, J.M., Cheruiyot, K.C., Lu, H., Wu, J.Z., Newstein C.M., Dooner, M.S., Friedman, J., Lally, A.M. and Ramratnam, B. Stem-loop binding protein is a multifaceted cellular regulator of HIV-1 replication. *Journal of Clinical Investigation*. 2016;126(8):3117-29. doi: 10.1172/JCI82360 PMID: 27454292.
14. Cheruiyot, C., Myall, J., Pataki, Z., Ramratnam, B. and **Li, M.\*** Proteomic Characterization of Exosomes from HIV-1 Infected Cells. In press at *Journal of Visualized Experiments*

#### **PUBLICATIONS SUBMITTED OR IN PREPARATION**

1. Cheruiyot, K.C., Pataki, Z. and **Li, M.\*** Proteomic analysis of exosomes and its applications in viral infections. *Proteomics-Clinical Applications*. In revision
2. **Li M.\***, Lee, K., Hsu, M., Nau, G.J. Mylonakis, M. and Ramratnam, B. Lactobacillus-derived extracellular vehicles enhance host immune responses against vancomycin-resistant enterococci. *BMC Microbiology*. Under review
3. **Li M.\***, Liu, T., Monnig, M., Isabella, N., Hogan, G., Williams, R., Park, S., Mayer, P., Monti, P., Kahler, C. and Ramratnam, B. Mediator of RNA polymerase II transcription subunit 6 is an alcohol-associated HIV-1 host factor. Manuscript in preparation

#### **ABSTRACTS (Selected)**

1. **Li, M.**, Wilson, K. A. and Tan-Wilson, A. Subtilisin-related proteases in *Arabidopsis thaliana* seedlings. 2004 National Meeting of ASPB, Lake Buena Vista, FL July 2004 (National)
2. **Li, M.** and Ramratnam, B. A live, oral microbicide for HIV-1 prevention. 14<sup>th</sup> Annual Research forum of Department Of Medicine at Alpert Medical School. Providence, RI June 2008 (Local)
3. **Li, M.**, Patton, D.L., Cosgrove-Sweeney, Y., Ratner, D., Rohan, L.C., Cole, A.M., Tarwater, P., Gupta, P. and Ramratnam, B. Incorporation of an HIV-1 microbicide in a food product. 16<sup>th</sup> Annual Research forum of Department Of Medicine at Alpert Medical School, Providence, RI June 2010 (Local)
4. **Li, M.**, Tucker, J.D., Aliotta, J.M., Quesenberry, P.J., Lally, M. and Ramratnam, B. Defining the proteomic output of HIV-1 infection using Stable Isotope Labeling of Amino Acids in Cell

- Culture (SILAC). 7<sup>th</sup> Annual US Human Proteome Organization Conference, Raleigh, NC March 2011 (National)
5. **Li, M.**, Lally, M. and Ramratnam, B. Proteomics of HIV-1 Control. 19<sup>th</sup> Conference on Retroviruses and Opportunistic Infections, Seattle, WA March 2012 (International)
  6. **Li, M.**, Tucker, J.D. and Ramratnam, B. The CD8+/CD4+ T Lymphocyte Interactome as defined by SILAC. 11<sup>st</sup> Human Proteome Organization Annual World Congress, Boston, MA September 2012 (International)
  7. **Li, M.**, Cheruiyot, C., Tucker, J.D., Lally, M. and Ramratnam, B. SLBP (stem-loop binding protein) regulates the expression of APOBEC3G. 21<sup>st</sup> Conference on Retroviruses and Opportunistic Infections, Boston, MA March 2014 (International)
  8. Lu, H., **Li M.**, Tucker L., Ramratnam B. THC ( $\Delta$ 9-Tetrahydrocannabinol) decreases HIV-1 replication in lymphocytic cells. 21<sup>st</sup> Annual Research forum of Department Of Medicine at Alpert Medical School. June, 2015 (Local)
  9. Dang, V., Myall, J., Ahsan, N., Hardy, E., Ramratnam, B. and **Li, M.** Proteomic analysis of exosomes derived from cervical-vaginal lavage fluid. 22<sup>nd</sup> Annual Research forum of Department Of Medicine at Alpert Medical School. June, 2016 (Local)

#### **ORAL PRESENTATIONS (Selected)**

1. "Therapeutic approaches for inflammatory bowel disease by using genetically modified Lactococcus lactis secreting interleukin 10" Liver Research Center, Brown Medical School, Providence, RI Feb. 09<sup>th</sup>, 2006 (Local)
2. "The Application of Stable Isotopic Labeling to Study the Cellular Secretome" Liver Research Center, Brown Medical School, Providence, RI April 24<sup>th</sup>, 2008 (Local)
3. "Intercellular transfer of proteins that impact the mesenchymal-epithelial transition as identified by SILAC" Liver Research Center, Brown Medical School, Providence, RI April 28<sup>th</sup>, 2009 (Local)
4. "Applying mass spectrometry-based proteomics to genetics, genomics and network biology" Liver Research Center, Brown Medical School, Providence, RI April 15<sup>th</sup>, 2010 (Local)
5. "Progress in quantitative proteomics" Liver Research Center, Brown Medical School, Providence, RI April 19<sup>th</sup>, 2011 (Local)
6. "HIV and Microvesicles" International Symposium of Cellular Vesicles: Determination of Cell Fate, Providence, RI April 22<sup>nd</sup>, 2011 (International)
7. "Proteomics and HIV-1 control" Center of Biomedical Research Excellence, Rhode Island Hospital and Brown Medical School, Providence, RI Oct. 31<sup>st</sup>, 2011 (Local)
8. "Vif hijacks CBF- $\beta$  to degrade APOBEC3G and promote HIV-1 infection" Liver Research Center, Brown Medical School, Providence, RI April 24<sup>th</sup>, 2012 (Local)
9. "A cohort based proteomic screen identifies histone related stem-loop binding protein (SLBP) as a multifaceted HIV-1 dependency factor" Center for International Health Research, RI Hospital, Providence, RI April 22<sup>nd</sup>, 2014 (Local)
10. "Extracellular Vesicles and HIV-1 latency" Extracellular Vesicles as Therapeutics, Providence, RI June 13<sup>th</sup>, 2014 (International)

11. "A cohort based reverse proteomic screen identifies histone related stem-loop binding protein (SLBP) as a multifaceted HIV-1 dependency factor" Center of Biomedical Research Excellence, RI Hospital, Providence, RI April 14<sup>th</sup>, 2015 (Local)
12. "Stem-loop binding protein (SLBP) in HIV-1 pathogenesis/latency" Center for International Health Research , RI Hospital, Providence, RI June 30<sup>th</sup>, 2015 (Local)
13. "Host factors (stem loop binding protein-SLBP) in HIV-1 latency" Rhode Island Immunology/Infectious Diseases Retreat, East Providence, RI May 31<sup>st</sup>, 2016 (Local)

### **PATENTS**

1. Lally, M., Ramratnam, B. and **Li, M.** Treating human immunodeficiency virus infections. No: 14/378,715

### **RESEARCH GRANT**

1. Lifespan Pilot Research Fund (#701-5857) "Stem-loop binding protein (SLBP) regulates the expression of APOBEC3G" **PI**, Direct costs: \$10,000 Oct. 2013 - Nov. 2014
2. Rhode Island Foundation Medical Research Grant (#20133969) "Overcoming HIV-1 Vif led degradation of APOBEC3G by regulating stem-loop binding protein (SLBP)" **PI**, Direct costs: \$14,800 Mar. 2014 – Aug. 2015
3. NIH/COBRE (Centers of Biomedical Research Excellence) at University of Rhode Island Pilot Research Grant (#5P20GM104317-02) "Overcoming HIV-1 latency by regulating stem-loop binding protein (SLBP)" **PI**, Direct costs: \$49,745 June 2014 - May 2015
4. University Medicine Foundation Research Fund (#:713-9051) "Lactobacillus extracellular vesicles modulate host functions" **PI**, Direct costs: \$30,000 Oct. 2015 - Jan. 2016
5. NIH COBRE Center for Antimicrobial Resistance and Therapeutic Discovery Project 3 "Lactobacillus-derived extracellular vesicles: Immunomodulation and Biotherapeutics" **PI**, Direct costs: \$987,653 Pending
6. NIH R21 "SLBP regulates APOBEC3G and its novel applications in HIV-I latency reversal" **PI**, Direct costs: \$275,000 Under review

### **PROFESSIONAL SERVICE**

1. Ad hoc reviewer: Proteomics; Proteomics - Clinical Applications; JAIDS; Virulence

### **UNIVERSITY TEACHING ROLES**

1. **Teaching Assistant at Binghamton University**
  - Introductory Biology Laboratory (Fall, 2000; ~30 students)
  - Principles of Cell Biology (Spring, 2001; ~80 students )
  - Introduction to Organismal and Population Biology (Fall, 2001; ~35 students)
  - Biochemistry (Spring, 2002; ~50 students)
  - Molecular Genetics (Fall, 2002; ~40 students)
  - Biochemistry Laboratory (Spring, 2003; ~30 students)

- Proteomics Laboratory (Fall, 2004; ~25 students)
- 2. **Guest Lecturer at Brown University**
  - The Biology of AIDS, 2012
- 3. **Summer Research Advisor at Brown University**
  - Geoffrey Hogan, 2011, 2012
  - Collins Cheruiyot, 2014
  - James Myall, 2016
  - Vy Dong, 2016
  - Robert Williams Jr. 2016
- 4. **Honors Thesis Advisor at Brown University**
  - Yang Long, 2008
  - Collins Cheruiyot, 2016
- 5. **Research Advisor at Brown University**
  - Isabella Newman, 2012-2013
  - Collins Cheruiyot, 2014-2016
  - Vy Dang, 2016
  - James Myall, 2016
  - Gloria Mensah, 2016-
  - Robert Williams Jr. 2016-