Lei Wang (Allen)

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EDUCATION

Ph.D., Biochemistry & Molecular Biology Dec 2013
University of California Riverside (UCR), Riverside, CA

M.S., Biotechnology Feb 2008
Hong Kong University of Science & Technology (HKUST), China

B.S., Biochemistry June 2006
Hong Kong University of Science & Technology (HKUST), China

RESEARCH EXPERIENCE

Post-Doctoral Research Fellow with Dr. Peter Lee, City of Hope Mar 2014- present

- Investigate the immune signaling network in cancer patients

Graduate Student with Dr. Manuela Martins-Green, UCR Feb 2009-Dec 2013

- Investigate the effects of pomegranate derived nature products on cancer progression and metastasis; prostate cancer and breast cancer
- Integrative approach using DNA microarray, microRNA PCR array, Luminx multiplex immunoassay and signaling pathway analysis
- Examined the effects of pomegranate and its components on cancer-related inflammation, especially the cytokines/chemokines production
- Identified three natural compounds with promising anti-metastatic effects
- Using mouse tumor models, demonstrated that the identified compounds significantly inhibit metastasis and angiogenesis *in vivo*
- Dissertation: "Pomegranate Juice and Pomegranate Derived Natural Products as Alternative Treatment for Cancer Progression and Metastasis"

M.S. Student with Dr. Chun Liang, HKUST Sep 2006-Feb 2008

- Anti-cancer drug screening from Traditional Chinese Medicine
- Identified chemicals disrupting the assembly of DNA replication initiation machinery
- Tested the cytotoxicity of identified chemicals on human liver cancer cells
- Thesis: "A Novel Yeast-two-Hybrid Based Screening Platform to Identify Anti-Cancer Drugs"

Undergraduate Final Year Project with Dr. Zhenguo Wu, HKUST Sep 2005-June 2006

- Investigate the function of novel severe acute respiratory syndrome (SARS) virus proteins
- Final Year Project: "The Cytotoxic Effect of a Novel Protein: Severe Acute Respiratory Syndrome (SARS) Corona-Virus Protein ORF8"

PUBLICATIONS

- **Wang L**, Li WF, Garcia M, Mulholland D, Lilly M and Martins-Green M. Luteolin, ellagic acid and punicic acid are natural products that inhibit prostate cancer metastasis. *Carcinogenesis*. In press.
- **Wang L** and Martins-Green M. Pomegranate and its components as alternative treatment for prostate cancer. Submitted to *Nutrition Review*.
- Liu Y, **Wang L**, Chen XL, Li WF and Martins-Green M. Insulin antagonizes thrombin-induced microvessel leakage. Manuscript in preparation.
- **Wang L**, Martins-Green M. The potential of pomegranate and its components for prevention and treatment of breast cancer. *Agro Food Ind Hi Tech.* 2013; 24(5):58-61.
- Martins-Green M, Petreaca M, and **Wang L**. Chemokines and their receptors are key players in the orchestra that regulates wound healing. *Advances in Wound Care*. 2013; 2(7):327-347.
- Rocha A, **Wang L**, Penichet M, and Martins-Green M. Pomegranate juice and specific components inhibit cell and molecular processes critical for metastasis of breast cancer. *Breast Cancer Res Treat*. 2012; 136(3):647-58.
- **Wang L**, Ho J, Glackin C, and Martins-Green M. Specific pomegranate juice components as potential inhibitors of prostate cancer metastasis. *Transl Oncol*. 2012; 5(5):344-55.
- **Wang L**, Alcon A, Yuan H, Ho J, Li QJ, and Martins-Green M. Cellular and molecular mechanisms of pomegranate juice-induced anti-metastatic effect on prostate cancer cells. *Integr Biol*. 2011;3(7):742-54.

SCIENTIFIC CONFERENCE POSTERS

- **Wang L**, Li WF, Garcia M, Lilly M and Martins-Green M. Luteolin, ellagic acid and punicic acid are natural products that inhibits prostate cancer metastasis *in vivo.* The American Society for Cell Biology (ASCB) 53rd Annual Meeting, 2013. Abstract 1151.
- **Wang L**, Li WF, Mulholland D, Martins-Green M. Pomegranate juice components as novel treatment for prostate cancer metastasis. American Association for Cancer Research (AACR) 104th Annual Meeting, 2013. Abstract 2244.
- **Wang L**, and Martins-Green M. Specific pomegranate juice components are potential inhibitors of prostate cancer metastasis. American Association for Cancer Research (AACR) 103rd Annual Meeting, 2012. Abstract 1999.
- **Wang L**, Ho J. Martins-Green M. Specific pomegranate juice components as potential inhibitors of prostate cancer metastasis. The American Society for Cell Biology (ASCB) 50th Annual Meeting, 2010. Abstract 934661. **Chosen for the Press Book**.
- **Wang L**, Alcon A, Yuan H, Martins-Green M. Cellular and molecular mechanisms involved in the anti-metastatic effect of pomegranate juice in prostate cancer cells. The American Society for Cell Biology (ASCB) 49th Annual Meeting, 2009. Abstract 707809.

HONORS

- Mary & Randolph T. Wedding Graduate Research Prize, BMB graduate program, UCR, 2013
- Mary & Randolph T. Wedding Travel Award, BMB graduate program, UCR, 2013
- Mary & Randolph T. Wedding Travel Award, BMB graduate program, UCR, 2012
- Mary & Randolph T. Wedding Graduate Research Prize, BMB graduate program, UCR, 2011
- Abstract chosen for American Society for Cell Biology (ASCB) 50th Annual Meeting Press Book, 2010
- Best Poster Award, BMB graduate program Annual Symposium, UCR, 2010
- University Fellowship, UCR, 2008-2009
- Scholarship for Academic Excellence, HKUST, 2006-2007

SELECTED SKILLS & TECHNIQUES

Cell Biology Techniques:

- Primary cell culture
- Luminex multiplex immunoassay
- Chemotaxis and invasion assay
- DNA transfection and RNAi
- Light and fluorescence microscopy
- Immunofluorescence

Molecular Biology Techniques:

- RNA and DNA isolation
- miRNA PCR array
- Affymetrix microarray and data analysis
- Real-time quantitative PCR
- Molecular cloning
- Western blot

Animal Skills

- Immuno-deficient mouse housing and handling
- Mouse tumor inoculation and bioluminescence imaging
- Mouse organ collection, fixation and sectioning
- Immunohistochemistry