

# Yi Wang

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## EDUCATION

### **New York University, New York**

- M.S. in Biology May.2017
- Overall GPA: 3.8/4.0;

### **Fudan University, Shanghai, China**

- B.S. in Biological Technology Jun.2015
- Overall GPA: 3.3/4.0;

## Experience

### **Memorial Sloan Kettering Cancer Center, New York**

Dr. Liang Deng' s laboratory, Senior Research Technician Apr.2016-  
Aug.2020

### **The Rockefeller University, New York**

Dr. Charles M. Rice' s Laboratory, Guest Researcher Oct.2018-  
Aug.2020

## Research Projects

**Intratumoral delivery of engineered Modified Vaccinia Virus Ankara (MVA) expressing Flt3L and OX40L for “in situ” therapeutic cancer vaccination:** *Memorial Sloan Kettering Cancer Center, Sept. 2016- Aug. 2020*

- Generated recombinant MVA $\Delta$ E5R recombinant virus expressing Flt3L and OX40L.
- Evaluated its anti-tumor efficacy *in vivo* by intratumoral injection of virus in different murine tumor models including B16-F10 melanoma, AT3 and MMTV-PyMT breast cancer model.
- Evaluated the anti-tumor immunity of combination therapy of intratumoral injection of virus and systemic delivery of immune checkpoint blockades antibodies in murine tumor models.
- Researched on the mechanism of tumor infiltrating T cell activation and regulatory T cells reduction induced by intratumoral injection of MVA $\Delta$ E5R-hFlt3L-OX40L.

**Screening and validation of vaccinia inhibitors of the cytosolic DNA sensing pathway mediated by cGAS/STING:** *Memorial Sloan Kettering Cancer Center, Sept. 2017- Aug. 2020*

- Identified 6 candidate vaccinia viral genes that inhibit cGAS-STING-IFN $\beta$  pathway by performing a dual luciferase-based screen of 72 vaccinia virus early genes
- Discovered vaccinia E5 protein as a major inhibitor of the cytosolic DNA sensor cGAS.
- Generated and purified recombinant viral proteins for biochemical assays and antibody production.

**Developing recombinant MVA-based immunotherapy for chronic viral hepatitis:** *Deng lab MSKCC/Rice lab at the Rockefeller University, Nov. 2018-Aug. 2020*

- Evaluated the therapeutic efficacy of combination of intravenous delivery of MVA $\Delta$ E5R-hFlt3L-OX40L and immune checkpoint blockade antibodies in mouse chronic hepatitis B infection model.
- Investigated the immune microenvironment of chronically virus-infected liver before and after MVA $\Delta$ E5R-hFlt3L-OX40L treatment.

**Functional Analysis and Mechanism of Inhibition of Hepatoma Cell Metastasis by BRMS1 through Regulating SCIN Gene:** *Fudan University, Sept. 2013- May. 2015*

- Researched on regulation of SCIN expression by BRMS1 by siRNA, qPCR.
- Analysis on activity of hepatoma cells regulated by SCIN gene by FACS analysis, Transwell assay, Invasion

assay and *in vivo* analysis.

- Researched on effect of BRMS1 on *SCIN* gene expression by regulation of its promoter by Luciferase assay and RNA-seq.

## **Publications**

- Yang N, Luna JM, Dai P, **Wang Y**, Rice CM & Deng L. (2020). Lung type II alveolar epithelial cells collaborate with CCR2<sup>+</sup> inflammatory monocytes in host defense against an acute vaccinia infection in the lungs. *BioRxiv*.
- Qiao X, Zhou Y, Xie W, **Wang Y**, Zhang Y, Tian T, ... & Qiao S. (2018). Scinderin is a novel transcriptional target of BRMS1 involved in regulation of hepatocellular carcinoma cell apoptosis. *American journal of cancer research*, 8(6), 1008.

## **Skills**

- Lab Skill: DNA/RNA extraction, PCR/qPCR, protein purification, molecular cloning, immunoblot, Flow Cytometry, virus purification, recombinant virus generation, mouse handling
- Computer Skill: Linux, Python, R, MySQL

## **SCIENTIFIC PRESENTATIONS**

- **2019 The Society for Immunotherapy of Cancer (SITC) Conference, National Harbor, Maryland**  
Yang N, **Wang Y**, Dai P, Shuman S and Deng L. Improving the immunogenicity of modified vaccinia virus Ankara (MVA) vaccine vector by deletion of the vaccinia E5R gene encoding a dominant cGAS inhibitor. (Poster presentation)
- **2019 CRI-CIMT-EATI-AACR 5<sup>th</sup> International Cancer Immunotherapy Conference, Paris, France**  
Yang N, **Wang Y**, Wang W, Mazo G, Dai P, Wang J, Yan W, Choi J, Shuman S, Merghoub T, Wolchok JD and Deng L. Dramatically Improving Vaccinia Virus-Based Cancer Immunotherapy by Deleting E5R, Which Encodes a Dominant Viral Inhibitor of cGAS. (Poster presentation)
- **2019 Society for Investigative Dermatology Conference, Chicago**  
Yang N<sup>#</sup>, **Wang Y**<sup>#</sup>, Yan W, Wang J, Choi J, Shuman S, Merghoub T, Wolchok JD and Deng L. Rational Design of Recombinant Modified Vaccinia Virus Ankara for Cancer Immunotherapy. (Oral presentation)
- **2018 CRI-CIMT-EATI-AACR 4<sup>th</sup> International Cancer Immunotherapy Conference, New York**  
Yang N<sup>#</sup>, **Wang Y**<sup>#</sup>, Yan W, Wang J, Choi J, Shuman S, Merghoub T, Wolchok JD and Deng L. Intratumoral delivery of engineered modified vaccinia virus Ankara expressing Flt3L and OX40L for "in situ" therapeutic cancer vaccination. (Oral presentation)
- **2018 International Investigative Dermatology Conference, Orlando**  
Dai P, Meyer C, **Wang Y**, Shaw K, Anderson L, Shuman S, Tushl T and Deng L. The cytosolic dsRNA-sensing pathway mediated by MDA5/MAVS/IRF3 is critical for the induction of type I and III IFNs after viral infection of skin keratinocytes. (Poster presentation)

## **Patents**

- 2018 Co-inventor on patent application. Recombinant modified vaccinia Ankara virus and vaccinia virus expressing human Flt3L and OX40L for cancer immunotherapy.

## **Additional Information**

### **Awards and Honors**

- University Scholarship for Academic Excellence, Fudan University  
2012-2014
- Professional Scholarship, School of Life Science, Fudan University  
2012-2014

### **Volunteer**

- Volunteering teaching in Qiu Yunfang Elementary School, Jiangxi Province, China      Jun.-Jul. 2013
- Volunteering teaching in Naqu Elementary School, Tibet, China                      Jul.-Aug. 2012

- Responsible for curriculum design, teaching and extracurricular activities organization.