

# Lijuan Ma



**Title :** Assistant professor

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Dr. Lijuan Ma obtained her PhD in Biochemistry and Molecular Biology from Sun Yat-sen University, working on DNA replication mechanism and related cancer therapy. After two years continuing research on mitosis cell cycle regulation, she joined Dr. Gerald R. Smith lab at Fred Hutchinson Cancer Research Center for her postdoc training to study another specific cell cycle, meiosis. Currently, her research focus on two aspects: 1. Age-related aneuploidy in human eggs and its related decline in female fertility and early miscarriage. 2. aneuploidy and cancer. Taking advantage of yeast traceable genetic system and powerful molecular tools, we are identifying drugs from TCM to interfere aneuploidy eggs formation thus to reduce the rate of early miscarriage. On the other hand, aneuploidy in somatic cells is the most prevalent genetic alteration in human cancer. Aneuploidy is a valuable cancer therapeutic target.

## **Teaching Activities:**

Biochemistry and Molecular Biology; Biochemistry and Molecular Biology Experiments; Microbiology and Immunology; Pharmacology and Clinical Pharmacy III—Clinical Pharmacology and Pharmacotherapy

## **Research Interests:**

1. anticancer drugs from TCM
2. age-related aneuploidy and miscarriage
3. molecular mechanism of meiosis

## **Education:**

2003-2009    PhD, Molecular Biology and Biochemistry, Sun Yat-sen University, Guangzhou, China

1999-2003 Bachelor, Biological Science, Shanxi Normal University, Shanxi, China

**Research Experience:**

2017-present Assistant Professor, Macau University of Science and Technology,  
Macau, China

2011-2017 Postdoc, Fred Hutchinson Cancer Research Center, Seattle, USA

2009-2011 Visiting Scholar, Hong Kong University of Science and Technology,  
Hong Kong, China

**Publications (\*corresponding author):**

1. Chen X, Li J, Zhang R, Zhang Y, Wang X, Leung EL, **Ma L**, Wong VKW\*, Liu L\*, Neher E\*, Yu H\*. Suppression of PD-L1 release from small extracellular vesicles promotes systemic anti-tumor immunity by targeting ORAI1 calcium channels. *Journal of Extracellular Vesicles*, 2022. (Accepted)
2. Chen G, Zhu X, Li J, Zhang Y, Wang X, Zhang R, Qin X, Chen X, Wang J, Liao W, Wu Z, Lu L, Wu W, Yu H\*, **Ma L\***. Celastrol inhibits lung cancer growth by triggering histone acetylation and acting synergically with HDAC inhibitors. *Pharmacol Res.* 2022 Oct 3:106487.
3. Leung EL\*, Huang J, Zhang J, Zhang J, Wang M, Zhu Y, Meng Z, Yu H, Neher E, **Ma L\***, Yao X\*. Novel Anticancer Strategy by Targeting the Gut Microbial Neurotransmitter Signaling to Overcome Immunotherapy Resistance. *Antioxid Redox Signal.* 2022, Nov 1. doi: 10.1089/ars.2021.0243. Online ahead of print.
4. Wang X, Liu Z, **Ma L**, Yu H. Ferroptosis and its emerging role in tumor. *Biophysics Reports*, 2021, 7(4): 280-294.
5. Li J, Zhang Y, Chen X, **Ma L**, Li P\*, Yu H\*. Protein phase separation and its role in chromatin organization and diseases. *Biomed Pharmacother.* 2021 Jun;138:111520
6. **Lijuan Ma**, Kyle R. Fowler, Cristina Martín-Castellanos and Gerald R. Smith. Functional organization of protein determinants of meiotic DNA break hotspots.

**Scientific Reports**, 2017 May 3;7(1):1393

7. **Lijuan Ma**, Neta Milman, Mridula Nambiar and Gerald R. Smith. Two separable functions of Ctp1 in the early steps of meiotic DNA double-strand break repair.

**Nucleic Acids Research**, 2015 43(15): 7349-7359

8. **Lijuan Ma**, Yuanliang Zhai, Daorong Feng, Tsz-choi Chan, Yongjun Lu, Xinrong Fu, Jiafeng Wang, Yanhong Chen, Jianna Li, Ke Xu, and Chun Liang. Identification of Novel Factors Involved in or Regulating Initiation of DNA Replication by a Phenotypic Screen in *Saccharomyces cerevisiae*. **Cell Cycle**, 2010 9(21): 4399-410