

## Shufang WANG-RENAULT

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Dr Shufang WANG-RENAULT

Project manager/researcher

10 years of experience in the following areas: genomics, epigenetics, immunology, cell biology and oncology. Main professional skills: project design based on the scientific literature; management and coordination of multiple projects in parallel; establishment of analytical methods and experimental protocols (ddPCR, NGS etc); significant experience in preclinical studies and liquid biopsy for the detection of rare mutations and epigenetic modifications; significant experience in technology transfer and valorization etc.

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## BIOGRAPHY

Dr Shu-Fang RENAULT obtained her Ph.D in immunology and cellular biology from Kyoto University, Japan in 2008. The main project she did during her Ph.D was to investigate the role of deregulated Rap1 signaling on the development of leukemia in mice model. Following that, she obtained a lecturer (MCF) position at Lanzhou University, China to help the team set up immunological approaches in the laboratory. From 2011, Dr Shu-Fang RENAULT's main interests shifted to preclinical studies. She worked on different projects including: understanding the influence of PD-1 signaling on tumor infiltrating T lymphocytes from lung cancer patients and investigating the epigenetics modifications (DNA methylation and microRNA) of lymphocytes from auto-immune disease patients etc. In 2016, she joined Dr Valerie Taly's group, working on identification and validation of DNA methylation biomarkers for diagnostic and follow-up of cancer patients. Recently, 2 patents have been filed and others are ongoing.

## CURRICULUM VITAE (updated Oct. 2019)

### PROFESSIONAL EXPERIENCES

**Since 2016 Project manager/researcher**, Translational Research & Microfluidics, UMRS1138- Personalized Medicine, Pharmacogenomics, Therapeutic Optimization, Paris Descartes University

- Preclinical projects: « Identification and validation of epigenetic biomarkers (DNA methylation) for the diagnosis and follow-up of cancer patients and detection of gene mutations in cancer patients by Next Generation Sequencing (NGS) and droplet digital PCR (ddPCR) technologies »
- Project design based on the scientific literature and establishment of analysis methods for biomarker identification
- Writing of scientific reports, articles, patents and funding applications
- Management of multiple projects and supervision of several people.
- Collaboration with laboratories and various institutions and specialists (clinicians, researchers, bio-informaticians etc.)
- Several articles are being prepared or published and two patents have been filed

**2011-2012 / 2014-2016 Research Engineer/Post-Doctoral researcher** Epigenetics and Environment Laboratory (LEE), National Center for Research in Human Genomics (CNRGH), CEA / Faculty of Medicine, Paris Sud University (Bicêtre Hospital), France « Investigation of epigenetic profiles of lymphocytes from patients with autoimmune disease » « Study of the association between the single nucleotide polymorphisms (SNP) of nicotinic acetylcholine receptors and lung cancer development with the use of stable human cell lines »

- Study of different microRNA and DNA methylation profiles using different methods: qPCR real time (Exiqon), 450K Human Methylation BeadChips, whole genome bisulfite sequencing (BS-seq, illumina) etc.
- Collaboration with bioinformaticians to analyze high throughput sequencing data
- Project coordination and supervision of M2 students
- Several articles have been published

**2009-2011 Post-Doctorat-** Department of Immunology and Hematology, Cochin Institute, Paris « The anergy of human tumors infiltrating T cells and their mechanisms by PD-1 signaling »

- Isolation, stimulation and analysis of tumor infiltrating T lymphocytes (TILs) or human PBT
- Detection of the expression of surface markers of lymphocytes and monocytes by flow cytometry and microscopy
- Vector construction with target genes and transfection of human primary cells by constructed vectors

#### **2008-2009 Lecturer**

Department of Life Sciences, Lanzhou University, China

**2001.07-2003.09 Research Associate (CDI)**, Département des sciences de la vie, Université de Lanzhou, Chine

### **EDUCATION**

**2008 PhD in Immunology and Cell Biology**, Kyoto University, Japan. « Development of Notch-Dependent T-ALL in Mice by Deregulation of Rap1 Signaling »

**2001 Master** en Immunologie, Département des Sciences de la vie, Université de Lanzhou, Chine

**1998 Licence (Bachelor)** de « Biology Engineering », Département des Sciences de la vie, Université de Lanzhou, Chine

### **PROFESSIONAL SKILLS**

Management and coordination of different research projects in parallel (logistics and scientific)

Valorisation and communication of results:

- Writing of scientific reports, articles, patents and funding applications
- Regular oral presentations

Supervision and Teaching:

- Supervision of engineers, technicians, L3, M1 and M2 interns
- Teaching in university Development and improvement of experimental protocols

Technical skills and biological materials used:

- Molecular biology: NGS and ddPCR etc
- Immunoassay: ELISA, luminex, IP etc
- Cell biology: cell culture, transfection etc
- Mouse models
- Human samples: human tumors and human blood; plasmatic circulating DNA;
- Cell lines, primary cells
- Lentivirus

#### **Languages**

French: fluent

Chinese: mother tongue

English: fluent

Japanese: fluent

### **PUBLICATIONS**

## PUBLICATIONS (+ 2 patents)

Plasma clearance of RAS mutation under therapeutic pressure is a rare event in metastatic colorectal cancer. Moati E, Blons H, Taly V, Garlan F, **Wang-Renault SF**, Pietrasz D, Didelot A, Garrigou S, Saint A, Pernot S, Taieb J, Laurent-Puig P, Zaanan A. *Int J Cancer*. 2019 Aug 31. doi: 10.1002/ijc.32657. [Epub ahead of print] IF: 7.36

HPV circulating tumoral DNA quantification by droplet-based digital PCR: a promising predictive and prognostic biomarker for HPV-associated oropharyngeal cancers. D. Veyer, M. Wack, M. Mandavit, S. Garrigou, S. Hans, P. Bonfils, L. Belec, S. Wang-Renault, P. Laurent-Puig, H. Mirghani, B. Rance, V. Taly, C. Badoual, H. Péré\*. *International Journal of Cancer* (2019), in press. IF: 7.36

Droplet-based digital PCR and next generation sequencing for monitoring circulating tumor DNA: a cancer diagnostic perspective. Postel M, Roosen A, Laurent-Puig P, Taly V, **Wang-Renault SF**. *Expert Rev Mol Diagn*. 2018 Jan;18(1):7-17. doi: 10.1080/14737159.2018.1400384. Epub 2017 Nov 13. Review.

Deregulation of microRNA expression in purified T and B lymphocytes from patients with primary Sjögren's syndrome. **Wang-Renault SF**, Boudaoud S, Nocturne G, Roche E, Sigrist N, Daviaud C, Bugge Tinggaard A, Renault V, Deleuze JF, Mariette X, Tost J. *Ann Rheum Dis*. 2018 Jan;77(1):133-140. doi: 10.1136/annrheumdis-2017-211417. Epub 2017 Sep 15.

aCNViewer: Comprehensive genome-wide visualization of absolute copy number and copy neutral variations. Renault V, Tost J, Pichon F, **Wang-Renault SF**, Letouzé E, Imbeaud S, Zucman-Rossi J, Deleuze JF, How-Kit A. *PLoS One*. 2017 Dec 19;12(12):e0189334. doi: 10.1371/journal.pone.0189334. eCollection 2017.

Overlap between differentially methylated DNA regions in blood B lymphocytes and genetic at-risk loci in primary Sjögren's syndrome. Miceli-Richard C, **Wang-Renault SF**, Boudaoud S, Busato F, Lallemand C, Bethune K, Belkhir R, Nocturne G, Mariette X, Tost J. *Ann Rheum Dis*. 2016 May;75(5):933-40. doi: 10.1136/annrheumdis-2014-206998. Epub 2015 Jul 16.

Early T cell signalling is reversibly altered in PD-1+ T lymphocytes infiltrating human tumors. **Wang SF**, Fouquet S, Chapon M, Salmon H, Regnier F, Labroquère K, Badoual C, Damotte D, Validire P, Maubec E, Delongchamps NB, Cazes A, Gibault L, Garcette M, Dieu-Nosjean MC, Zerbib M, Avril MF, Prévost-Blondel A, Randriamampita C, Trautmann A, Bercovici N. *PLoS One*. 2011 Mar 7;6(3):e17621. doi: 10.1371/journal.pone.0017621.

Progressive upregulation of PD-1 in primary and metastatic melanomas associated with blunted TCR signaling in infiltrating T lymphocytes. Chapon M, Randriamampita C, Maubec E, Badoual C, Fouquet S, **Wang SF**, Marinho E, Farhi D, Garcette M, Jacobelli S, Rouquette A, Carlotti A, Girod A, Prévost-Blondel A, Trautmann A, Avril MF, Bercovici N. *J Invest Dermatol*. 2011 Jun;131(6):1300-7. doi: 10.1038/jid.2011.30. Epub 2011 Feb 24.

Development of Notch-dependent T-cell leukemia by deregulated Rap1 signaling. **Wang SF**, Aoki M, Nakashima Y, Shinozuka Y, Tanaka H, Taniwaki M, Hattori M, Minato N. *Blood*. 2008 Mar 1;111(5):2878-86. doi: 10.1182/blood-2007-07-103119. Epub 2008 Jan 7.

Essential role of Rap signal in pre-TCR-mediated beta-selection checkpoint in alphabeta T-cell development. Kometani K, Moriyama M, Nakashima Y, Katayama Y, **Wang SF**, Yamasaki S, Saito T, Hattori M, Minato N. *Blood*. 2008 Dec 1;112(12):4565-73. doi: 10.1182/blood-2008-06-164517. Epub 2008 Sep 18

Rap1 signal controls B cell receptor repertoire and generation of self-reactive B1a cells. Ishida D, Su L, Tamura A, Katayama Y, Kawai Y, **Wang SF**, Taniwaki M, Hamazaki Y, Hattori M, Minato N. *Immunity*. 2006 Apr;24(4):417-27.

Antibacterial effect and structure-activity relationship of cephalosporin derivatives. Wang Qin\*, Zhao Qi, **Wang Shu-fang**, He Yong-gang, Hui Xin-ping, Zhang Zi-yi. *Journal of Lanzhou University (Chinese)* , 2003,01:77-79

Anti-oxidation effects of pyrrolin nitroxides and derivatives on liver, liver mitochondria and red blood cell in rats and egg phospholipid. **Wang Shu-Fang**, Wang Qin\*, Pan Jing et al. *Chinese Pharmacological Bulletin* 2001,17(4):424 -427

Activity of Immune Regulation of Growth Hormone Releasing peptide (GHRP) on Enhanced Growth of Mice. Wang Qin\*,  
**Wang Shu-Fang**, Gao Li-Wei. Journal of Lanzhou University (Chinese), 2000,36(4):69-72