

# Shujuan Wang

National Institute of Biological Sciences, Beijing, 102206, Beijing China

## Personal States

---

**Phone:** +86-15010220368

**Email:** [hxcwsj@126.com](mailto:hxcwsj@126.com)

### Research interests:

1. Quantitative mass spectrometry in the field of proteomics and metabolomics, and their application in biology, biomedicine;
2. The characterization of protein complex based on the combination of quantitative mass spectrometry and cross-linking.

## Education

---

1. **Oct. 2009—Sep. 2013** Ph.D. in analytical chemistry, Hong Kong Baptist University, Hong Kong;
2. **Sep. 2006—Jun. 2009** M. Phil in science from MOE Key Laboratory of Laser Life Science, Institute of Laser Life Science, South China Normal University, Guangzhou, China;
3. **Sep. 2002—Jun. 2006** B. S. in Biotechnology from Department of Biology, Henan University, Kaifeng, China.

## Work

---

1. **Sep. 2022 - Present** Postdoc in National Institute of Biological Sciences, Beijing
2. **Dec. 2017 - Aug. 2022** Associate Researcher in State Key Laboratory of Proteomics, Beijing Proteome Research Center, National Center for Protein Sciences- Beijing;
3. **Jan. 2016 - Nov. 2017** Research assistant in State Key Laboratory of Proteomics, Beijing Proteome Research Center, National Center for Protein Sciences- Beijing;
4. **Oct. 2013 - Oct. 2015** Postdoc in State Key Laboratory Breeding Base-Shenzhen Key Laboratory of Chemical Biology, Graduate School at Shenzhen, Tsinghua University

## Research Experience

---

1. **Aug. 2022 – present**
  - (1) Construction of an inter-molecular cross-link benchmarking dataset
2. **Jan. 2016 - Aug.2022**
  - (1) The investigation the correlation of the differential assembly of ERBB signaling complex with sensitivity of cancer cell lines to targeted therapies, including:
    - 1) to establish the methodology of AP-PRM for the analysis of ERBB signaling complex in cancer cells ;
    - 2) to investigate the differential assembly of ERBB signaling complex in cancer cells and correlate with drug sensitivity;
    - 3) to investigate drug resistance mechanisms of breast cancer cells.
  - (2) The spatiotemporal characterization of ErbB receptor complexes during signaling transduction;
  - (3) Chemical crosslinking-assisted temporal profiling (COTP) identify transient interactors of the EGF signaling complex

**3. Oct. 2013 - Oct.2015**

The application of MALDI –TOF imaging in the investigation of breast cancer and traditional Chinese medicine:

- (1) to establish the methodology of MALDI imaging;
- (2) to apply MALDI imaging in the analysis of breast cancer tissues and cells;
- (3) to apply MALDI imaging for the Chinese medicinal herbs analysis.

**4. Oct. 2009 - Sep. 2013**

The investigation of organic pollutants biodegradation by green algae in aqueous water based on LC-MS, including:

- (1) the isolation of microalgae from environment;
- (2) the application of green algae for the removal of organic pollutants;
- (3) metabolism of organic pollutants by green algae;
- (4) determination and identification of organic pollutants and their metabolites by using LC-ion trap-MS, UPLC-QqQ-MS, UPLC-QTOF-MS.

**5. Sep. 2006 - Jun. 2009**

The application of CLC and CE for determination of second metabolites including vitamins, flavonoids, phytohormones in normal corn and genetically modified corn to understand consequences of genetic manipulation.

## **Publications**

---

1. **Shujuan Wang**, et al, Yong Zheng, Molecular plasticity of ERBB receptor complexes associated with sensitivity to targeted therapies in cancer cells, **under revision**;
2. **Shujuan Wang**, Cunjie Zhang, Mansheng Li, Chao Zhao, Yong Zheng, A system-wide spatiotemporal characterization of ErbB receptor complexes by subcellular fractionation integrated quantitative mass spectrometry, *Anal. Chem.*, 2021, 93, 7933–7941 (**IF 8.0**).
3. **Shujuan Wang**, Karen Poon, Zongwei Cai, Removal and metabolism of triclosan by three different microalgal species in aquatic environment, *Journal of Hazardous Materials*, 2018, 342, 643-650 (**IF 14.2**).
4. Xian Wang, **Shujuan Wang**, Zongwei Cai, The latest development and applications of mass spectrometry in food-safety and quality, *Trends in Analytical Chemistry*, 2013, 52: 170-185, 2013 (**IF 14.9, CoFirst author**).
5. **Shujuan Wang**, Xian Wang, Karen Poon, Yini Wang, Shangfu Li, Hongxia Liu, Shuhai Lin, Zongwei Cai, Removal and reductive dechlorination of triclosan by *Chlorella pyrenoidosa*, *Chemosphere*, 2013, 92, 1498-1505, 2013 (**IF 8.9**).
6. **Shujuan Wang**, Xiaowu Chen, Hemi Luan, Zongwei Cai, Hongxia Liu, Yuyang Jiang, MALDI Imaging of cell cultures for the analysis of lipids related to the invasive phenotype of breast cancer, *Rapid Communication in Mass Spectrometry*, 2016, 30, 533-542 (**IF 2.6**).
7. Hangrui Bai, **Shujuan Wang**, Zongwei Cai, Dan Gao, Jianjun Liu, Hongxia Liu, Yuyang Jiang, Localization of ginsenosides in *Panax ginseng* with different age by matrix-assisted laser-desorption/ionization time-of-flight mass spectrometry imaging, *Journal of Chromatography B*, 2016, 1026: 263-271 (**IF 3.0, CoFirst author**).
8. **Shujuan Wang**, Hangrui Bai, Zongwei Cai, Dan Gao, Jianjun Liu, Hongxia Liu, Yuyang Jiang, MALDI imaging for the localization of saponins in root tissues and rapid differentiation of three

- Panax* herbs, Electrophoresis, 2016, 37: 1956-1966 (IF 3.6).
9. **Shujuan Wang**, Karen Poon, Zongwei Cai, Biodegradation and removal of 3,4-dichloroaniline by *Chlorella pyrenoidosa* based on liquid chromatography-electrospray ionization-mass spectrometry. Environmental Science and Pollution Research, 2013, 20: 552-557 (IF 5.2).
  10. **Shujuan Wang**, Li Jia, Deping Chen, Pressurized CEC with gradient elution for separation of flavonoids from corn, Journal of Separation Science, 2009, 32: 388-393 (IF 3.6).
  11. **Shujuan Wang**, Li Jia, Da Xing, Deping Chen, Jingshan Zhao, On-line concentration and pressurized capillary electrochromatographic analysis of phytohormones in corn, Journal of Separation Science, 2008, 31: 859-864 (IF 3.6).
  12. **Shujuan Wang**, Li Jia, Deping Chen, Capillary liquid chromatographic determination of fat-soluble vitamins and  $\beta$ -carotene in corns, Chinese Journal of Analysis Laboratory, 2009, 28: 23-26.
  13. Amr. R. Ghanam, Shengwei Ke, **Shujuan Wang**, Ramy Elgendy, Chenyao Xie, Siqi Wang, Ran Zhang, Min Wei, Weiguang Liu, Jun Cao, Yan Zhang, Zhi Zhang, Tian Xue, Yong Zheng, Xiaoyuan Song, Alternative transcribed 3' isoform of long non-coding RNA Malat1 inhibits mouse retinal oxidative stress, iScience, 2023, 26: 105740 (IF 6.1).
  14. Hangyu Yu, **Shujuan Wang**, Zongwei Cai, Karen Poon, Differential handling of toxic chemicals by stress shock algae. International Journal of Environmental Pollution and Remediation, 2012, 1: 111-118.
  15. Xiaowu Chen, Dan Gao, Feng Liu, Xiang Gao, **Shujuan Wang**, Yufen Zhao, Hongxia Liu, Yuyang Jiang, A novel quantification method for analysis of twenty natural amino acids in human serum based on N-phosphorylation labeling using reversed-phase liquid chromatography-tandem mass spectrometry, Analytica Chimica Acta, 2014, 836: 61-71 (IF 6.9).
  16. Fei Wang, Qianqian WANG, Baowei Liu, Lisheng Mei, Sisi Ma, **Shujuan Wang**, Ruoyu Wang, Yan Zhang, Chaoshi Niu, Zhiqi Xiong, Yong Zheng, Zhi Zhang, Juan Shi, Xiaoyuan Song, The long noncoding RNA Synage regulates synapse stability and neuronal function in the cerebellum. Cell Death & Differentiation 2021, 28(9): 2634-2650. (IF, 12.1).
  17. Jiawen Lyu, Yan Wang, Jiawei Mao, Yating Yao, **Shujuan Wang**, Yong Zheng, Mingliang Ye, Pseudotargeted MS Method for the Sensitive Analysis of Protein Phosphorylation in Protein Complexes, Analytical Chemistry, 2018, 90, 6214-6221 (IF 8.0).

## Research grants in charge and participating in (selected)

---

### 1. In charge:

- (1) National Youth Science Foundation, 21705007, 2018.01-2020.12, Identification of potential biomarker about drug resistance of breast cancer cells with Her2 positive by using affinity purification-quantitative mass spectrometry.
- (2) Chinese Postdoctoral Science Foundation, 2014M540949, 2014.06-2015.10, Identification of potential biomarker about estrogen receptor status in breast cancer tissues by using imaging mass spectrometry.

### 2. Participating in:

- (1) The China Ministry of Science and Technology, 2106YFA0501400, 2016.7-2021.6, New methods for dynamic analysis of large-scale protein complexes.

- (2) National Natural Science Foundation of China, 31670839, 2017.01-2020.12, The investigation of dynamics of signaling complex across subcellular localization mediated by growth factor receptor.
- (3) National Natural Science Foundation of China, NCFC21275020, 2013.01-2016.12, Direct analysis of plant tissues of traditional Chinese medicines by using MALDI-imaging mass spectrometry.