SHEN, XIAOTAO

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INFORMATION

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EDUCATION

- **PhD** Student in Metabolomics and Bioinformatics (Advisor: Dr. Zheng-Jiang Zhu)
  Aug. 2013 - Present, **Chinese Academy of Sciences (CAS)**.
- **BSs** in Biotechnology *Aug. 2009 - Jun. 2013*, **Inner Mongolia University**.

RESEARCH

- Mass Spectrometry-based Large-Scale Metabolomics.
- Metabolomics Data Processing Methods and Software Development.
- Biomarker Discovery for Diseases.

HONORS AND AWARDS

- **Student Travel Award for Oral Presentation**
  The International Metabolomics Society (2018).
- **International Conference Travel Award** The *Metabolites* Journal (2018).
- **China National Scholarship** Ministry of Education of the People's Republic of China (2017).
- **Award for Outstanding Youth Report**
  The 3th China Mass Spectrometry Analysis Conference (2017).
- **Merit Student** University of Chinese Academy of Sciences (2016).
- **Award for Outstanding Youth Report**
  The 34th China Mass Spectrometry Society Conference (2016).
- **Inner Mongolia Outstanding Graduate** Inner Mongolia Autonomous Region (2013).
- **National Encouragement Scholarship** Inner Mongolia University (2011).

PUBLICATIONS

- **X. Shen**, R. Wang, X. Xiong, Y. Yin, Y. Cai, J. Ma, N. Liu and Z.-J. Zhu, Large-scale Metabolite Identification for Untargeted Metabolomics Using Metabolic Reaction Network, **Nature Communications**, under review.
- **X. Shen** and Z.-J. Zhu, MetFlow: An interactive and integrated workflow for metabolomics data cleaning and differential metabolite discovery, **Bioinformatics**, submitted.
- Z. Zhou, **X. Shen**, X. Chen, J. Tu, X. Xiong, and Z.-J. Zhu, LipidIMMS Analyzer: Integrating Multi-dimensional Information to Support Lipid Identification in Ion Mobility–Mass Spectrometry based Lipidomics, **Bioinformatics**, in press.
- H. Jia, **X. Shen (Co-first author)**, Y. Guan, M. Xu, M. Mo, J. Zhu and Z.-J. Zhu, Assessment of The Response to Neoadjuvant Chemo-Radiation in Rectal Cancer Patients based on A Metabolomics Approach, **Radiotherapy and Oncology**, 2018, 128, 548-556.
- Z. Zhou, J. Tu, X. Xiong, **X. Shen**, and Z.-J. Zhu, LipidCCS: Prediction of Collision Cross-Section Values for Lipids with High Precision to Support Ion Mobility-Mass Spectrometry based Lipidomics, **Analytical Chemistry**, 2017, 89, 9559–9566.
- Z. Zhou, **X. Shen**, J. Tu, and Z.-J. Zhu, Large-Scale Prediction of Collision Cross-Section Values for Metabolites in Ion Mobility - Mass Spectrometry, **Analytical Chemistry**, 2016, 88, 11084-11091.
- J. Wang, T. Zhang, **X. Shen (Co-first author)**, J. Liu, D. Zhao, Y. Sun, L. Wang, Y. Liu, X. Gong, Y. Liu, Z.-J. Zhu, F. Xue,* Serum Metabolomics for Early Diagnosis of Esophageal Squamous Cell Carcinoma by UHPLC-QTOF/MS, **Metabolomics**, 2016, 12: 116.
- **X. Shen**, X. Gong, Y. Cai, Y. Guo, J. Tu, H. Li, T. Zhang, J. Wang, F. Xue, and Z.-J. Zhu, Normalization and Integration of Large-Scale Metabolomics Data Using Support Vector Regression, **Metabolomics**, 2016, 12: 89.

ORAL PRESENTATIONS

- Metabolic Reaction Network-based Recursive Metabolite Identification for Untargeted Metabolomics. **The 14th International Conference of the Metabolomics Society**, June, 2018, Seattle, USA.
- Assessment of the Response to Neoadjuvant Chemo-Radiation in Rectal Cancer Patients based on a Metabolomics Approach. **The 3th China Mass Spectrometry Analysis Conference**, December, 2017, Xiamen, China.
- Normalization and Integration of Large-Scale Mass Spectrometry-based Metabolomics Data Using Support Vector Regression. **The 34th China Mass Spectrometry Society Conference**, September, 2016, Xining, China.
- Normalization and Integration of Large-Scale Mass Spectrometry-based Metabolomics Data Using Support Vector Regression. **The 64th American Society for Mass Spectrometry Conference**, June, 2016, San Antonio, USA.

POSTERS PRESENTATION

- Metabolic Reaction Network based Metabolite Annotation in Untargeted Metabolomics. **The 13th International Conference of the Metabolomics Society**, June, 2017, Brisbane, Austria.

TECHNICAL STRENGTH

- **Languages:** Mandarin (Very fluent), English (Fluent).
- **Mass Spectrometry Analysis:** Agilent QT0F 6550, Agilent QQQ 6495, 6460, Agilent IMMS 6560, AB sciex Triple TOF 5600, 6600.
- **Programming Languages:** R, Python.
- **Bioinformatic Tools:** Agilent MassHunter work station, AB sciex PeakView, XCMS, MS-DIAL.
- **Other Skills:** Markdown, Photoshop, Illustrator, Linux (Ubuntu and CentOS), GitHub, Shiny.