

RESUME

Name: Xiuli Zhang

Gender: **Female**

Nationality: **China**

Date of Birth: **1977-2-16**

Current Employer: **Dalian Institute of Chemical Physics, Chinese Academy of Sciences**

Title: **Professor**

Contact Address: **Biotechnology building, Road Zhongshan Road 457, Dalian Institute of Chemical Physics, CAS, Dalian, Liaoning Province, China, 116023**

Phone: **13841169035**

E-mail: **zhangxiuli1977@hotmail.com**

Educational Background:

PhD Degree: **2017.2, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Prof. Xinmiao Liang (Supervisor)**

Bachelor Degree: **2000.6, Nankai University, Chemistry, Prof. Zuoqing Shi (Supervisor)**

Research Background:

My current research focuses on separation and purification of TCMs, as well as CLIP technology, for drug discovery. I developed several two-dimensional liquid chromatography methods to purify the active compounds from TCMs. I have built a sample library of natural products including more than 100,000 samples. I have developed cellular label-free integrative pharmacology profiling method to evaluate the activity of natural products against 40 kinds of GPCR targets. I have found several natural compounds with specific GPCR target activity. I authored 78 original research papers in international journals, which have a total of 1176 citations and 34 of which have an impact factor greater than 3. I have 30 patents in which 12 have been authorized.

I was selected into Liaoning Province Science and Technology Awards Expert Library in 2018. I was awarded by Dalian Medical University with the "14-16 Annual Clinical Teaching Advanced Education Worker" in 2017. I am invited to review some international SCI journals such as Journal of Chromatography A, Analytical & Bioanalytical Chemistry, Journal of

Separation Science, Scientific Reports, and RSC Advances.

Projects:

- a) International Cooperation Plan from Ministry of Science and Technology of China (2015DFG32260, 2015-2017), ¥910000, supervisor.
- b) "Personalized Medicines—Molecular Signature-based Drug Discovery and Development", Strategic Priority Research Program of the Chinese Academy of Sciences (Grant No. XDA12040314, 2016-2017), ¥1000000, supervisor.
- c) National Science Foundation of China (81473436, 2015-2018), ¥ 710000, supervisor.
- d) Kanghong Pharmaceutical about therapeutic material basis of Songling Xuemaikang Sapsule (KH2YFX20121224, 2012-2015), ¥1000000, supervisor.
- e) National Science Foundation of China (20805046, 2009-2011), ¥ 180000, supervisor.
- f) Knowledge Innovation Program of Chinese Academy of Sciences (KSCX2-YW-R-214,2009-2010), ¥200000, supervisor.
- g) State Key Program of National Natural Science of China (Grant No.U1508221, 2016-2019), ¥2800000, participant.
- h) the External Cooperation Program of BIC , Chinese Academy of Science (Grant No.121421KYSB20130013, 2014-2016), ¥700000, participant.
- i) National Key Technology Research and Development Program for The 12th Five-year Plan (2012BAD33B03, 2012-2015), ¥500000, participant.
- j) State Key Program of National Natural Science of China (Grant No. 21135005, 2012-2016), ¥3000000, participant.
- k) National High Technology Research and Development Program of China (863 Program,2012AA020203, 2012-2015), ¥865000, participant.
- l) National Key Scientific Project for New Drug Discovery and Development (2009ZX09301-012, 2009-2010), ¥3900000, participant.

Published Papers (as corresponding author):

- [1] L. Wei, T. Hou, C. Lu, J. Wang, X. Zhang*, Y. Fang, Y. Zhao, J. Feng, J. Li, L. Qu, H.-I. Piao, X. Liang*, SAR Studies of N- 2-(1H-Tetrazol-5-yl)phenyl benzamide Derivatives as Potent G Protein-Coupled Receptor-35 Agonists, *Acs Medicinal Chemistry Letters*, 9 (2018) 422-427.
- [2] J. Wang, H. Qi, X. Zhang*, W. Si, F. Xu, T. Hou, H. Zhou, A. Wang, G. Li, Y. Liu, Y. Fang, H.-L. Piao, X. Liang*, Saikosaponin D from Radix Bupleuri suppresses triple-negative breast cancer cell growth by targeting beta-catenin signaling, *Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie*, 108 (2018) 724-733.
- [3] P. Zhang, J. Wang, Y. Zhao*, X. Zhang*, L. Qu, C. Wang, J. Feng, A. Wang, W. Zhou, Y. Liu, T. Hou, H. Zhou, Z. Wang, X. Liang, Discovery of novel antagonists on beta2-adrenoceptor from natural products using a label-free cell phenotypic assay, *Naunyn-Schmiedeberg's archives of pharmacology*, (2018), in press
- [4] L. Wei, J.X. Wang, X.L. Zhang*, P. Wang, Y.P. Zhao, J.Q. Li, T. Hou, L.L. Qu, L.Y. Shi, X.M. Liang*, Y. Fang, Discovery of 2H-Chromen-2-one Derivatives as G Protein-Coupled Receptor-35 Agonists, *Journal of Medicinal Chemistry*, 60 (2017) 362-372.
- [5] T. Hou, L. Shi, J. Wang, L. Wei, L. Qu, X. Zhang*, X. Liang*, Label-free cell phenotypic profiling and pathway deconvolution of neurotensin receptor-1, *Pharmacological Research*, 108 (2016) 39-45.
- [6] J. Wang, X. Zhang*, X. Li, Y. Zhang, T. Hou, L. Wei, L. Qu, L. Shi, Y. Liu, L. Zou, X. Liang*, Anti-gastric cancer activity in three-dimensional tumor spheroids of bufadienolides, *Scientific Reports*, 6 (2016) 24772-24781.
- [7] J.X. Wang, Z.M. Guo, A.J. Shen, L. Yu, Y.S. Xiao, X.Y. Xue, X.L. Zhang*, X.M. Liang*, Hydrophilic-subtraction model for the characterization and comparison of hydrophilic interaction liquid chromatography columns, *Journal of Chromatography A*, 1398 (2015) 29-46.
- [8] J. Ding, W. Wen, D. Xiang, P. Yin, Y. Liu, C. Liu, G. He, Z. Cheng, J. Yin, C. Sheng, W. Zhang, F. Nan, W. Ye, X. Zhang*, H. Wang, psi-Bufarenogin, a novel anti-tumor compound, suppresses liver cancer growth by inhibiting receptor tyrosine kinase-mediated signaling, *Oncotarget*, 6 (2015) 11627-11639.
- [9] J.X. Wang, T. Hou, L. Wei, L.Y. Shi, J. He, N. Zhou, G.W. Sun, X.L. Zhang*, X.M. Liang*, Discovery of new targets of phenolic acids in danshen using a label-free cell phenotypic assay, *Rsc Advances*, 5 (2015) 25768-25776.
- [10] X.J. Guo, X.L. Zhang*, Z.M. Guo, Y.F. Liu, A.J. Shen, G.W. Jin, X.M. Liang*, Hydrophilic interaction chromatography for selective separation of isomeric saponins, *Journal of Chromatography A*, 1325 (2014) 121-128.
- [11] J.X. Wang, C.R. Wang, Z.M. Guo, X.F. Dong, Y.S. Xiao, X.Y. Xue, X.L. Zhang*, X.M. Liang*, A novel method for characterization and comparison of reversed-phase column selectivity, *Journal of Chromatography A*, 1361 (2014) 153-161.
- [12] J.X. Wang, S. Kong, J.Y. Yan, G.W. Jin, Z.M. Guo, A.J. Shen, J.Y. Xu, X.L. Zhang*, L.J. Zou, X.M. Liang*, Hydrophilic interaction liquid chromatography-solid phase extraction directly combined with protein precipitation for the determination of triptorelin in plasma, *Journal of Chromatography B-Analytical Technologies in the Biomedical and Life Sciences*, 960 (2014) 214-221.
- [13] Z. Long, Y. Zhang, Z.M. Guo, L. Wang, X.Y. Xue, X.L. Zhang*, S.S. Wang, Z.W. Wang, O. Civelli, X.M. Liang*, Amide Alkaloids from *Scopolia tangutica*, *Planta Medica*, 80 (2014) 1124-1130.
- [14] X.L. Zhang, H.Y. Deng, Y.S. Xiao, X.Y. Xue, A.M. Ferrie, T. Elizabeth, X.M. Liang*, Y. Fang, Label-free cell phenotypic profiling identifies pharmacologically active compounds in two traditional Chinese medicinal plants, *Rsc Advances*, 4 (2014) 26368-26377.
- [15] J.Y. Xu, X.L. Zhang*, Z.M. Guo, J.Y. Yan, L. Yu, X.L. Li, X.Y. Xue, X.M. Liang*, Orthogonal separation and

identification of long-chain peptides from scorpion *Buthus martensi* Karsch venom by using two-dimensional mixed-mode reversed phase-reversed phase chromatography coupled to tandem mass spectrometry, *Analyst*, 138 (2013) 1835-1843.

[16] Z. Long, Z.M. Guo, X.Y. Xue, X.L. Zhang*, L. Nordahl, X.M. Liang*, Selective separation and purification of highly polar basic compounds using a silica-based strong cation exchange stationary phase, *Analytica Chimica Acta*, 804 (2013) 304-312.

[17] X.J. Guo, X.L. Zhang*, J.T. Feng, Z.M. Guo, Y.S. Xiao, X.M. Liang*, Purification of saponins from leaves of *Panax notoginseng* using preparative two-dimensional reversed-phase liquid chromatography/hydrophilic interaction chromatography, *Analytical and Bioanalytical Chemistry*, 405 (2013) 3413-3421.

[18] L. Ding, J. Dong, Y.S. Xiao, X.L. Zhang*, X.Y. Xue, X.M. Liang*, Study on Retention Equation for Protein in Reversed Phase Liquid Chromatography, *Chinese Journal of Analytical Chemistry*, 41 (2013) 181-186.

[19] C.R. Wang, Z.M. Guo, Z. Long, X.L. Zhang*, X.M. Liang*, Overloading study of basic compounds with a positively charged C18 column in liquid chromatography, *Journal of Chromatography A*, 1281 (2013) 60-66.

[20] Z. Long, Z.M. Guo, X.Y. Xue, X.L. Zhang*, X.M. Liang*, Two-dimensional strong cation exchange/positively charged reversed-phase liquid chromatography for alkaloid analysis and purification, *Journal of Separation Science*, 36 (2013) 3845-3852.

[21] Z. Long, C.R. Wang, Z.M. Guo, X.L. Zhang*, L. Nordahl, J. Zeng, J.G. Zeng, X.M. Liang*, A non-aqueous solid phase extraction method for alkaloid enrichment and its application in the determination of hyoscyamine and scopolamine, *Analyst*, 137 (2012) 1451-1457.

[22] X.L. Zhang, Y.F. Liu, Z.M. Guo, J.T. Feng, J. Dong, Q. Fu, C.R. Wang, X.Y. Xue, Y.S. Xiao, X.M. Liang*, The herbalome—an attempt to globalize Chinese herbal medicine, *Analytical and Bioanalytical Chemistry*, 402 (2012) 573-581.

[23] X.M. Cai, Z.M. Guo, X.Y. Xue, J.Y. Xu, X.L. Zhang*, X.M. Liang*, Two-dimensional liquid chromatography separation of peptides using reversed-phase/weak cation-exchange mixed-mode column in first dimension, *Journal of Chromatography A*, 1228 (2012) 242-249.

[24] Z. Long, C.R. Wang, Z.M. Guo, X.L. Zhang*, L. Nordahl, X.M. Liang*, Strong cation exchange column allow for symmetrical peak shape and increased sample loading in the separation of basic compounds, *Journal of Chromatography A*, 1256 (2012) 67-71.

[25] J.Y. Xu, X.L. Zhang*, Z.M. Guo, J.Y. Yan, L. Yu, X.L. Li, X.Y. Xue, X.M. Liang*, Short-chain peptides identification of scorpion *Buthus martensi* Karsch venom by employing high orthogonal 2D-HPLC system and tandem mass spectrometry, *Proteomics*, 12 (2012) 3076-3084.

[26] J. Dong, L. Yu, X.L. Zhang*, X.Y. Xue, Z.M. Guo, X.M. Liang*, Protein separation on a polar-copolymerized C-8 stationary phase, *Analytical and Bioanalytical Chemistry*, 399 (2011) 3415-3421.

[27] J. Dong, X.M. Cai, L.J. Zou, C. Chen, X.Y. Xue, X.L. Zhang*, X.M. Liang*, Lysophosphatidylcholine Biomarkers of Lung Cancer Detected by Ultra-performance Liquid Chromatography Coupled with Quadrupole Time-of-flight Mass Spectrometry, *Chemical Research in Chinese Universities*, 27 (2011) 750-755.

[28] C.M. Li, Y.S. Xiao, X.Y. Xue, J.T. Feng, X.L. Zhang*, X.M. Liang*, Isolation and Purification of Unstable Iridoid Glucosides from Traditional Chinese Medicine by Preparative High Performance Liquid Chromatography Coupled with Solid-phase Extraction, *Chemical Research in Chinese Universities*, 27 (2011) 392-396.

[29] X.M. Cai, J. Dong, L.J. Zou, X.Y. Xue, X.L. Zhang*, X.M. Liang*, Metabonomic Study of Lung Cancer and the Effects of Radiotherapy on Lung Cancer Patients: Analysis of Highly Polar Metabolites by Ultraperformance HILIC Coupled with Q-TOF MS, *Chromatographia*, 74 (2011) 391-398.

[30] J. Zeng, X.L. Zhang*, Z.M. Guo, J.T. Feng, X.Y. Xue, X.M. Liang*, A new method for chemical

identification based on orthogonal parallel liquid chromatography separation and accurate molecular weight confirmation, *Journal of Chromatography A*, 1218 (2011) 1749-1755.

[31] X.M. Cai, C.R. Wang, J.Y. Xu, X.Y. Xue, X.L. Zhang*, X.M. Liang*, Application of matrix solid-phase dispersion methodology to the extraction of endogenous peptides from porcine hypothalamus samples for MS and LC-MS analysis, *Journal of Chromatography B-Analytical Technologies in the Biomedical and Life Sciences*, 879 (2011) 657-661.

[32] C.R. Wang, Z.M. Guo, J. Zhang, J. Zeng, X.L. Zhang*, X.M. Liang*, High-performance purification of quaternary alkaloids from *Corydalis yanhusuo* W. T. Wang using a new polar-copolymerized stationary phase, *Journal of Separation Science*, 34 (2011) 53-58.

[33] J. Zhang, Y.S. Xiao, J.T. Feng, S.L. Wu, X.Y. Xue, X.L. Zhang*, X.M. Liang*, Selectively preparative purification of aristolochic acids and aristololactams from *Aristolochia* plants, *Journal of Pharmaceutical and Biomedical Analysis*, 52 (2010) 446-451.

[34] J.B. Zhu, X.J. Guo, S.P. Fu, X.L. Zhang*, X.M. Liang*, Characterization of steroidal saponins in crude extracts from *Dioscorea zingiberensis* C. H. Wright by ultra-performance liquid chromatography/electrospray ionization quadrupole time-of-flight tandem mass spectrometry, *Journal of Pharmaceutical and Biomedical Analysis*, 53 (2010) 462-474.

[35] Y.F. Liu, J.T. Feng, Y.S. Xiao, Z.M. Guo, J. Zhang, X.Y. Xue, J. Ding, X.L. Zhang*, X.M. Liang*, Purification of active bufadienolides from toad skin by preparative reversed-phase liquid chromatography coupled with hydrophilic interaction chromatography, *Journal of Separation Science*, 33 (2010) 1487-1494.

[36] J. Zeng, Z.M. Guo, Y.S. Xiao, C.R. Wang, X.L. Zhang*, X.M. Liang*, Purification of polar compounds from *Radix isatidis* using conventional C18 column coupled with polar-copolymerized C18 column, *Journal of Separation Science*, 33 (2010) 3341-3346.

[37] J. Dong, X.M. Cai, L.L. Zhao, X.Y. Xue, L.J. Zou, X.L. Zhang*, X.M. Liang*, Lysophosphatidylcholine profiling of plasma: discrimination of isomers and discovery of lung cancer biomarkers, *Metabolomics*, 6 (2010) 478-488.

[38] Y.F. Liu, Y.S. Xiao, X.Y. Xue, X.L. Zhang*, X.M. Liang*, Systematic screening and characterization of novel bufadienolides from toad skin using ultra-performance liquid chromatography/electrospray ionization quadrupole time-of-flight mass spectrometry, *Rapid Communications in Mass Spectrometry*, 24 (2010) 667-678.

[39] C.M. Li, X.L. Zhang*, X.Y. Xue, F.F. Zhang, Q. Xu, X.M. Liang*, Structural characterization of iridoid glucosides by ultra-performance liquid chromatography/electrospray ionization quadrupole time-of-flight tandem mass spectrometry, *Rapid Communications in Mass Spectrometry*, 22 (2008) 1941-1954.

[40] X.L. Zhang, D. Martens, P.M. Kramer, A.A. Kettrup, X.M. Liang*, On-line immunoaffinity column-liquid chromatography-tandem mass spectrometry method for trace analysis of diuron in wastewater treatment plant effluent sample, *Journal of Chromatography A*, 1133 (2006) 112-118.

[41] X.L. Zhang, D. Martens, P.M. Kramer, A.A. Kettrup, X.M. Liang**, Development and application of a sol-gel immunosorbent-based method for the determination of isoproturon in surface water, *Journal of Chromatography A*, 1102 (2006) 84-90.

Awards:

✧ Member of Youth Innovation Promotion Association, CAS.

✧ The 100 most influential outstanding international academic papers in China in 2007.

- ✧ The Second-grade Award of Liaoning Province Natural Science Academic Achievement in 2012.
- ✧ The First-grade Award of Dalian Natural Science Academic Achievement in 2011.