


# CV

<b>Name</b>	Xuexin Li	<b>Gender</b>	Male	<b>Age</b>	31	
<b>Title</b>	Professor	<b>Position</b>	Director of Biomedical Innovation Center	<b>Education</b>	MD, PhD	
<b>Research Directions</b>	Single-cell multi-omics, Tumor immunotherapy resistance, Organoid technology, Precision drug delivery					
<b>Full Unit Name</b>	The Fourth Affiliated Hospital of China Medical University					
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**Main Achievements (Results, Papers, Publications):**

**Personal Achievements**

Doctorate from Karolinska Institute in Sweden, Visiting Researcher at Karolinska Institute, Visiting Professor at King's College London, Distinguished Young Scholar of "Xing Liao Talent Program" (Liaoning province High-Level Talent Support Initiative), Director of Biomedical Innovation Center at The Fourth Affiliated Hospital of China Medical University, Deputy Director of General Surgery (National Clinical Key Specialty). Research areas include: pan-cancer mechanism analysis based on systems medicine and single-cell multi-omics, mechanisms of resistance in cancer immunotherapy, precision drug delivery, and exploring disease mechanisms through organoids and organ-on-a-chip. Over the past three years, published more than 30 papers in SCI-indexed English journals. As first author or corresponding author, published papers in high-impact journals such as Nature Communications, Genome Biology, Hepatology, EBioMedicine, Nucleic Acids Research, Cell Reports Medicine, and PNAS, with a total impact factor exceeding 400. Led 2 international joint fund projects at Karolinska Institute, 1 National Natural Science Foundation project (general), and multiple provincial and ministerial projects, accumulating over 2 million yuan in research funding. Granted for 2 national invention patents.

Awards include: International Academic Award from the Japanese Society for Immunology, Annual Special Contribution Award from Tokyo Medical and Dental University, Excellence Award in the Biomedical Group of the 15th "Chunhui Cup" Innovation and Entrepreneurship Competition for Chinese Students Abroad, and Third Prize in the Global Finals of the "Win in Suzhou, Create a Winning Future" International Maker Competition. Delivered academic reports at international conferences, including the annual meeting of the Japanese Society for Immunology and the European Huntington Disease Network (EHDN) conference.

**Papers and Publications (First Author or Corresponding Author in the Past Three Years)**

1. Single-cell transcriptomic architecture unraveling the complexity of tumor heterogeneity in distal cholangiocarcinoma. Cellular and Molecular Gastroenterology and Hepatology. 2022 Jan 1;13(5):1592-609. IF=9.225
2. Ursa: A Comprehensive Multi-Omics Toolbox for High-Throughput Single-Cell

- Analysis(2023). *Molecular Biology and Evolution*. IF=10.7
3. Modulator of TMB-associated Immune infiltration (MOTIF) predicts immunotherapy response and guides combination therapy 2023 *Science Bulletin*. IF=18.9
  4. Single Cell Atlas: a single-cell multi-omics human cell encyclopedia. *Genome biology* 2024 IF=12.31
  5. HTCA: a database with an in-depth characterization of the single-cell human transcriptome. *Nucleic Acids Research*. 2023 Jan 6;51(D1):D1019-28. IF=19.16
  6. Universal cutoff for tumor mutational burden in predicting the efficacy of anti-PD-(L)1 therapy for advanced cancers. *Front Cell Dev Biol*. 2023 May 25;11:1209243. IF 6.081
  7. The anti-leprosy drug clofazimine reduces polyQ toxicity through activation of PPAR $\gamma$  *Ebiomedicine* 2024 IF=11.1
  8. A single-cell pan-cancer analysis to show the variability of tumor-infiltrating myeloid cells in immune checkpoint blockade. *Nature Communications* 2024 IF=14.9
  9. Dynamic Immunoediting by Macrophages in Homologous Recombination Deficiency-Stratified Pancreatic Ductal Adenocarcinoma Drug Resistance Updates. 2024 IF=24.7
  10. Molecular Profiling Defines Three Subtypes of Synovial Sarcoma *Advanced Science*. 2024 IF=15.1
  11. Magnetic nanoparticles for cancer theranostics: Advances and prospects. *Journal of Controlled Release*. 2021 Jul 10;335:437-48. IF=11.467
  12. Endogenous Stimuli-Responsive Nanoparticles for Cancer Therapy: From Bench to Bedside. *Pharmacological Research*. 2022 Oct 23;106522. IF=10.334
  13. mRNA vaccine in cancer therapy: Current advance and future outlook. *Clin Transl Med*. 2023 Aug;13(8):e1384. doi: 10.1002/ctm2.1384. IF=10.6
  14. Immunotherapy in gastrointestinal cancers: advances, challenges, and countermeasures. *Science bulletin*. 2023 Apr;30;68(8):763. IF=18.9
  15. Engineered Nanoparticles for Precise Targeted Drug Delivery and Enhanced Therapeutic Efficacy in Cancer Immunotherapy. *Acta Pharm. Sin. B*. 2024 IF=14.5
  16. Pang Z\*, Zhang H, Zheng S, Yang X, Liu C, Han Q, Chen Y, Li Z, Zhang X, Cao L, Wang Q, Cao Y, Sun X, Zhao P#, Li X#, Zheng Q#, Sheng R#. HNF4 $\alpha$ -CDKL3 axis restricts MASLD progression by targeting FoxO1 via noncanonical phosphorylation. *Hepatology*. 2024 IF=15.5
  17. Xuexin Li\* #, Lu Pan\* , Weiyuan Li\*, Bingyang Liu\*, Chunjie Xiao<sup>6</sup>, Valerie Chew<sup>9</sup>, Xuan Zhang<sup>10</sup>, Wang Long<sup>11</sup>, Florent Ginhoux<sup>12,13,14</sup>, Joseph Loscalzo<sup>15</sup>, Marcus Buggert<sup>16</sup>, Xiaolu Zhang#, Ren Sheng#, Zhenning Wang#, Deciphering Immune Predictors of Immunotherapy Response: A Multiomics Approach at the Pan-Cancer Level. *Cell Reports Medicine* 2025 IF=11.7
  18. Lanjing Ma\*, , Zhongqiu Pang , Haijiao Zhang , Xueling Yang , Shaoqin Zheng , Yi Chen , Weijie Ding , Qing Han , Xi Zhang , Liu Cao , Teng Fei , Qiang Wang , Daming Gao , Aina He , Ke-Bang Hu# , Xue-Xin Li #, Ren Sheng#, Clear cell renal carcinoma essentially requires CDKL3 for oncogenesis. *PNAS* 2025 IF=10.8

## Books

- "Clinical Oncology": First Editor
- "Common Tumor Diagnosis and Treatment Methods and Practices": First Editor
- "A Brief History of the Ancestry of Hepatobiliary and Pancreatic Surgery and Anatomical Terminology": Co-author

## Patents

- An organoid culture image compression method and system , First inventor , Patent granted
- A pH-stable arginine deiminase mutant and its application in cancer therapy, First

**inventor, Patent granted**

### **Technical Achievements**

**1. Single-Cell Analysis Platform Development and Transfer:** Led the SCA Consortium to develop a one-stop single-cell analysis platform, The Single Cell Analyst. This platform is a no-code tool that supports both online and offline operations, providing a comprehensive and user-friendly environment covering all omics types from 10X Genomics. A project transfer agreement was reached with Hefei Xiyi Technology Development Co., Ltd., with an investment of 1.5 million yuan.

**2. Drug Repurposing Encyclopedia:** As the first author, launched the Drug Repurposing Encyclopedia (DRE)—covering over 198 million important drug-cell phenotype associations from 20 organisms in an interactive network server. A project transfer agreement was reached with Hefei Xiyi Technology Development Co., Ltd., with an investment of 900,000 yuan.

**3. Oncolytic Virus Development:** Collaborated with the renowned Swedish biotherapy company Elicera Therapeutics, signing a joint R&D plan for the oncolytic virus ELC-201, aimed at exploring its efficacy and safety in various solid tumors through preclinical experiments, providing more precise and effective treatment for cancer patients.

**4. Hepatocellular Carcinoma Organoid Construction:** Collaborated with Jianlan Biology, signing a collaborative innovation plan based on NAC-Organ tumor organoid culture technology to reconstruct the microenvironment of hepatocellular carcinoma, aiming to enhance the precision and effectiveness of treatment, reduce drug side effects, and significantly improve patients' quality of life post-treatment.

**5. Joint Laboratory for Medical Data Science and AI:** Collaborated with iFlytek to sign an agreement for the establishment of a joint laboratory, jointly applying for the Sino-Zimbabwe Medical Data Science and AI Laboratory, aimed at combining medical data science and AI technology to promote innovation in medical research and clinical applications, developing advanced data analysis tools and intelligent diagnostic systems to improve research efficiency and diagnostic accuracy.

**6. Joint Laboratory for Cancer Prevention and Immunotherapy:** Collaborated with Flavio Salazar, Vice President of the University of Chile and former Minister of Science, to establish a comprehensive research laboratory for cancer prevention and immunotherapy, while jointly developing DC vaccine IIT trials.

### **Academic Awards and Conference Reports**

1. Xuexin Li (1/1); Best Presentation Award Winner 2018, Japanese Society for Immunology, Natural Sciences, International Academic Award, 2018 (Xuexin Li) (Research Award)

2. Xuexin Li (1/1); Annual Special Contribution Award, Tokyo Medical and Dental University, Natural Sciences, Other, 2017 (Xuexin Li) (Research Award)

3. Li Xuexin (1/5); AI-based International Top Drug Screening and Vaccine R&D Platform, "Chunhui Cup" Chinese Students Abroad Innovation and Entrepreneurship Competition Committee, Natural Sciences, Other, 2020 (Li Xuexin; Mao Xinyue; Long Wang; Sundararaman Rengarajan) (Research Award)

4. Xuexin Li; Takeshi Tsuabata; Association of Single-cell Polymorphisms with Guillain-Barré Syndrome, 2018 Japanese Immunology Annual Meeting, Keio Plaza Hotel, Tokyo, 2018-07-21 (Conference Report)

5. Xuexin Li; Takeshi Tsuabata; Significant Associations of Human SIGLEC10 Polymorphisms with Susceptibility to Guillain-Barré Syndrome, the 47th Japanese Immunology Annual Meeting, Fukuoka International Congress Center, 2018-07-21

(Conference Report)

6. Presented at Nature Conferences "Human Genetics and Genomics - Focusing on Complexity and Health" with the keynote:

"Deciphering Immune Predictors of Immunotherapy Response: A Multiomics Approach at the Pan-Cancer Level". 2024-10

7. Third Prize (Clinical Medicine Category) at the 16th National Youth Conference on Medical Science and Technology, 2024 (for submitted paper). 2024-11

8. Keynote speaker at the 2nd CCF Digital Medicine Summit (DMS2024):

"Multiomics Integration and Single-Cell Technologies: Pioneering a New Era in Translational Medicine". Served as Session Chair for a DMS2024 sub-forum, facilitating interdisciplinary exchanges on digital medicine innovations. 2024-11

**Academic Positions**

1. Member, Japanese Society for Immunology
2. Member, European Huntington's Disease Network
3. Vice President, Chinese Students and Scholars Association in Sweden
4. Committee Member, Bio-therapy Committee, Liaoning Anti-Cancer Association
5. Committee Member, Tumor Marker Committee, Liaoning Anti-Cancer Association
6. Young Investigator Member, Translational Medicine Committee, Chinese Microcirculation Society