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Research Areas:

- 1) Ion channel gating and modulation mechanism
- 2) Ion channel function in health and disease
- 3) Drug screening targeting ion channels

Education:

- 2005.09-2009.06 B.S. (Biomedical Engineering),
Huazhong University of Science and Technology, Wuhan, China.
- 2009.06-2014.06 PhD. (Biophysics), Supervisor: Prof. **Jiuping Ding**
Huazhong University of Science and Technology, Wuhan, China.

Working Experience:

- 2014.08-2020.12 Postdoc (Biomedical Engineering), Supervisor: Prof. **Jianmin Cui**
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- 2021.1-present Assistant Professor, SKL, MUST

Publication:

1. **Panpan Hou**, Po Wei Kang, Audrey Deyawe Kongmeneck, Nien-Du Yang, Yongfeng Liu, Jingyi Shi, Xianjin Xu, Kelli McFarland White, Mark A. Zaydman, Marina A. Kasimova, Guiscard Seebohm, Ling Zhong, Xiaoqin Zou, Mounir Tarek, and Jianmin Cui. Two-stage electro-mechanical coupling of a K_v channel in voltage-dependent activation. *Nature Communications*. 2020; 11: 676.
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3. Yongfeng Liu#, Xianjin Xu#, Junyuan Gao#, Moawiah M. Naffaa, Hongwu Liang, Jingyi Shi, Hong Zhan Wang, Nien-Du Yang, **Panpan Hou**, Wenshan Zhao, Ira S. Cohen, Xiaoqin Zou, Jianmin Cui. A PIP2 substitute mediates voltage sensor-pore coupling in KCNQ activation. *Communications Biology*. 2020 Jul 16;3(1):385.
4. **Panpan Hou**, Jingyi Shi, Kelli McFarland White, Yuan Gao, Jianmin Cui. ML277 specifically enhances the fully activated open state of KCNQ1 by modulating VSD-pore coupling. *eLife*. 2019. Jul 22;8.

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8. Zhenzhen Yan#, Bin Hu#, Xiying Guo, Anxi Weng, Ling Zhong, Feng Xiao, Jiuping Ding#, and **Panpan Hou#**. Single Channel Recordings Reveal Differential β 2 Subunit Modulations Between Mammalian and *Drosophila* BK_{Ca}(β 2) Channels. *PLoS ONE*. 2016: e0163308.
9. Suha Mahmood A.Alghazal, Jiuping Ding, **Panpan Hou**. Cytotoxic effect of Quinidine on testicular tissues, sperm parameters and Ca²⁺ level in mice sperms; as an option of male contraception. *Advances in Life Science and Technology*. 2015. 30:70-76.
10. Mark Zaydman, Marina Kasimova, Kelli McFarland, Zachary Beller, **Panpan Hou**, Holly E Kinser, Hongwu Liang, Guohui Zhang, Jingyi Shi, Mounir Tarek, Jianmin Cui. Domain–domain interactions determine the gating, permeation, pharmacology, and subunit modulation of the IKs ion channel. *eLife*. 2014. 3:e03606.
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12. Haowen Liu#, **Panpan Hou#**, Xiying Guo#, Zhiwen Zhao, Bin Hu, Xia Li, Luyang Wang, Jiuping Ding. Structural Basis for Calcium and Magnesium Regulation of a Large Conductance Calcium-Activated Potassium Channel with β 1 Subunits. *J. Biol. Chem*. 2014. 289:16914-16923.
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16. Rui Liu#, Zheng Zhang#, Huan Liu#, **Panpan Hou**, Jun Lang, Sheng Wang, Hongli Yan, Pengcheng Li, Zhigang Huang, Hongbing Wu, Mingqiang Rong, Jian Huang, Hong Wang, Longbao Lv, Mingfeng Qiu, Jiuping Ding, Ren Lai. Human beta-defensin 2 is a novel opener of Ca²⁺-activated potassium channels and induces vasodilation and hypotension in monkeys. *Hypertension*. 2013. 62:415-425.
17. Jie Luo, **Panpan Hou**, Jiuping Ding, and Anlian Qu. Kernel Based Non-Iterative Automatic Fast Capacitance Compensation in Patch-Clamp Experiments. *Cellular and Molecular Bioengineering*. 2012. 5:440-449.