Stanford

Chenzhou Hao

Basic Life Research Scientist, Department of Neurobiology

SUPERVISORS

- Michael Lin

Bio

BIO

My expertise encompasses drug design, screening, and optimization. Currently, I am collaborating with my team to discover next-generation antiviral drugs targeting potentially pandemic viruses through structure-based drug discovery approaches.

My research interests include scientific visualization and structural biology, and I am eager to contribute to human health as a drug hunter in the future.

In addition to my passion for research, I enjoy music, history, and architecture.

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HONORS AND AWARDS

- Reward-gainers of the excellent Ph.D dissertations, Shenyang Pharmaceutical University (2018)
- First prize of excellent thesis of Chinese Pharmaceutical Congress, Chinese Pharmaceutical Association (2013)
- Best poster prize, Chinese Medicinal Chemistry Symposium (CMCS2015), Chinese Pharmaceutical Association (2015)

EDUCATION AND CERTIFICATIONS

- Ph.D. | Medicinal chemistry, Shenyang Pharmaceutical University , Medicinal chemistry (2017)
- B.S. | Pharmaceutics, Shenyang Pharmaceutical University , Pharmaceutics (2010)

PROJECTS

- Design and Evaluation of Lys-Covalent MEK Inhibitors Based on Covalent Allosteric Inhibition Strategy (NSFC: 81903437) - National Natural Science Foundation of China (January 1, 2020 - December 31, 2022)

SERVICE, VOLUNTEER, AND COMMUNITY WORK

- Member of the Stanford Medical School Chorus

LINKS

- Lin lab: https://linlab.stanford.edu/home

Professional

WORK EXPERIENCE

- Basic Life Research Scientist - Stanford University, School of Medicine (4/25/2023 - present)
- Assistant Research Fellow - Shenzhen Bay Laboratory (April 25, 2021 - April 12, 2023)
- Postdoctor Fellow - Peking University (October 8, 2017 - April 25, 2021)

Publications

PUBLICATIONS

- **An orally bioavailable SARS-CoV-2 main protease inhibitor exhibits improved affinity and reduced sensitivity to mutations.** *Science translational medicine*
  Westberg, M., Su, Y., Zou, X., Huang, P., Rustagi, A., Garhyan, J., Patel, P. B., Fernandez, D., Wu, Y., Hao, C., Lo, C. W., Karim, M., Ning, et al
  2024; 16 (738): eadi0979

- **Development of a cell-permeable adenine-derived probe for capture of nucleotide-binding proteins in living cells** *CHINESE CHEMICAL LETTERS*
  Liu, L., Chen, R., Xue, G., Hao, C., Weng, W., Pan, Z.
  2024; 35 (3)

- **Optically activated MEK1/2 inhibitors (Opti-MEKi) as potential antimelanoma agents** *EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY*
  Hao, C., Li, X., Wang, Z., Liu, L., He, F., Pan, Z.
  2023; 251: 115236

- **Design, synthesis, biological evaluation and molecular docking study of novel thieno[3,2-d]pyrimidine derivatives as potent FAK inhibitors** *EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY*
  Wang, R., Yu, S., Zhao, X., Chen, Y., Yang, B., Wu, T., Hao, C., Zhao, D., Cheng, M.
  2020; 188: 112024

- **Synthesis, bioconversion, pharmacokinetic and pharmacodynamic evaluation of N-isopropyl-oxy-carbonyloxymethyl prodrugs of CZh-226, a potent and selective PAK4 inhibitor** *EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY*
  Guo, J., Wang, T., Wu, T., Zhang, K., Yin, W., Zhu, M., Pang, Y., Hao, C., He, Z., Cheng, M., Liu, Y., Zheng, J., Gu, et al
  2020; 186: 111878

- **Design, synthesis, biological evaluation and molecular modeling of novel 1H-pyrrolo[2,3-b]pyridine derivatives as potential anti-tumor agents** *BIOORGANIC CHEMISTRY*
  Wang, R., Chen, Y., Yang, B., Yu, S., Zhao, X., Zhang, C., Hao, C., Zhao, D., Cheng, M.
  2020; 94: 103474

- **Design, synthesis and biological evaluation of novel 7H-pyrrolo[2,3-d]pyrimidine derivatives as potential FAK inhibitors and anticancer agents** *EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY*
  Wang, R., Chen, Y., Zhao, X., Yu, S., Yang, B., Wu, T., Guo, J., Hao, C., Zhao, D., Cheng, M.
  2019; 183: 111716

- **Design, synthesis, structure-activity relationships study and X-ray crystallography of 3-substituted-indolin-2-one-5-carboxamide derivatives as PAK4 inhibitors** *EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY*
  Guo, J., Zhao, F., Yin, W., Zhu, M., Hao, C., Pang, Y., Wu, T., Wang, J., Zhao, D., Li, H., Cheng, M.
  2018; 155: 197-209

- **Discovery of 2-(4-Substituted-piperidin/piperazine-1-yl)-N-(5-cyclopropyl-1H-pyrazol-3-yl)-quinazoline-2,4-diamines as PAK4 Inhibitors with Potent A549 Cell Proliferation, Migration, and Invasion Inhibition Activity** *MOLECULES*
  Wu, T., Pang, Y., Guo, J., Yin, W., Zhu, M., Hao, C., Wang, K., Wang, J., Zhao, D., Cheng, M.
  2018; 23 (2)

- **Structure-Based Design of 6-Chloro-4-aminoquinazoline-2-carboxamide Derivatives as Potent and Selective p21-Activated Kinase 4 (PAK4) Inhibitors** *JOURNAL OF MEDICINAL CHEMISTRY*
  Hao, C., Zhao, F., Song, H., Guo, J., Li, X., Jiang, X., Huan, R., Song, S., Zhang, Q., Wang, R., Wang, K., Pang, Y., Liu, et al
  2018; 61 (1): 265-285

- **The therapeutic potential of CETP inhibitors: a patent review** *EXPERT OPINION ON THERAPEUTIC PATENTS*
  Wang, X., Li, W., Hao, L., Xie, H., Hao, C., Liu, C., Li, W., Xiong, X., Zhao, D.
  2018; 28 (4): 331-340

- **Design, synthesis and evaluation of aromatic heterocyclic derivatives as potent antifungal agents** *EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY*
  Zhao, S., Zhang, X., Wei, P., Su, X., Zhao, L., Wu, M., Hao, C., Liu, C., Zhao, D., Cheng, M.

2017; 137: 96-107

- **Discovery of indolin-2-one derivatives as potent PAK4 inhibitors: Structure-activity relationship analysis, biological evaluation and molecular docking study** *BIOORGANIC & MEDICINAL CHEMISTRY*
  Guo, J., Zhu, M., Wu, T., Hao, C., Wang, K., Yan, Z., Huang, W., Wang, J., Zhao, D., Cheng, M.
  2017; 25 (13): 3500-3511
- **Development of 2, 4-diaminoquinazoline derivatives as potent PAK4 inhibitors by the core refinement strategy** *EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY*
  Hao, C., Huang, W., Li, X., Guo, J., Chen, M., Yan, Z., Wang, K., Jiang, X., Song, S., Wang, J., Zhao, D., Li, F., Cheng, et al
  2017; 131: 1-13
- **Synthesis of novel β-propanamides to inhibit cholesteryl ester transfer protein (CETP)** *CHINESE CHEMICAL LETTERS*
  Xie, H., Liu, C., Li, Y., Bai, C., Hao, C., Guo, J., Luo, C., Zhao, D., Cheng, M.
  2017; 28 (2): 260-263
- **Discovery of biphenyl imidazole derivatives as potent antifungal agents: Design, synthesis, and structure-activity relationship studies** *BIOORGANIC & MEDICINAL CHEMISTRY*
  Zhao, D., Zhao, S., Zhao, L., Zhang, X., Wei, P., Liu, C., Hao, C., Sun, B., Su, X., Cheng, M.
  2017; 25 (2): 750-758
- **Design, synthesis, and structure-activity relationship studies of benzothiazole derivatives as antifungal agents** *EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY*
  Zhao, S., Zhao, L., Zhang, X., Liu, C., Hao, C., Xie, H., Sun, B., Zhao, D., Cheng, M.
  2016; 123: 514-522
- **Design, synthesis and biological evaluation of novel cholesteryl ester transfer protein inhibitors bearing a cycloalkene scaffold** *EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY*
  Liu, C., Luo, C., Hao, L., Wu, Q., Xie, H., Zhao, S., Hao, C., Zhao, D., Cheng, M.
  2016; 123: 419-430
- **Design, synthesis and biological evaluation of N,N-3-phenyl-3-benzylaminopropanamide derivatives as novel cholesteryl ester transfer protein inhibitor** *BIOORGANIC & MEDICINAL CHEMISTRY*
  Zhao, D., Xie, H., Bai, C., Liu, C., Hao, C., Zhao, S., Yuan, H., Luo, C., Wang, J., Lin, B., Zheng, J., Cheng, M.
  2016; 24 (8): 1589-1597
- **Discovery of novel N,N-3-phenyl-3-benzylaminopropionanilides as potent inhibitors of cholesteryl ester transfer protein in vivo** *BIOORGANIC & MEDICINAL CHEMISTRY*
  Xie, H., Li, Y., Bai, C., Wang, R., Liu, C., Hao, C., Lin, B., Cheng, M., Zhao, D.
  2016; 24 (8): 1811-1818
- **Advances in the 1-phenanthryl-tetrahydroisoquinoline series of PAK4 inhibitors: potent agents restrain tumor cell growth and invasion** *ORGANIC & BIOMOLECULAR CHEMISTRY*
  Hao, C., Li, X., Song, S., Guo, B., Guo, J., Zhang, J., Zhang, Q., Huang, W., Wang, J., Lin, B., Cheng, M., Li, F., Zhao, et al
  2016; 14 (32): 7676-7690
- **Synthesis and biological evaluation of 3-phenyl-3-aryl carboxamido propanoic acid derivatives as small molecule inhibitors of retinoic acid 4-hydroxylase (CYP26A1)** *BIOORGANIC & MEDICINAL CHEMISTRY*
  Zhao, D., Sun, B., Ren, J., Li, F., Song, S., Lv, X., Hao, C., Cheng, M.
  2015; 23 (6): 1356-1365
- **Molecular recognition of CYP26A1 binding pockets and structure-activity relationship studies for design of potent and selective retinoic acid metabolism blocking agents** *JOURNAL OF MOLECULAR GRAPHICS & MODELLING*
  Sun, B., Song, S., Hao, C., Huang, W., Liu, C., Xie, H., Lin, B., Cheng, M., Zhao, D.
  2015; 56: 10-19
- **Design, synthesis and biological evaluation of 1-phenanthryl-tetrahydroisoquinoline derivatives as novel p21-activated kinase 4 (PAK4) inhibitors** *ORGANIC & BIOMOLECULAR CHEMISTRY*
  Song, S., Li, X., Guo, J., Hao, C., Feng, Y., Guo, B., Liu, T., Zhang, Q., Zhang, Z., Li, R., Wang, J., Lin, B., Li, et al
  2015; 13 (12): 3803-3818

- **Pharmacophore-based design, synthesis, and biological evaluation of novel 3-((3,4-dichlorophenyl)(4-substituted benzyl)amino) propanamides as cholesteryl ester transfer protein (CETP) inhibitors** *CHINESE CHEMICAL LETTERS*
  Zhao, D., Li, W., Shi, Y., Xiong, X., Song, S., Hao, C., Cheng, M., Shen, J.
  2014; 25 (2): 299-304