

Haoqing Wang  
AHA Postdoctoral Fellow  
Molecular and Cellular Physiology  
Stanford University

### **Education and Training:**

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2019-current Postdoctoral Fellowship. Stanford University School of Medicine. Advisor: Prof. Brian Kobilka.

2013-2019 Ph.D. in Biochemistry and Molecular Biophysics, Subject Minor in Computational Science and Engineering. California Institute of Technology. Advisor: Prof. Pamela Bjorkman

2009-2013 Bachelor of Science in Molecular Biomedical Sciences. Hong Kong University of Science and Technology. Advisor: Prof. Zhihong Guo

### **Honors:**

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2021 American Heart Association Postdoctoral Fellowship  
2018 Chinese Government Award for Outstanding Self-Financed Students Abroad  
2014 Caltech-Amgen Graduate Fellowship  
2013 First Class Honors  
2012 Columbia University Summer Research Symposium  
2010-2013 Dean's List  
2010-2013 Scholarship Scheme for Continuing UG Students

### **Publications:**

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Google scholar: [https://scholar.google.com/citations?user=-t\\_gvbQAAAAJ&hl=en](https://scholar.google.com/citations?user=-t_gvbQAAAAJ&hl=en)

Ehsan M, **Wang H**, Cecchetti C, Mortensen JS, Du Y, Hariharan P, Nygaard A, Lee HJ, Ghani L, Guan L, Loland CJ, Byrne B, Kobilka BK, Chae PS. Maltose-bis(hydroxymethyl)phenol (MBPs) and Maltose-tris(hydroxymethyl)phenol (MTPs) Amphiphiles for Membrane Protein Stability. *ACS Chem Biol*. 2021 Sep 17;16(9):1779-1790. doi: 10.1021/acscchembio.1c00578. Epub 2021 Aug 26. PubMed PMID: 34445864; PubMed Central PMCID: PMC8482870.

Sadaf A, Kim S, Bae HE, **Wang H**, Nygaard A, Uegaki Y, Du Y, Munk CF, Katsube S, Sung Lee H, Bae J, Choi CW, Choi HJ, Byrne B, Gellman SH, Guan L, Loland CJ, Kobilka BK, Im W, Chae PS. Conformationally flexible core-bearing detergents with a hydrophobic or hydrophilic pendant: Effect of pendant polarity on detergent conformation and membrane protein stability. *Acta Biomater*. 2021 Jul 1;128:393-407. doi: 10.1016/j.actbio.2021.04.043. Epub 2021 Apr 29. PubMed PMID: 33933694; PubMed Central PMCID: PMC8222176.

Cohen AA, Yang Z, Gnanapragasam PNP, Ou S, Dam KA, **Wang H**, Bjorkman PJ. Construction, characterization, and immunization of nanoparticles that display a diverse array of influenza HA trimers. *PLoS One*. 2021;16(3):e0247963. doi: 10.1371/journal.pone.0247963. eCollection 2021. PubMed PMID: 33661993; PubMed Central PMCID: PMC7932532.

Das M, Mahler F, Hariharan P, **Wang H**, Du Y, Mortensen JS, Patallo EP, Ghani L, Glück D, Lee HJ, Byrne B, Loland CJ, Guan L, Kobilka BK, Keller S, Chae PS. Diastereomeric Cyclopentane-Based Maltosides (CPMs) as Tools for Membrane Protein Study. *J Am Chem Soc*. 2020 Dec 23;142(51):21382-21392. doi: 10.1021/jacs.0c09629. Epub 2020 Dec 14. PubMed PMID: 33315387; PubMed Central PMCID: PMC8015409.

Ehsan M, Katsube S, Cecchetti C, Du Y, Mortensen JS, **Wang H**, Nygaard A, Ghani L, Loland CJ, Kobilka BK, Byrne B, Guan L, Chae PS. New Malonate-Derived Tetraglucoside Detergents for Membrane Protein Stability. *ACS Chem Biol*. 2020 Jun 19;15(6):1697-1707. doi: 10.1021/acscchembio.0c00316. Epub 2020 Jun 5. PubMed PMID: 32501004; PubMed Central PMCID: PMC7410094.

Yang Z, **Wang H**, Liu AZ, Gristick HB, Bjorkman PJ. Asymmetric opening of HIV-1 Env bound to CD4 and a coreceptor-mimicking antibody. *Nat Struct Mol Biol*. 2019 Dec;26(12):1167-1175. doi: 10.1038/s41594-019-0344-5. Epub 2019 Dec 2. PubMed PMID: 31792452; PubMed Central PMCID: PMC6899201.

Marcovitz A, Turakhia Y, Chen HI, Gloude-mans M, Braun BA, **Wang H**, Bejerano G. A functional enrichment test for molecular convergent evolution finds a clear protein-coding signal in echolocating bats and whales. *Proc Natl Acad Sci U S A*. 2019 Oct 15;116(42):21094-21103. doi: 10.1073/pnas.1818532116. Epub 2019 Sep 30. PubMed PMID: 31570615; PubMed Central PMCID: PMC6800341.

Escolano A, Gristick HB, Abernathy ME, Merckenschlager J, Gautam R, Oliveira TY, Pai J, West AP Jr, Barnes CO, Cohen AA, **Wang H**, Golijanin J, Yost D, Keeffe JR, Wang Z, Zhao P, Yao KH, Bauer J, Nogueira L, Gao H, Voll AV, Montefiori DC, Seaman MS, Gazumyan A, Silva M, McGuire AT, Stamatatos L, Irvine DJ, Wells L, Martin MA, Bjorkman PJ, Nussenzweig MC. Immunization expands B cells specific to HIV-1 V3 glycan in mice and macaques. *Nature*. 2019 Jun;570(7762):468-473. doi: 10.1038/s41586-019-1250-z. Epub 2019 May 29. PubMed PMID: 31142836; PubMed Central PMCID: PMC6657810.

**Wang H**, Barnes CO, Yang Z, Nussenzweig MC, Bjorkman PJ. Partially Open HIV-1 Envelope Structures Exhibit Conformational Changes Relevant for Coreceptor Binding and Fusion. *Cell Host Microbe*. 2018 Oct 10;24(4):579-592.e4. doi: 10.1016/j.chom.2018.09.003. PubMed PMID: 30308160; PubMed Central PMCID: PMC6185872.

Gristick HB, **Wang H**, Bjorkman PJ. X-ray and EM structures of a natively glycosylated HIV-1 envelope trimer. *Acta Crystallogr D Struct Biol*. 2017 Oct 1;73(Pt 10):822-828. doi: 10.1107/S2059798317013353. Epub 2017 Sep 29. PubMed PMID: 28994411; PubMed Central PMCID: PMC5633907.

**Wang H**, Gristick HB, Scharf L, West AP, Galimidi RP, Seaman MS, Freund NT, Nussenzweig MC, Bjorkman PJ. Asymmetric recognition of HIV-1 Envelope trimer by V1V2 loop-targeting antibodies. *Elife*. 2017 May 26;6. doi: 10.7554/eLife.27389. PubMed PMID: 28548638; PubMed Central PMCID: PMC5472438.

Freund NT, **Wang H**, Scharf L, Nogueira L, Horwitz JA, Bar-On Y, Golijanin J, Sievers SA, Sok D, Cai H, Cesar Lorenzi JC, Halper-Stromberg A, Toth I, Piechocka-Trocha A, Gristick HB, van Gils MJ, Sanders RW, Wang LX, Seaman MS, Burton DR, Gazumyan A, Walker BD, West AP Jr, Bjorkman PJ, Nussenzweig MC. Coexistence of potent HIV-1 broadly neutralizing antibodies and antibody-sensitive viruses in a viremic controller. *Sci Transl Med*. 2017 Jan 18;9(373). doi: 10.1126/scitranslmed.aal2144. PubMed PMID: 28100831; PubMed Central PMCID: PMC5467220.

**Wang H**, Cohen AA, Galimidi RP, Gristick HB, Jensen GJ, Bjorkman PJ. Cryo-EM structure of a CD4-bound open HIV-1 envelope trimer reveals structural rearrangements of the gp120 V1V2 loop. *Proc Natl Acad Sci U S A*. 2016 Nov 15;113(46):E7151-E7158. doi: 10.1073/pnas.1615939113. Epub 2016 Oct 31. PubMed PMID: 27799557; PubMed Central PMCID: PMC5135367.

Scharf L, **Wang H**, Gao H, Chen S, McDowall AW, Bjorkman PJ. Broadly Neutralizing Antibody 8ANC195 Recognizes Closed and Open States of HIV-1 Env. *Cell*. 2015 Sep 10;162(6):1379-90. doi: 10.1016/j.cell.2015.08.035. PubMed PMID: 26359989; PubMed Central PMCID: PMC4587768.

## **Skills:**

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## **Languages**

- Mandarin: native; English: fluent.