

# Carlos Xavier Hernández

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## Experience

Graduate Fellow in the Biophysics Program with Vijay Pande @ Stanford University	2013 - Present
Undergraduate Researcher at the Center for Computational Biology and Bioinformatics with Raul Rabadan @ Columbia University Medical Center	2010 - 2013
Undergraduate Fellow at the Department of Chemistry and Biochemistry with James Andrew McCammon @ University of California, San Diego	2012
Undergraduate Fellow at the Department of Biochemistry and Molecular Biophysics with Stephen Goff @ Columbia University Medical Center	2011

## Education

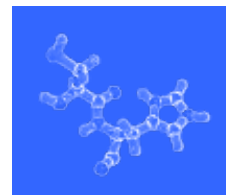
Stanford University Biophysics, PhD	Present
Columbia University in the City of New York Applied Mathematics, BSc	2013

## Skills

- Python | Java
- HTML | CSS | JavaScript | SQL
- MATLAB | R | UNIX
- Computational Biochemistry
- Web | Mobile Development
- Machine Learning | Data Mining

## Awards

Graduate Research Fellowship National Science Foundation	2013
ADVANCE Summer Institute Fellowship Stanford University	2013
Exceptional Research Opportunities Program Fellowship Howard Hughes Medical Institute	2012
Summer Undergraduate Research Fellowship Genentech	2011



## Publications

MDTraj: a modern, open library  
for the analysis of molecular dynamics trajectories 2015  
McGibbon R.T., Beauchamp K.A. Schwantes C.R., Wang L.-P.,  
Hernández C.X., Harrigan M.P., Lane T.J., Swails J.M., and Pande V.S.  
*Biophysical Journal*. doi: 10.1016/j.bpj.2015.08.015

Markov State Models Provide Insights  
into Dynamic Modulation of Protein Function 2015  
Shukla D., Hernández C.X., Weber J.K., and Pande V.S.  
*Accounts of Chemical Research*. doi: 10.1021/ar5002999

Structure-based Network Analysis  
of an Evolved G-Protein Coupled Receptor Homodimer Interface 2013  
Nichols S.\*, Hernández C.X.\*, Wang, Y. and McCammon J.A.  
*Protein Science*. doi: 10.1002/pro.2258

Understanding the Origins of a Pandemic Virus 2011  
Hernández C.X., Khiabani H., Chan J. and Rabadan R.  
*arXiv*. arXiv: 1104.4568v1 [q-bio.PE]

## Press

Pandemic Flu Risk Raised by Lax Hog-Farm Surveillance 2012  
*Wired Science*

The Origin and Evolution of a Pandemic Virus 2011  
*MAGNet Newsletter*, 4:15-18

## Mentorship

Irfan Kherani 2011  
Global Health and Health Policy Student @ Princeton University  
Thesis: Cross-Hemispheric Phylogenetic Analysis of 2009 H1N1 Pandemic Influenza

Ravi Vaidya 2010  
High School Student  
Thesis: Distinct Circulation of Influenza Virus in Geographically Diverse U.S. Air Force Installations