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# 1 Education

## 1.1 Purdue University

PULSE - PURDUE  
INTERDISCIPLINARY LIFE SCIENCE  
PH.D  
2016-Current | West Lafayette, IN

## 1.2 Universidad Nacional

BS IN BIOLOGY  
2010 - 2016 | Bogota, COL

# 2 Select Coursework

## 2.1 Graduate Level Courses

Macromolecules (In Progress)  
Computing for Life Sciences (In Progress)  
Membrane Biophysics  
Systems Biology

## 2.2 Undergraduate

Cell Biology  
Advanced Cell Biology  
Molecular Biology of The Cell  
Molecular Biology  
Biochemistry  
Biophysics  
Genetics  
Animal Physiology  
Advanced Animal Physiology

## 2.3 Independent

Bioinformatics  
Data Visualization  
Machine Learning  
R Programming  
Bash

# 3 Skills

## 3.1 Techniques

Proficient:  
Cell Culture • Cloning • Kinase Assay  
LC-MS/MS • PCR • Western Blot  
Familiar:  
H&E Stain • Fluorescent Probing • MTT  
Transient Transfection •

## 3.2 Languages

B2+:  
Spanish

# 4 Research Experience

**GRUPO DE INVESTIGACION EN HORMONAS (GIH) | AUXILIARY  
RESEARCH STUDENT - CELL CULTURE COORDINATOR**  
June 2013 – Aug 2015 | Bogota, COL

- Received training in several commonly used techniques in biochemistry.
- Assisted doctoral candidate Susana Novoa in a project that implied the measurement of secreted metalloproteases in mammalian cell culture conditioned medium after stimulation with a particular growth hormone using in-gel kinase assays and quantitative image analysis.
- Recurring exposé and participant in weekly article dissertations and results expositions.
- Assisted Dr. Umana in the supervision and maintenance of the cell culture room inside the lab, among other coordination activities.

**TAO LAB | VISITING UNDERGRADUATE SCHOLAR - ROTATION STUDENT**  
Aug 2015 – Dec 2015 | Aug 2016 - Oct 2016 | West Lafayette, IN

- Assisted Doctoral candidate Justine Arrington in a project based on the recognition of substrates to a particular kinase, making use of in-vitro assays and shotgun proteomics as an approach.
- Assisted in the expression and tandem affinity purification of several recombinant proteins in E.coli.
- Carried out the merging and comparison of phosphoproteomics data sets acquired in the lab with public data sets with Doctoral candidate I-Hsuan (Blair) Chen.
- Collaborated with Doctoral Candidate Chuan-Chih Hsu in the computational analysis and data visualization of tandem mass spectrometry data to estimate phosphopeptide identification rates.

**TRADER LAB | ROTATION STUDENT**  
Oct 2016 - Current | West Lafayette, IN

- Currently involved in the large scale expression and purification of several proteins for routine laboratory application.
- Currently attempting to purify the immunoproteasome complex by affinity chromatography of tagged sub-units.

# 5 Publications

- Tao, A., Hsu, C., Xue, L., Wang, P., Paez, J.S., Zhou, Y., Zhu, J. (In Review) Estimate phosphopeptide identification rate by tandem mass spectrometry. Journal of the American Society of Mass Spectrometry.