

Kevin Tommy Chang

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EDUCATION

Rice University, Houston, TX

Aug 2014 – May 2018

- **B.A.** in Cognitive Sciences
Neuroscience specialization, Minor in Evolutionary Biology and Ecology
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AWARDS AND HONORS

- Stanford Research Conference poster award | 2017
 - Lovett Undergraduate Research Symposium poster award | 2016
 - President's Honor Roll (Top 30% academically in class) | 2016-2017
 - Certificate of Special Congressional Recognition (US Congressman Blake Farenthold) | 2014
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RESEARCH EXPERIENCE

Baylor College of Medicine, Department of Molecular and Human Genetics – Houston, TX
2014 – Present | Jan and Dan Duncan Neurological Research Institute | Texas Children's Hospital
Advised by Dr. Marco Sardiello, PhD.

- Project lead on novel research for amino acid analysis and human proteomics
- Built and designed a computational database for evolutionary constrained analysis
- Designed, assisted, and executed experiments to investigate the role of the gene CLN8 and to cure the genetic disease NCL8

National Aeronautics and Space Administration (NASA), Johnson Space Center – Houston, TX
2017 – Present | Human Systems Integration Division | Rice University
Advised by Chelsea Iwig, M.S., NASA Human Factors Engineer

- Conducted study evaluating electroencephalography (EEG) devices for astronaut use
 - Collected EEG data during flight-sim situations
 - Analyzed changes in individual and team alertness, workload, and other cognitive functions
 - Evaluated EEG hardware for future use in astronautics
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PUBLICATIONS

Aminode: Analysis of Evolutionarily Constrained Regions of the Human Proteome.

Kevin Tommy Chang, Junyan Guo, Alberto di Ronza, Marco Sardiello. *Paper under revision on **Scientific Reports**.*

Control of lysosome biogenesis by an ER cargo receptor.

Alberto di Ronza, Lakshya Bajaj, Jaiprakash Sharma, Deepthi Sanagasetti, Parisa Lotfi, Michela Palmieri, Abdallah Amawi, **Kevin Tommy Chang**, Lauren Popp, Maria Chiara Meschini, Hon-Chiu Eastwood Leung, Laura Segatori, Alessandro Simonati, Filippo Maria Santorelli, Marco Sardiello. *Under resubmission to **Nature**.*

PRESENTATIONS

Aminode: Analysis of Evolutionarily Constrained Regions of the Human Proteome.

Kevin Tommy Chang, Junyan Guo, Alberto di Ronza, Marco Sardiello. International Bioinformatics and Computational Biology Conference 2017, Naples, Italy, poster. December 2017.

Analysis of Evolutionarily Constrained Regions of the Human Proteome.

Kevin Tommy Chang, Junyan Guo, Alberto di Ronza, Marco Sardiello. Rice Undergraduate Research Symposium, Houston, TX, poster. April 2017.

Aminode: A Novel Tool and Database for the Evolutionary Analysis of the Human Proteome.

Kevin Tommy Chang, Junyan Guo, Alberto di Ronza, Marco Sardiello. Stanford Research Conference, Stanford, CA, poster. March 2017.

Evolutionary Constrained Analysis of the Human Proteome.

Kevin Tommy Chang, Junyan Guo, Alberto di Ronza, Marco Sardiello. Lovett Undergraduate Research Symposium, Houston, TX, poster. March 2016.

Computational Tools for Evolutionary Constrained Analyses.

Kevin Tommy Chang, Junyan Guo, Alberto di Ronza, Marco Sardiello. Rice Undergraduate Research Symposium, Houston, TX, poster. April 2016.

TEACHING EXPERIENCE

Academic Fellow – Houston, TX

2016 – Present | Lovett Society of Fellows | Lovett College | Rice University

- Fellow at Lovett College, in charge of biochemistry, evolutionary biology and ecology, neuroscience, and computer science
- Served as a tutor for Lovett college
- Organized academic events for Lovett College

Teaching Assistant – Houston, TX

2015 – 2017 | Department of Biosciences | Rice University

- Teaching Assistant for the following courses under Collin Thomas, PhD.:
 - BIOC 201: Introductory Biology
- As an in-class instructor, provided in-class programming help and on hand debugging assistance
- Graded weekly assignments and exams and gave relevant feedback to students
- Designed coursework and testing material

Teaching Assistant – Houston, TX

2015 – 2017 | Department of Computer Science | Rice University

- Teaching Assistant for the following courses under Professor John Greiner, PhD.:
 - COMP 130: Elements of Algorithms and Computation
 - COMP 200: Elements of Computer Science
- As an in-class instructor, provided in-class programming help and on hand debugging assistance
- Graded weekly assignments and exams and gave relevant feedback to students
- Designed coursework and testing material

Student Athlete Tutor – Houston, TX

2017- Present | Office of Academic Advising for Athletics | Rice University

- 1-on-1 tutor for student athletes for the following subjects: computer science, biochemistry, math
- Developed personalized study plans for students to succeed academically
- Coordinated schedules with 5+ students during each semester to provide on hand help

English Teacher – Taipei, Taiwan

2011 | Taipei Municipal XiSong Elementary School

- Worked with students aged 9 through 10
 - Taught English as a second language, serving as a foundation for later studies
 - Developed course curriculum, including stories, worksheets, and oral presentation
 - Graded assignments and exams and gave feedback to students
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LANGUAGES AND SKILLS

Programming: Java, Python, R

Lab: mouse models, mouse perfusion, mouse genetics, cell culture, western blotting, protein purification, immunohistochemistry, immunoprecipitation, immunofluorescence, cell fractionation, bioinformatics, confocal microscopy, cell based assays, molecular cloning, transfection, cell fractionation, PCR, brain cryosectioning

Computation: object heuristics, neural netting, software development

Software: Adobe Creative Suite, Ensembl Biomart, Emotiv Xavier

LEADERSHIP AND ACTIVITIES

Head Academic Fellow – Houston, TX

2017 – Present | Lovett College | Rice University

- One of 22 selected academic fellows appointed by Rice University to lead the program
- Coordinated all academic fellow activity at Lovett college
- In charge of communication with other head fellows across the university
- Established and hosted academic events and expos

Emergency Medical Technician – Houston, TX

2017- Present | Rice University Police Department | Rice University

- Served as an on duty first responder for Rice University campus and surrounding areas
- Provided rapid response and hands-on care in cases of trauma and medical emergencies
- Operated equipment such as defibrillators and bag valve mask resuscitators in life support roles
- Assessed nature and extent of illness or trauma on scene of emergency
- Administered drugs under physician direction
- Provided inpatient care in emergency room environment within hospitals

Editor, Writer – Houston, TX

2016 – Present | Rice Catalyst | Rice Undergraduate Research Journal

- Produced literary compositions and articles for campus journal
- Acted as interviewer for off campus stories
- Managed style and content of the publication
- Provided feedback and reviews for writers

Other Activities:

Rice Neuroscience Society, Rice Taiwanese Association, Rice Biosciences Society, National Forensic League, Piano, Saxophone

CERTIFICATIONS

Emergency Medical Technician, Basic

2016 | National Registry of Emergency Medical Technicians.

Basic Life Support

2016 | UTHSC Houston School of Dentistry, Houston TX.

EMERGENCY MEDICAL CLINICAL TRAINING

Ben Taub Hospital, Houston TX

2016 | Emergency Center Inpatient Care | 16 hours

Texas Children's Hospital, Houston TX

2016 | Emergency Center Inpatient Care | 8 hours

Cypress Creek Emergency Medical Services, Houston TX

2016 | Medic 31 | Rapid Response Medic Unit | 24 hours

Montgomery County Emergency Medical Services, Conroe TX

2016 | Medic 13 | Rapid Response Medic Unit | 48 hours

REFERENCES

Marco Sardiello, PhD.

Assistant Professor, Department of Human and Molecular Genetics.

Baylor College of Medicine, Jan and Dan Duncan Neurological Research Institute, Texas Children's Hospital.
Baylor Plaza, Houston TX, 77030. Phone: +1 8328248871. E-mail: sardiell@bcm.edu

Alex Morgan, PhD.

Assistant Professor, Department of Philosophy.

Rice University, Houston, TX. E-mail: alex.morgan@rice.edu

Michael Kohn, PhD.

Associate Professor, Department of Biosciences.

Rice University. Houston, TX. E-mail: hmkohn@rice.edu