

Daniel Fang

13268 Laurel Park Lane Draper, UT 84020
801-949-4961 | Daniel.fang@utah.edu

EDUCATION

University of Utah

Master of Science in Computer Science

Salt Lake City, UT
August 2021 - Present

University of Utah

Bachelor of Science in Biomedical Engineering

GPA:3.87/4.00

Salt Lake City, UT
Graduated: May 2019
Dean's List 2015-2019

Hillcrest High School

Honors Advanced Diploma and International Baccalaureate Diploma

National Merit Scholarship Recipient, National AP Scholar

Midvale, UT
Graduated June 2015

SKILLS AND QUALIFICATIONS

- Computer Programs/Languages: Microsoft Office, HTML, CSS, Java, JavaScript, Python, C, C#, SQL
- Lab skills: PCR, Western Blot, Gel Electrophoresis, Confocal Imaging, Heidelberg Spectralis, Seg3D
- Languages: English (Fluent), Spanish (Proficient), Chinese (Proficient)
- Medical skills: Basic Life Support(BLS/ CPR) certification, Certified Nursing Assistant Certification (CNA)(expired)
- Tutoring Subjects: GRE, SAT, ACT, most AP classes, math up to Linear Algebra, Chemistry, English (ESL)

WORK EXPERIENCE

A Caring Hand Home Health Care

Certified Nursing Assistant

Sandy, UT
June 2017 – April 2019

- Assisted residents with activities of daily living including showering, eating, getting dressed, and toileting.
- Recorded and documented changes and daily activities in weekly progress reports.

Mathnasium – The Math Learning Center

Math Tutoring Instructor

Draper, UT
Oct 2014 – March 2015

- Tutored elementary to high school-age students in mathematics to help them better comprehend key mathematical concepts or catch up with other students.
- Mentored students on the Mathnasium curriculum with including one-on-one instant feedback and weekly assessments of skills.
- Organized daily schedules and long-term plans for students to advance their mathematical understanding.

RESEARCH EXPERIENCE

Dr. Odelberg/Zhu Lab – Eccles Institute of Human Genetics

Lab Technician

Salt Lake City, UT
September 2019 – Present

- Tested and interpreted biochemistry laboratory protocols, including tissue sampling, polymerase chain reaction (PCR), qPCR, Western blot, and gel electrophoresis.
- Maintained an entire colony of mice with skills such as weaning, breeding, and euthanizing the mice.
- Certified by the Institutional Animal Care and Use Committee (IACUC) in the safe handling and care of mice.
- Analyzed and screened diseases such as Multiple Sclerosis and Diabetes in hundreds of mice tissue samples with confocal microscopy.
- Completed surgeries and dissections of mice, including injection through various portals in the body and induction of experimental autoimmune encephalomyelitis (EAE).

Dr. Ambati Lab – Moran Eye Center

Lab Aide

Salt Lake City, UT
October 2015 – June 2019

- Tested and interpreted biochemistry laboratory protocols, including tissue sampling, polymerase chain reaction (PCR), qPCR, Western blot, and gel electrophoresis.
- Maintained an entire colony of mice with skills such as weaning, breeding, and euthanizing the mice.
- Certified by the Institutional Animal Care and Use Committee (IACUC) in the safe handling and care of rabbits and mice.
- Analyzed and screened ophthalmological diseases in hundreds of mice eyes with Optical Coherence Tomography (OCT) and Fluorescein Angiography (FA) with the Heidelberg Spectralis instrument.

COMMUNITY SERVICE

Salt Lake City Mission

Volunteer

Salt Lake City, UT
August 2020 – Present

- Packaged groceries and other food for donation to homeless people and needy families.
- Coordinated other volunteers in preparation of donation bags and adjusted responsibilities as needed.

Belief Education

Volunteer English Teacher

Fuzhou, Fujian, China
July 2019 – August 2019

- Worked as an English as a second language teacher in a school in China. Taught 20 elementary age school children basic English skills and what it's like to live in the United States. Specifically focused on topics in a health setting, such as nutrition and exercise.
- Coordinated the students on a field trip to a local farm to learn English in a different setting, on topics such as foods, animals, and plants.

Project Youth

Team Leader

Salt Lake City, UT
December 2018 – April 2019

- Taught 100 6th graders about higher education with lessons once a month about higher education classes, campus life, and goal setting.
- Coordinated elementary school age kids for a field trip to the University of Utah campus.

University of Utah Hospital, Emergency Room

Volunteer/Volunteer Trainer

Salt Lake City, UT
August 2015 – October 2017
May 2018 – November 2018

- Assisted nurses and other hospital staff in the care of emergent patients.
- Supported patients with their needs. Transported patients to their various medical tests and their rooms throughout the hospital.
- Instructed new volunteers on the inner workings of the emergency department.

University of Utah Hospital, Medical ICU

Volunteer

Salt Lake City, UT
October 2017 – August 2018

- Assisted nurses and other hospital staff in the care of patients.
- Supported patients with their wants and needs including fetching food, water, blankets, and other supplies.
- Restocked medical supplies including personal protective equipment (PPE) in each patient room as well as in hallway stocks.

American Chemical Society Student Chapter, University of Utah

Volunteer

Salt Lake City, UT
August 2016 – May 2017

- Participated in outreach events to local elementary schools designed to get students interested in chemistry.
- Helped set up events and communicated between members to organize large scale outreach events.

Promise South Salt Lake

Volunteer Tutor

Salt Lake City, UT
January 2016 – May 2016

- Tutored underprivileged and refugee children in different subjects, including math, English, science, and writing.
- Oversaw up to 10 students in completing their homework and assisted in credit recovery.

- Directed students in participation in a recreational activity after completing their homework.
- Employed instructional learning software to better help students understand difficult concepts.

Cottonwood Heights Math Club

Vice President/Instructor

Cottonwood Heights, UT

June 2014 – May 2015

- Instructed middle school aged students on competitive math strategies.
- Developed a competitive math curriculum, a combination of past math competitions and novel material to supplement their critical thinking and problem-solving abilities.

PUBLICATIONS

- Xiaohui Zhang, Austin Bohner, Sai Bhuvanagiri, Hironori Uehara, Arun Kumar, Upadhyay, Lyska Emerson, Sailaja Bondalapati, Santosh Kumar Muddana, **Daniel Fang**, Miaoling Li, Zoya Sandhu, Alya Hussain, Lara S Carroll, Michelle Tiem, Bonnie Archer, Uday Kompella, Rajkumar Patil, Balamurali K. Ambati. (2017). Targeted Intracellular Nanoparticle for Neovascular Macular Degeneration: Preclinical Dose Optimization and Toxicology Assessment. *Molecular Therapy*, 25(7), 1606-1615. doi:10.1016/j.ymthe.2017.01.014.
- Lara S. Carroll, Hironori Uehara, **Daniel Fang**, Susie Choi, Xiaohui Zhang, Malkit Singh, Zoya Sandhu, Philip M. Cummins, Tim M. Curtis, Alan W. Stitt, Bonnie J. Archer, Balamurali K. Ambati. (2019). Intravitreal AAV2.COMP-Ang1 Attenuates Deep Capillary Plexus Expansion in the Aged Diabetic Mouse Retina. *Investigative Ophthalmology & Visual Science*, 60(7), 2494-2502. Doi: 10.1167/iovs.18-26182.
- Tavia Dutson, Md Torikul Islam, Jinjin Cai, Zhonglou Sun, **Daniel Fang**, Anthony J. Donato, Weiquan Zhu, Lisa A. Lesniewski. (2020). Arf6 heterozygosity Results in Impaired Glucose Tolerance Due to Abberant Hepatic Gluconeogenesis. *Federation of American Societies for Experimental Biology (FASEB) Journal*, 34(S1). Doi: 10.1096/fasebj.2020.34.s1.09478.

PRESENTATIONS

- Fang, D., & Zhang M. (2019, April). *Dual Suppression of Growth Factors in the Treatment of Age-related Macular Degeneration*. Poster session presented at the Undergraduate Research Symposium, University of Utah.
- Fang, D. (2019, April). *Dual Suppression of Growth Factors in the Treatment of Age-related Macular Degeneration*. Thesis & poster presentation at the Bioengineering Senior Symposium, University of Utah.

AWARDS/HONORS

- President's Resident Scholarship: Full tuition + housing at the University of Utah for 8 semesters
- Undergraduate Research Opportunity Program (UROP) grant recipient: May 2018 – December 2018
- Undergraduate Research Scholar Designation (URSD) – May 2019

PAST REFERENCES

Dr. Shannon Odelberg, Principle Investigator
Odelberg/Zhu Laboratory, Eccles Institute of Human Genetics, University of Utah
 Sodelber@genetics.utah.edu

Dr. Weiquan (Wendy) Zhu, Principle Investigator
Odelberg/Zhu Laboratory, Eccles Institute of Human Genetics, University of Utah
 Weiquan.zhu@u2m2.utah.edu

Dr. Balamurali Ambati, Principle Investigator
Ambati Laboratory, Moran Eye Center, University of Utah
 Bambati@gmail.com

Xiaohui Zhang, Research Associate
Ambati Laboratory, Moran Eye Center, University of Utah
 Xiaohuizhang1970@gmail.com

Heather Palmer, Professor/Academic Advisory

Department of Biomedical Engineering, University of Utah
Heather.j.palmer@utah.edu

Dr. Lucas Timmins, Assistant Professor
Department of Biomedical Engineering, University of Utah
Lucas.timmins@utah.edu

Dr. Nicholas Korevaar, Associate Chair of Department of Mathematics, Professor
Department of Mathematics, University of Utah
korevaar@math.utah.edu

Tracy Bodrero, Volunteer Coordinator
University of Utah Hospital, University of Utah
Tracy.bodrero@hsc.utah.edu