

# Daniel Fang

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## EDUCATION

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### 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

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- 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

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### 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

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### 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

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### **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 6<sup>th</sup> 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**

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- 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**

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- 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**

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- 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**

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**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*  
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**Dr. Balamurali Ambati**, Principle Investigator  
*Ambati Laboratory, Moran Eye Center, University of Utah*  
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**Dr. Lucas Timmins**, Assistant Professor  
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**Dr. Nicholas Korevaar**, Associate Chair of Department of Mathematics, Professor  
*Department of Mathematics, University of Utah*  
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**Tracy Bodrero**, Volunteer Coordinator  
*University of Utah Hospital, University of Utah*  
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