

# RYAN MERKLEY

## EDUCATION

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- MS** Arizona State University, Nanoscience May 2016  
Thesis: “DNA as a functional linker for tuning the stiffness and ligand presentation on cellular scaffolds”
- BS** Arizona State University, Biochemistry May 2015  
Graduated Magna Cum Laude

## HONORS AND AWARDS

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- Biomod Team Gold** 2014  
As an ASU-endorsed team of undergraduates participating in Biomod, an international biomolecular design competition, we received Team Gold, one of the highest overall awards

## RESEARCH EXPERIENCE

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- Biodesign Institute, ASU** 2014 to 2016  
**Undergrad researcher**
- Designed and developed DNA nanostructures to be used for targeted drug delivery
  - Synthesized biomolecules primarily using DNA and peptide self-assembly
  - Analyzed and purified biomolecules using techniques such as HPLC, AFM, & PAGE

## TEACHING EXPERIENCE

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- Arizona State University** July 2018 to present  
**Instructional Professional**, Chemistry
- Taught general chemistry and biochemistry courses, including lab and recitation sections, covering chemistry basics, thermodynamics, and kinetics
  - Developed assessments, experiment protocols, and exams
  - Coordinated grading and labs with several other instructors
- Basis.Ed Charter Schools**, Phoenix, AZ July 2017 to July 2018  
**Subject Expert**, Chemistry
- Taught general introductory chemistry courses to 7<sup>th</sup> and 8<sup>th</sup> graders, with an average class size of 35 students
  - Developed and supervised chemistry labs, as well as assignments, quizzes, and exams

## **JOURNAL PUBLICATIONS**

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Varun, D., Srinivasan, G. R., Tsai, Y. H., Kim, H. J., Cutts, J., Petty, F., **Merkley, R.**, ... Brafman, D. A. (2017). A robust vitronectin-derived peptide for the scalable long-term expansion and neuronal differentiation of human pluripotent stem cell (hPSC)-derived neural progenitor cells (hNPCs). *Acta biomaterialia*, 48, 120–130. doi:10.1016/j.actbio.2016.10.037

## **PROFESSIONAL SERVICE**

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**Graphic Design & Educational Content Creation**  
Squint Science

## **COMMUNITY SERVICE**

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**Boy Scouts of America**  
Scoutmaster, Mesa, AZ, 2016 - 2018

## **LANGUAGES**

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**English:** Native Language

**Haitian Creole:** Fluent

**French:** Intermediate Listener, Speaker, Reader, and novice Writer

**Spanish:** Intermediate Listener, Speaker, Reader and novice Writer

## **SKILLS**

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**Graphic Design:** Adobe Illustrator and Adobe Suite, GIMP

**Video Editing and Development:** Final Cut Pro, Adobe Premiere Pro, After Effects

**Web designer:** Wordpress

## **REFERENCES**

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