

# GABRIEL MEDNICK, PHD

## Biochemist, bioinformatician and data scientist

My PhD research allowed me to gain extensive experience with biochemistry, spectroscopy and molecular biology. After my postdoc, I worked as a senior scientist for a biotech startup where I utilized my expertise in DNA, RNA and protein biochemistry, and cultivated an engineering outlook on research applications in biotech. In recent years, my passion for R programming and data science has become my primary professional focus. My interests include biological data analysis and predictive modeling for working with all types of data. My mission is to facilitate data informed choices that provide insight, drive innovation and optimize decision making.



### PROFESSIONAL EXPERIENCE

- 2021**
  - Founder and senior data scientist**  
[Deepen Analytics](#) 📍 Santa Cruz, CA
    - Data Science and Bioinformatics Consulting
- 2020**
  - Computational biologist**  
Claret Biosciences LLC 📍 Santa Cruz, CA
    - Worked on unique modeling problems using tidyverse and tidymodels framework in R, as well as command line tools, bash scripting and python.
    - Created and managed multi-step workflows with Snakemake.
    - Used version control on all projects.
    - Generated custom command line tools from R scripts using argparse.
- 2020**  
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**2018**
  - Senior Scientist**  
UpRNA LLC (founded by professor David Deamer, inventor of nanopore sequencing.) 📍 Santa Cruz, CA
    - Investigated proprietary methods of DNA and RNA synthesis.
    - Worked as the principal operating scientist.

### TEACHING EXPERIENCE

- 2018**  
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**2016**
  - General chemistry.**  
Taught and co-taught general chemistry and biology as part of an active learning initiative. 📍 UCSC
- 2016**  
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**2009**
  - Biochemistry and Physical chemistry**  
Teaching assistant for upper division biochemistry and physical chemistry series for multiple years 📍 UCSC

### CONTACT INFO

[🌐 gabemednick.com](http://gabemednick.com)

[🌐 LinkedIn](#)

[🌐 github.com/gmednick](https://github.com/gmednick)

For more information, please contact me:

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### SKILLS

Data science

Machine learning

Bioinformatics

Microbiology

Molecular biology

Biochemistry

Spectroscopy

Programming:

R, Python, SQL, Bash, Git/GitHub

My [DataCamp profile](#)



## EDUCATION

- 2021

● **Data scientist**  
Professional certification 📍 Data Camp
- 2018  
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2016

● **HHMI postdoctorate at UCSC**  
Teaching chemistry and biology with a focus on technology and student engagement in STEM 📍 UCSC
- 2016

● **PhD in chemistry**  
Research emphasis in biophysical chemistry 📍 UCSC

Thesis: Structural Characterization of a Bacterial Photosensing Light-Oxygen-Voltage (LOV) Protein Domain From *Rhizobium leguminosarum*
- 2008

● **BS in biochemistry and molecular biology**  
3.98 GPA 📍 UCSC

Thesis: Interpreting Conformational Changes of the LOV2 Domain Using Time-resolved Raman Spectroscopy



## INVENTIONS

- 2020

● **Methods And Devices For Non-Enzymatic Nucleic Acid Synthesis**  
David Deamer, Gabriel Mednick 📍 Filed by UCSC's patent office



## SELECTED PUBLICATIONS

- 2020

● **AFM Images of Viroid-Sized Rings That Self-Assemble from Mononucleotides through Wet-Dry Cycling: Implications for the Origin of Life**  
Tue Hassenkam, David Deamer, Gabriel Mednick, Bruce Damer 📍 Life
- 2016

● **Structural and Functional Characterization of a Bacterial Photosensing Light-Oxygen-Voltage (LOV) Protein Domain From *Rhizobium leguminosarum*.**  
Gabriel Mednick (PhD thesis) 📍 UCSC
- 2006

● **Receptor for Advanced Glycation End-Products is a Respiratory Marker of Type I Cell Injury in Acute Lung Injury.**  
Tokujiro Uchida, Madoka Shirasawa, Lorraine B. Ware, Katsuo Kojima, Yutaka Hata, Koshi Makita, Gabe Mednick, Zachary Matthay, and Michael A. Matthay 📍 American Journal of Respiratory and Critical Care Medicine