

GABRIEL MEDNICK, PHD

Biochemist, bioinformatician and data scientist

After finishing my PhD, I developed and implemented innovative teaching practices in chemistry and biology at the university level. More recently, I worked as a senior scientist for a small biotech startup where I continued to grow as a research scientist with expertise in DNA, RNA and protein biochemistry, and cultivated an engineering outlook on research applications. I have been developing my skills as a data scientist over several years and have an interest in biological data analysis and general machine learning for working with all types of data. My mission is to facilitate data informed choices that provide insight, drive innovation and optimize decision making.

My company, Deepen Analytics, provides contracting and consulting services to generate innovative data solutions. In addition, I currently teach data science at various universities including Kansas State and San Diego State.



PROFESSIONAL EXPERIENCE

- 2021

● **Founder and senior data scientist**
Deepen Analytics

• Data Science and Bioinformatics Consulting

📍 Santa Cruz, CA
- 2020

● **Computational biologist**
Claret Biosciences LLC

• Worked on unique modeling problems using tidyverse and tidymodels framework in R, as well as command line tools, bash scripting and python.

• Used version control on all projects.

• Generated custom command line tools from R scripts using argparse.

📍 Santa Cruz, CA
- 2020
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2018

● **Senior Scientist**
UpRNA LLC (founded by professor David Deamer, inventor of nanopore sequencing.)

• Investigated proprietary methods of DNA and RNA synthesis.

• Worked as the principal operating scientist.

📍 Santa Cruz, CA

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

in [LinkedIN](#)

🐙 github.com/gmednick

For more information, please contact me:

✉ gmednick@gmail.com

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 |
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

2005

● **Activation of the $\alpha 7$ nAChR Reduces Acid-Induced Acute Lung Injury in Mice and Rats to the distribution of intra-individual divergence of alternative splicing.**

Xiao Su, Jae Woo Lee, Zachary Matthay, Gabe Mednick, Tokujiro Uchida, Xiaohui Fang, Naveen Gupta, and Michael A. Matthay

📍 American Journal of Respiratory Cell and Molecular Biology