

GABRIEL MEDNICK, PHD




Biochemist, bioinformatician and data scientist

I am passionate about biochemistry, biotechnology, bioinformatics and data science. I take pleasure in drawing insight from data and solving uncharted challenges.



In my free time, I enjoy exploring the ocean, beaches and trails around Santa Cruz and spending time with my wife and chihuahua.



PROFESSIONAL EXPERIENCE

- 2021**
 - Co-founder and VP of informatics**
[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

EDUCATION

- 2021**
 - Data scientist**
Professional certification  Data Camp

CONTACT INFO

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 760-214-6512

For more information, please contact me.

SKILLS

Experienced with microbiology, molecular biology, biochemistry, spectroscopy, data science, bioinformatics and machine learning.

Programming skills include working with R, Python, SQL, Bash and Git. Please see my [DataCamp](#) profile for a detailed list of programming courses I have completed.

This resume was made with R using the [pagedown](#) package. Last updated on 2021-08-25.

- 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
- 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