Pete **Apicella**

Molecular Biologist

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I am a highly published molecular biologist with experience in plant and fungal biology. I bring startup environment experience

Education

University of Connecticut
Storrs, Connecticut

MSc Plant Sciences — *2020*

- Thesis - Studies of the Cannabinoid Biosynthetic Pathway in Developing Cannabis sativa Flowers and Elucidation of Genetic and Physiological Mechanisms Regulating Cannabinoid Production

University of Connecticut
Storrs, Connecticut

BSc Horticulture — *2018*

- Honors Thesis - Combinations of Allelopathic Crop Extracts Reduce Digitaria spp. and Setaria faberi Seed Germination

Technical Skills

Dry Lab	Wet Lab
Snapgene Viewer, BLAST, Ensembl, Microsoft Office, R (ggplot2, agricolae, RMarkdown, corrplot, tidyverse, and other packages)	Tissue Culture, Protoplasting, Nucleic acid isolation, Gel electrophoresis, PCR, quantitative PCR, RT-PCR, Experimental design

Experience

Research Associate
Denver, Colorado

Mydecine Innovations Group Inc. — *October 2020 → April 2022*

- Conceived the design of intellectual property related to increasing the rate biosynthesis of secondary metabolites in a filamentous fungus to be used as a heterologous host. Listed as a co-inventor on the provisional patent.
- Designed and implemented experiments related to nucleic acid isolation, molecular identification of species, gene expression analysis, stimulation of defense compound biosynthesis, cloning of metabolite biosynthesis cassettes, protoplasting, and CRISPR-Cas9 genome editing.
- Created mutants of a filamentous fungus to serve as platforms for ectopic metabolite production
- Facilitated the acquisition of scientific equipment and overall operationality of a 7500 ft^2 laboratory
- Trained colleagues and one intern in fungal tissue culture, molecular biology techniques, and basic use of R for data visualization and statistical analysis
- Created R Markdown guides on how to implement data visualization and analysis in R

Graduate Research Assistant
Storrs, Connecticut

University of Connecticut — *August 2018 → August 2020*

- Successfully defended thesis on genetic regulation of cannabinoid biosynthesis in Cannabis sativa.
- Designed and executed experiments in university greenhouses and commercial grow facilities.
- Implemented quantitative PCR to measure gene expression levels of genes in the cannabinoid biosynthesis pathway and quantified cannabinoid content using HPLC
- Analyzed and visualized data in R to facilitate comprehension in invited talks and manuscripts.
- Obtained controlled substances research licenses for laboratory, wrote standard operating procedures for the sampling, transport, and secure storage of controlled substances.

Graduate Mentor
Storrs, Connecticut

University of Connecticut — *August 2018 → August 2020*

- Trained undergraduate and graduate students in molecular biology techniques.
- Mentored one student to win a grant, design and execute an experiment, and present findings at a university research forum.