

You joined the MSU CF lab



CURE=Course-based Undergrad Research Experience

You are doing PCR-based experiments on human CF gene
...using genomic DNA sequence analysis
...primer design & annealing conditions testing
...using human cells w/ genomic purification
...use of PCR, Gel Electrophoresis, NanoDrop Spectrophotometer, more
...presenting scientific talks
...reading scientific papers
...writing drafts of manuscripts

HIGH FIVES ALL AROUND

THIS IS WHAT SCIENTISTS DO

[it's not *pretend*, and it's not ever really *finished*]

YOU

EXPERIENCE

Cystic Fibrosis Lab Internship

January 2025-May 2025

Research intern with Douglas B. Luckie, Ph.D., Director of MSU Cystic Fibrosis

Research Laboratory, Michigan State University, East Lansing MI (cf.psl.msu.edu)

- Planned, pursued and presented experimental results on a research project aimed at using a PCR-based strategy to identify the {your mutation} of the human CFTR gene.
 - Gained experience with polymerase chain reaction (PCR), DNA sequence analysis, primer design, troubleshooting, genomic DNA extraction and agarose gel electrophoresis methods.
- Initiated a secondary research project to test the Yaku et al 2008 method using intentional mismatch to reduce rate of false positives when using PCR to diagnose SNPs.
 - Gained skills in experimental design, DNA sequence comparisons and analysis via BLAST, comparative primer design and testing.
- Participated in all aspects of lab work which included: preparation of solutions; maintaining lab notebook; and reading/presenting published research/figures in journal club as well as own research data/findings in formal talks during research seminar settings, and authoring manuscripts for publication.



- Research Experiences for Undergraduates (REU)
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Apply for a REU

And/Or State:

All

Search Clear

List all REU sites

Graduate School (secrets)

Students who go to graduate school to study for a Masters or PhD in a STEM field...

- You do NOT pay any tuition, it is waived.
- You do not need any loans YOU ARE PAID.
- Current (2025) salary for a graduate student in MI is \$35,000(MSU) - \$42,000(UM)/year, elsewhere \$52,000(Yale) - \$54,000(Stanford) w/healthcare & dental

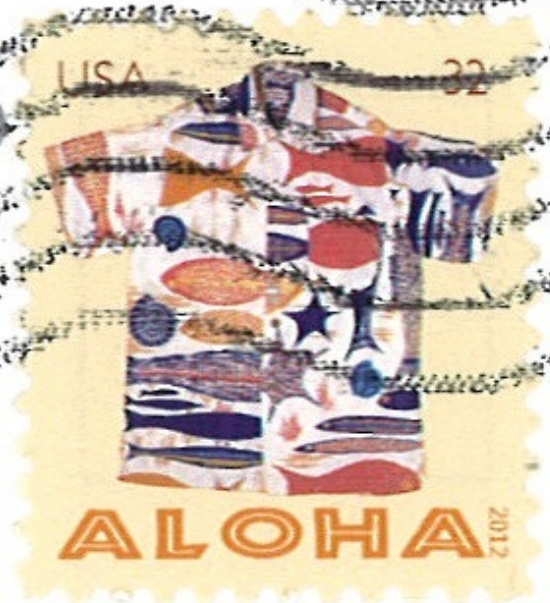
Apply for a REU

Dr. Luckie,
Ni hao!
I am currently on a bullet
train going about 300 km/hr
on its way to Beijing.
So far I have visited
Shanghai, Nanjing, Yangzhou,
Da Feng, and Siyang. My
research at Nanjing Forestry
University involved gene
cloning and transformation
in a popular Chinese tea plant.
My experience here has been
incredible and I can't thank
you enough for giving me
this opportunity and preparing
me for this work. I am the
youngest and one of the few
students that has experience in

The Nanjing Changjiang River Bridge
the lab. I hope you are enjoying your summer!
-Joanna

POSTCARD

ADDRESS ONLY



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USA

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ST. LOUIS, MO 63103
CITYMUSEUM.ORG

SAINT LOUIS MO 630

07 AUG 2014 PM 8 L



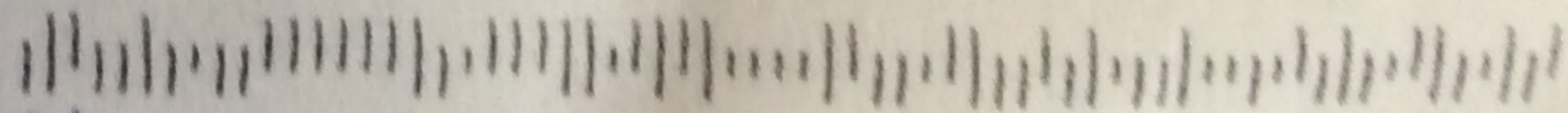
The treehouse area was expanded in 2012, incorporating more found natural woods and creating a wondrous multistory indoor climber...and secret tunnels!

Dr. Luckie, I am so glad I was able to do an REU internship this summer at the Ponfirth Center in St. Louis (thanks again for the letter of rec!). I got to focus on a project related to the evening complex in the circadian clock of plants. Basically I was able to validate some interactions in tobacco using Co-IPs and western detections (lots!) I've learned a ton here and St. Louis is a really cool city. Thanks for suggesting the REU programs back in LB14/5. Hope all is well.

- Jessica Goldsworthy

Photo by Andy Weissman

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Naturally Obsessed

