

# **“Research Experiences”**

**NCI R25 Cancer Research Education Grants Program  
(PAR-23-277)**

Rebecca Schweppe, PhD

University of Colorado Anschutz Medical Campus



cabtrac

CANCER BIOLOGY  
TRAINING  
CONSORTIUM

# NCI R25 Funding Mechanisms

1. Curriculum or  
Methods  
Development (PAR-  
23-278)

2. Courses for Skills  
Development (PAR-  
23-276)

3. Research  
Experiences  
(PAR-23-277)

# NCI R25 Research Experiences Goals:

To provide an educational experience for undergraduate students that primarily focuses on ***Research Experiences*** to facilitate the exploration of careers in cancer research.

Applications are encouraged that propose **innovative, state-of-the-art programs** that address the cause, diagnosis, prevention, or treatment of cancer, rehabilitation from cancer, or the continuing care of cancer patients and the families of cancer patients, in order to advance the [NCI mission](#).

<https://grants.nih.gov/grants/guide/pa-files/PAR-23-277.html>

# NCI R25 Program

- Participants: Undergraduate students (freshman – seniors)
- Budget: \$300,000/year for 5 years.
- Program components:
  - Provide an innovative approach to hands-on cancer research for 8-15 weeks (full-time).
  - Provide complementary educational activities (seminars, journal clubs, grand rounds, field trips, career development presentations, etc) that should not exceed more than 8 hours per week.
  - The proposed programs should provide experiences beyond formal NIH training mechanisms.

<https://grants.nih.gov/grants/guide/pa-files/PAR-23-277.html>

# R25 Research Strategy

- Proposed Research Education Program
- Program Director/Principal Investigator
- Program Faculty
- Program Participants
- Institutional Environment and Commitment
- Plan for Instruction in the Responsible Conduct of Research
- Evaluation Plan

<https://grants.nih.gov/grants/guide/pa-files/PAR-23-277.html>

# NCI R25 Session

## Five-minute presentations:

- **Larry Matherly, PhD**, Wayne State University School of Medicine
- **Rajagopal Ramesh, PhD, DBA, FAIMBE**, University of Oklahoma College of Medicine
- **Mukund Seshadri, DDS, PhD**, Roswell Park

## Additional panelist:

- **Mary Reyland, PhD**, University of Colorado Anschutz Medical Campus

# NextGen Oncology Scholars (R25CA295446)

*(cancerbiologyprogram.med.wayne.edu)*

**Morhaf Achkar and Larry Matherly (PIs)**



- **10-week, full-time summer fellowship for 12 sophomores–seniors.**
- **Matched dual mentors and near-peer mentors.**
- **Innovative training in contemporary cancer research** including hands-on research experience.
- **Weekly seminars and journal club** led by PhD students and faculty, with **clinical shadowing.**
- **Student Research Day** with poster presentations.
- Introduction to **technical and analytical research methods, state-of-the-art cores, scientific communication, teamwork, and career networking.**
- ***Goal is to prepare to prepare early-stage students for professional careers in cancer research, education, and clinical care.***

# Trainee Spotlight



**HAMILTON YOUNG**  
CURE Scholar (2022)



**WILHELM**  
Mentor (CT)

## PUBLICATIONS

Nano Letter (2024) HIF

Nano Letter (2022) HIF

## ACADEMIC STANDING

Graduate Student

Biomedical Engineering

Cornell University

## AWARDS

NSF Graduate Research Fellow

Astronaut Scholar

Outstanding Senior, OU Gallogly

College of Engineering

# Cancer Undergraduate Research Experience (CURE) Program (NCI, R25CA291599)

Program Began in 2010, supported by the SCC, TSET, and Philanthropy;  
Funding from NCI began in August 2025

**Participants:** 111 participants since program inception

- 6 slots per year; will increase to 15 for summer 2026
- \$6,000 stipend, housing covered
- Match with appropriate mentor based on mutual research interest
- 10-week mentored summer research experience
- Enrichment sessions (e.g. writing a scientific abstract; maintaining lab notebook; writing a personal statement; use of AI technology)
- Near-peer mentoring opportunities
- Social networking events
- Oral and poster presentation competitions

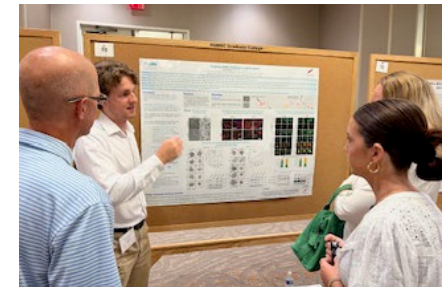
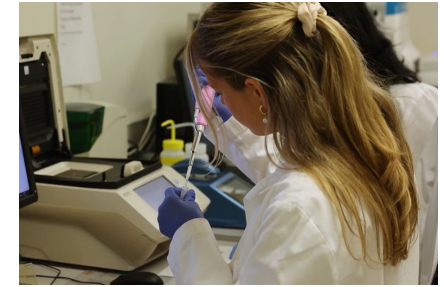
**Mentor:** Incentive of \$5000 per lab

**Data below is based on current CCSG reporting period (2022-2025)**

**24** participants (11 (72%) graduated from colleges; the remaining 13 students are currently rising juniors or seniors in colleges.

**CURE Impact:** Of those graduated (11/24; 72%) from colleges;

- **4** accepted to graduate school (36%);
- **2** accepted to medical school (18%)
- **2** pursuing biomedical-related careers (18%)
- **11** publications (3 listed as 1<sup>st</sup> or 2<sup>nd</sup> author)



# Summer Research Experiences in Quantitative Cancer Sciences and Emerging Technologies

Hershberger/Seshadri (MPI) A0 (2024): 19 → A1 (2025): 10

## Program Summary

(What did the reviewers appreciate?)

- ✓ Renewal of a successful program (10+ years of funding; history of ~70 years)
- ✓ MPIs – complementary expertise
- ✓ Undergraduate and medical students
- ✓ Quantitative cancer sciences – genomics, AI
- ✓ Structured curriculum (evolving) and evaluation plan faculty productivity
- ✓ Cancer center partnership with medical school
- ✓ Benchmarks and productivity metrics

## A0 Concerns

- Institutional commitment (\$) unclear
- Advisory board expertise
- Mentor matching data (from previous cycle)
- Expertise in quantitative sciences and emerging technologies