



Overview of the CaRES Program

UAB Cancer Research Experiences for Students
<https://sites.uab.edu/cares/>

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Goals of the CaRES Program

CaRES is an “R25” research training grant funded by the National Cancer Institute (NCI) to support students to undertake short cancer research projects

Long-term goal: motivate participating students to pursue careers in cancer research.

Short-term goals: provide each student with the support needed to undertake a mentored cancer research project; provide each preceptor with a capable student who can facilitate his or her research progress.

Overarching goal: to become recognized as a model for short-term cancer research education and training.

Background of CaRES

- CaRES was initially funded in 1999, now in year 20
- To date CaRES supported **788 medical students and graduate students** to do short cancer research projects
- **Preceptors** are UAB Comprehensive Cancer Center faculty
- **Longitudinal tracking** of CaRES students found:
 - 1) 15% remain actively involved in cancer research
 - 2) 27% published cancer-related, peer-reviewed papers after doing CaRES; about 500 papers through 2017

Students Eligible for CaRES

- **UAB** medical students and MPH students
 - **USA** medical students
 - **Auburn** veterinary medicine and pharmacy students
 - **Samford** pharmacy students and MPH students
 - **ACOM** medical students
 - Medical and veterinary medicine students, as well as graduate students in public health, nursing and dental students, from **HBCU's** are eligible to participate
- Undergraduates and high school students are not eligible.**

CaRES Faculty Preceptors

400 UAB Comprehensive Cancer Center faculty in the **six research areas** listed below are eligible to propose CaRES projects and mentor CaRES students:

- 1) Inflammation, Immunology, and Immuno-therapeutics
- 2) Cancer Cell Biology
- 3) Experimental Therapeutics
- 4) Neuro-Oncology
- 5) Cancer Control and Population Sciences
- 6) Cancer Chemoprevention

Fundable CaRES Projects

Any type of cancer research project submitted by CCC faculty members can be funded by CaRES. For reference,

CaRES projects funded over the past 3 years were:

- **Basic Science** (including animal research) – 35%
- **Clinical** (cancer patients) – 35%
- **Community** (people at risk for cancer) – 25%
- **Analytical** (secondary data) – 5%

In recent years, many CaRES projects have focused on cancers of the breast, ovary, cervix, skin, and brain; or on obesity, diet, and tobacco use; or on cancer survivorship.

CaRES Virtual Projects in 2021

- Due to the pandemic, many / most / or possibly all CaRES projects in 2021 will be “**virtual**” projects
- NCI will approve virtual projects if the goals are clear, **mentorship** and oversight are substantial, and a poster or paper is produced; details from NCI are forthcoming
- Virtual projects may relate to **basic science, patient care, or community health**
- Many virtual projects involve **secondary data analysis**
- **UAB and NCI policies** on social distancing must be maintained and projects must be done without risk to students, faculty, or staff.

CaRES Application Process

- There is **no application** (document) to fill out!
- There are **no essays** to write and **no research proposals** to put together! Sounds too easy, doesn't it?
- ***Each CaRES research project is proposed by a UAB faculty preceptor who will interview interested students until she or he finds the perfect student to work with them this summer to complete their research project***
- But if **you are selected** to do a CaRES project, **we will need** your current CV and proof of American citizenship or permanent residency to verify program eligibility

CaRES Student-Preceptor

Self-Matching Process Timeline

- Early in the calendar year, **Cancer Center faculty members** who want a CaRES student to work with them in the summer, post their **project descriptions** on our website <https://sites.uab.edu/cares/>
- Students read each **project description** and **identify** projects to which they are **well-suited**, based on their background and career interests
- **Students** email their CV to the preceptor of each project that interests them and **request an interview** as soon as possible.
- **Students** interview for as many CaRES projects as they wish, and **preceptors** interview as many students as they wish.
- **Once a student and a preceptor agree** to work together, they email Dr. Waterbor to claim one of our **30 CaRES internship slots**.
- ***Typically, all internship slots are filled by about March 1 but the projects are not done until summer***

Internship Weeks and Pay

- **CaRES internships are for 8-15 weeks** in the period *May 3 – August 27, 2021*
- Start and end dates for each project are negotiated between preceptor and student, according to their availability and in light of the demands of the project
- **Performance Sites:** all projects are done at UAB or at HudsonAlpha Institute for Biotechnology in Huntsville, AL
- Student pay is **\$600/week** for full-time effort
- CaRES can pay for poster printing and for some other **training-related expenses**
- Students must arrange and pay for their own **housing**

Seminars and Poster Session

- **CaRES Seminar Series:** 6 hours of in-class instruction on career development and the **Responsible Conduct of Research (RCR)**, with online homework assignments
- **CaRES Poster Session:** in July CaRES students showcase their work with awards given for the best posters
- **UAB medical students** are encouraged to present at **Medical Student Research Day** in the fall
- **CaRES students** are encouraged to work with their preceptors to present their CaRES research at professional meetings.

Important Features of CaRES

- **Self-matching process** of students to preceptors
- **Flexible start & end dates** in May through August
- **400 UAB Cancer Center** faculty eligible to be preceptors
- Recruitment of students from **several professional and biomedical graduate programs**, from **several universities**
- A few projects based at **HudsonAlpha** in Huntsville
- **Individual Development Plans** completed by each student-preceptor pair before summer begins
- Instruction in the **Responsible Conduct of Research**
- **Favorable short- and long-term program evaluation results** (see CaRES website for summaries of evaluations)

Publications about CaRES

- **Daniel CL, Brooks CM, Waterbor JW.** Approaches for longitudinally tracking graduates of NCI-funded short-term cancer research training programs. *J Cancer Educ* 2011; 26:58–63
- **Desmond R, Padilla LA, Daniel Cl, Prickett CT, Venkatesh R, Brooks M, Waterbor JW.** Career outcomes of graduates of R25E short-term cancer research training programs. *J Cancer Educ* 2016;31 (1):93-100.
- **Padilla LA, Venkatesh R, Daniel CL, Desmond RA, Brooks CM, Waterbor JW.** An evaluation methodology for longitudinal studies of short-term cancer research training programs. *J Cancer Educ* 2016; 31(1):84-92. NIHMSID: NIHMS644185 PubMed [journal] PMID:25412722, PMCID: PMC4441613
- **Padilla LA, Desmond RA, Brooks CM, Waterbor JW.** Automated Literature Searches for Longitudinal Tracking of Cancer Research Training Program Graduates. *J Cancer Educ* 2016; PubMed PMID:27734282, PMCID PMC5380600. *This paper won the American Association of Cancer Education (AACE) Presidential Prize Paper Award in 2016*

Reasons Why the CaRES Program Has Been Successful

- **Large pool of bright and highly-motivated students of varied backgrounds and disciplines from which to recruit**
- Excellent (and numerous) UAB faculty preceptors who are active in cancer research and enjoy mentoring students
- Dedicated CaRES program faculty (Drs. Smith, Waterbor, Brooks, Litton, and Padilla) and staff (Internship Coordinator Judy Baker)
- UAB's collaborative and student-oriented environment
- UAB's outstanding *O'Neal Comprehensive Cancer Center*

If you have questions, contact:

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Thank you!