**Facilities and Other Resources:**

Directions: Include the following information:

* A profile of the students of the applicant institution and any information or estimate of the number who have obtained a baccalaureate degree and gone on to obtain an academic or professional doctoral degree in the health-related sciences during the last five years.
* Description of plans to recruit well-qualified undergraduate students from diverse backgrounds to participate in the research project.
* A description of the special characteristics of the applicant institution that make it appropriate for an AREA grant awarded through this FOA, where the goals of this FOA are to: (1) provide support for meritorious research at undergraduate-focused institution or institutional components; (2) strengthen the research environment at these institutions/components; and (3) give undergraduate students an opportunity to gain significant biomedical research experience through active involvement in the research.
* Description of the likely impact of an AREA grant on the PD(s)/PI(s).
* Description of the likely impact of an AREA grant on the research environment of the applicant institution.
* Description of the likely impact of the AREA grant on the ability of undergraduate students at the institution to gain experience conducting biomedical research.
* Provide a description of the resources of the grantee institution available for the proposed research (e.g., equipment, supplies, laboratory space, release time, matching funds, etc.).
* Although the majority of the research must be directed by the PD(s)/PI(s) and conducted at the grantee institution, limited use of special facilities or equipment at another institution is permitted. For any proposed research sites other than the applicant institution, provide a brief description of the resources and access students will need and have to these resources.

**Profile of students at UNCG**

A profile of the students of the applicant institution/academic component and any information or estimate of the number who have obtained a baccalaureate degree and gone on to obtain an academic or professional doctoral degree in the health-related sciences during the last five years.

The University of North Carolina at Greensboro (UNCG) is a comprehensive doctoral research institution with approximately $40,000,000 in annual sponsored research funding support. UNCG served 16,106 degree-seeking undergraduates and 3,204 degree-seeking graduate students in Fall 2019. Of these students, 41% of undergraduates (n=6546) and 40% of graduate students (n=1287) are enrolled in Science and Math departments at UNCG.

Of the 17 constituent institutions that comprise the University of North Carolina system, UNCG has the most diverse student population. UNCG is a Minority Serving Institution with an undergraduate student body in 2019 consisting of approximately 34.7% African Americans and 11.7% Hispanic or Latino Americans. Furthermore, the percentage and count of students from groups underrepresented in science has increased by approximately 60% since 2009. Females make up 67% of undergraduate students at UNCG. The University also serves a significant proportion of students with financial need, with approximately 51.8% of its students eligible for need-based Pell Grants in 2019, leading the U.S. Department of Education to officially recognize the institution as a Title III Part A institution.

UNCG continues to build on a rich history of undergraduate research in biomedical disciplines. Since 1997 UNCG has invested more than $2M in support of more than 1,300 undergraduate student researchers, through just the Undergraduate Research Scholarship and Creativity Office (URSCO). Prior campus surveys have found more than 600 undergraduates were engaged in faculty-mentored research during a given academic year, more than half were students in departments that have a track record of NIH funding (Psychology, Chemistry and Biochemistry, Biology, Kinesiology, Human Development and Family Studies, Public Health Education, and Nutrition). These undergraduate researchers have been supported by a wide array of sources, including internal URSCO funding, external training grants (e.g. NIH MARC U-STAR, NIH R15, etc), and through coursework (e.g. independent study). Women make up 2/3 of these students engaged in undergraduate research, and 1/4 are from under-represented race/ethnicity groups.

Graduation rates at UNCG are in line with four-year public institutions (58.9% six-year graduation rate for cohort that entered in Fall 2013). In particular, African American students graduate at a slightly higher rate than their European-American contemporaries. Freshman retention rate has trended up at UNCG, reaching an average of 77% for the Fall 2015-17 cohorts, compared to an average of 75% for Fall 2010-2012 cohorts. UNCG regularly receives national recognition for successes with underserved populations. The University is one of just 13 public four-year institutions nationwide, to be featured in a new report by the U.S. Department of Education highlighting institutions across the country that are making significant strides in increasing graduation rates among Pell Grant-eligible students.

UNCG tracks the success of our students that continue to biomedical graduate programs. UNCG baccalaureate graduates went on to earn a total of 216 doctoral-level biomedical degrees (from any accredited university in the U.S.) during 2012-2016. Of these, 2/3 were female (n=144) and 1/3 were male (n=72). White students accounted for 73% (n=157), African Americans accounted for 10% (n=22), Asians accounted for 4% (n=9), Hispanics/Latinos accounted for 1.4% (n=3) and others accounted for 10% (n=22) of these doctoral-level degrees. The most common doctoral granting institutions attended by this cohort included UNC-Chapel Hill (n=34), UNC Greensboro (n=15), Elon University (n=10), East Carolina University (n=9), Virginia Commonwealth University (n=7), Duke University (n=6), and Winston-Salem State University (n=5). The most common doctoral-level biomedical degrees earned were physical therapy (n=44), pharmacy (n=35), medicine (n=21), nursing (n=21), psychology (n=13), dentistry (n=10), audiology (n=8), veterinary medicine (n=8), and chiropractic medicine (n=6). There is an upward trend in doctoral-level biomedical degrees earned, from n=29 in 2012 to n=48 in 2016. This upward trend applies to nearly every major group defined by gender and race. For example, females earned about 30 doctoral degrees per year (2013-16), up from 18 degrees in 2012. Likewise, African Americans doubled their number of doctoral-level degrees earned per year, from n=3 in 2012 to n=6 in 2016. These data are based on a query to the National Student Clearinghouse in September 2016, and therefore captures all graduates of accredited universities in the United States.

**Plans to recruit well-qualified undergraduate students from diverse backgrounds to participate in the research project.**

Include a description of your plans to recruit well-qualified undergraduate students from diverse backgrounds to participate in the research project.

For example, you could describe how you recruited any current undergrads to your lab and indicate if you will use the similar methods. You could describe a new approach that you will use to attract additional students to the new project, such as from a particular course you teach, from a funded training program on campus (e.g. STAMPS, MARC, McNair, etc) or from another venue. Will you approach and ask specific students in these courses/programs?

**Special characteristics that make the institution** **and academic component appropriate for the AREA program**

A description of the special characteristics of the applicant institution that make it appropriate for an AREA grant awarded through this FOA, where the goals of this FOA are to: (1) provide support for meritorious research at undergraduate-focused institution or institutional components; (2) strengthen the research environment at these institutions/components; and (3) give undergraduate students an opportunity to gain significant biomedical research experience through active involvement in the research.

As described above, UNCG has a student body that both benefits from, and contributes to, the success and impact of AREA (R15) projects at the institution. We have an institutional track record of training an array of students from groups that are currently underrepresented in biomedical research, as defined by gender, race, ethnicity, and financial status, for the future biomedical workforce.

Furthermore, the overall research profile of the University is an excellent fit for the goals of the AREA program. UNCG serves Greensboro, North Carolina, and the Nation, through a variety of programs and research projects aimed at diverse groups with a focus on both advancing research and scholarship while also engaging our community. Significant externally funded service and research efforts for diverse and underserved populations span the university; these include innovative educational enrichment programs for K-12 schools, research and programs to address “food deserts”, initiatives for education opportunities for individuals experiencing homelessness, programs on safe and affordable housing, National Institutes for Child Health and Development funded research on early child development, state contracts for childcare certifications, and improved recovery of wounded warriors from traumatic brain injuries.

With respect to students, we have garnered a number of awards to support our efforts including: 1) a $1 million S-STEM grant from NSF to enroll academically talented and financially challenged minority, female, and first-generation students seeking degrees in STEM, as part of the Science, Technology, and Math Preparation Scholarship (STAMPS) program; 2) in March 2017, UNCG was selected for the Gates Foundation’s Frontier Set, joining 31 institutions across the country working to close achievement gaps in higher education; 3) in May 2017, we received a $1.4 million NIH Maximizing Access to Research Careers Undergraduate Student Training in Academic Research (MARC U-STAR) grant to support underrepresented minority and disadvantaged students pursuing biomedical and behavioral health degrees; 4) in September 2017, UNCG was selected to host a $1.2 million McNair Post baccalaureate Achievement Program to prepare first-generation, low-income, and underrepresented undergraduate students for doctoral studies, and: 5) UNCG has been awarded an NIH T32 program with $858K in funding, to support diverse pre-doctoral chemistry students who are studying innovative technologies for natural products and alternative medicines research.

UNCG is classified by The Carnegie Foundation as a Research University with “Higher Research Activity-R2” and a “Community-Engaged Institution”, one of only 50 such institutions in the country to have both.

**Impact of the AREA program on PD/PI**

Include a description of the likely impact of an AREA grant on the PD(s)/PI(s).

**Impact of the AREA program on the applicant institution**

Include a description of the likely impact of an AREA grant on the research environment of the institution/academic component.

Over many years, the R15 program has made a very significant impact on UNCG as an institution, to both the faculty and the students. More than one third (14 of 36 = 39%, as of May 2020) of our active NIH awards were made under the R15 program. Diverse NIH institutes support these active R15 awards, including NICHD, NHLBI, NIDDK, NIMH, and NIGMS. Each of the current and past R15 awards have led to the performance of solid biomedical research by exceptional faculty, while simultaneously exposing numerous undergraduates to this research. Based on this track record, it is likely that future R15 awards will continue to draw upon UNCG’s institutional experience and will ultimately have a similarly significant impact on the institution.

**Likely impact of the AREA grant on the ability of undergraduate students at the institution to gain experience conducting biomedical and behavioral research.**

Description of the likely impact of the AREA grant on the ability of undergraduate students at the institution to gain experience conducting biomedical research.

Here (or elsewhere in this document), the PI may wish to add data on their prior research training of students and/or one or two specific student vignettes/examples. Can talk about prior students they have trained, and how that experience benefitted the student short/long term. Optional.

**Description of the resources of the grantee institution available for the proposed research.**

Provide a description of the resources of the grantee institution available for the proposed research (e.g., equipment, supplies, laboratory space, release time, matching funds, etc.).

This is where you might include your standard facilities and resources description of any resources available to the project (e.g., equipment, laboratory space, release time, etc.) Most of these facilities and resources will be in your own lab or department, but you might also describe any relevant resources available through core labs, other departments, close collaborators, your college/school, and the university.

**Description of the resources for any proposed research sites other than the applicant institution.**

Although the majority of the research must be directed by the PD(s)/PI(s) and conducted at the grantee institution, limited use of special facilities or equipment at another institution is permitted. For any proposed research sites other than the applicant institution, provide a brief description of the resources and access students will need and have to these resources.