NIH/AREA PROGRAM UPDATE: AN INSTITIONAL POINT OF VIEW

Grants Resource Center Proposal Development Workshop
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10:50 – 11:50 a.m.

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"Kenne-where?"

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Kennesaw State University

- 2-yr. school from 1960s-80's, 4-yr. college 80's-90's, university since mid 90's
- Predominantly undergraduate institution (PUI) – 90% undergraduate enrollment.
- Mostly non-traditional students until recently
- Traditional focus on teaching, not research, until recently
- 19 master's programs
- No Ph.D. programs until recently. New Ed.D., DBA, and DNS. First PhD programs are "cooking."

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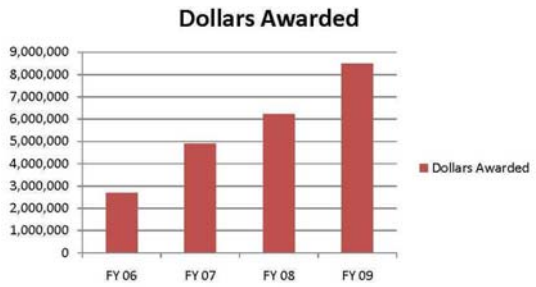
Kennesaw State University



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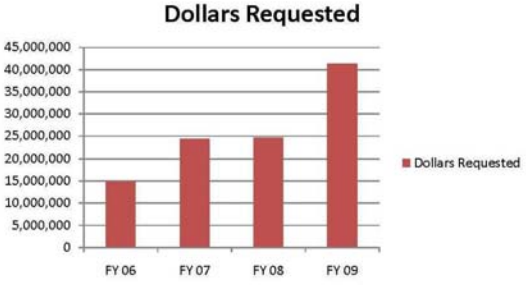
Kennesaw State University



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Kennesaw State University

KSU'S HISTORY WITH NIH:

- 2004: Only one NIH funded researcher.
- 2005-6: Started trying for AREA awards.
- 2007: two AREA awards (sociology & biochemistry)
- 2008: one more AREA award in biochemistry
- 2009-2010: three AREA supplements awarded, one R21 awarded, one AREA renewal awarded, one AREA competitive revision pending; three to five AREA submissions scheduled for June 2010.
- About $970,000 in active awards among 3 PIs.
- Several consortium proposals pending.

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How do we compare to other institutions in our state?

NIH Research Portfolio Online Reporting Tools (RePORT) State Detail for 2008:

- Georgia Tech: $28.5 million
- University of Georgia: $33 million
- Morehouse School of Medicine: $25 million
- Emory University: $234 million
- Kennesaw State: $201,000

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PERCEPTION:

- "The big funding agencies like NIH aren't interested in what the little guys are doing."

REALITY:

- NIH has made major commitments to supporting research at schools like ours.

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NIH AREA GRANTS

- AREA=Academic Research Enhancement Award
- AREA grants support small research projects in the biomedical and behavioral sciences **conducted by students and faculty** in health professional schools, and other academic components that have **not been major recipients of NIH research grant funds**.

http://grants.nih.gov/grants/funding/area.htm

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NIH AREA PROGRAM GOALS

- TO SUPPORT MERITORIOUS RESEARCH
- TO STRENGTHEN THE RESEARCH ENVIRONMENT OF THE INSTITUTION
- TO EXPOSE STUDENTS TO RESEARCH

http://grants.nih.gov/grants/funding/area.htm

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AREA GOALS AND PUI GOALS TEND TO BE A GREAT MATCH!

1. To enhance and expand academic programs and delivery
2. To improve retention, progression, and graduation rates while maintaining high quality
3. To expand campus resources and enhance campus infrastructure
4. To enhance student life activities and prepare students to be leaders
5. To improve service, strengthen accountability, and establish a stronger sense of community
6. To promote an inclusive campus environment.

Kennesaw State University's Strategic Plan, 2007-2012

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Statement from the NIH instructions to peer reviewers:

- "… the National Institutes of Health has made a special effort to stimulate research in educational institutions that provide baccalaureate training for a significant number of our nation's research scientists, but which have not been major recipients of NIH support. Funds have been added to the NIH budget specifically for the … AREA program since 1985. **AREA grants are for the support of small-scale health-related research projects conducted by faculty in institutions that are not research intensive.** These grants create a research opportunity for scientists and institutions, otherwise unlikely to participate extensively in NIH programs, to contribute to the nation's biomedical and behavioral research effort."

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Why does NIH care about this?

- PUIs are an important training ground for the next generation of scientists.
- A strong research environment is a major factor in attracting and retaining talent in the sciences.
- PUIs play a very important role in broadening the participation of underrepresented groups in the sciences.

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What has changed?

- The cap on the funding request has doubled, from $150K to $300K.
- Eligibility has been expanded to more institutions.
- The format has changed.

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What do the changes mean?

- More institutions and more PIs are eligible to compete.
- More institutions and more PIs are likely to see AREA as an attractive opportunity.
- Will AREA grants become harder to get?
- Or should we view these changes as evidence that NIH considers AREA worth the investment?

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BRIEF ELIGIBILITY GUIDE FOR AREA GRANTS

- Your institution offers baccalaureate or advance degrees in fields of study related to biomedical and behavioral sciences.
- Your institution has NOT received more than $6 million in NIH funding in 4 of the previous 7 years.
- This represents a change from the previous PA, under which the limit was $3 million.

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WHO IS ELIGIBLE FOR NIH AREA (R15) GRANTS?

Health professional schools/colleges and "other academic components" that:

- offer baccalaureate or advanced degrees in the biomedical and behavioral sciences
- have received less than $6 million per year (in both direct and F&A/indirect costs) in research grants and/or cooperative agreements from NIH in at least four of the last seven years

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MORE DETAILED INFORMATION ABOUT AREA ELIGIBILITY :

- Health professional schools/colleges include accredited schools or colleges of medicine, veterinary medicine, podiatry, nutrition, dentistry, osteopathy, pharmacy, public health, optometry, nursing, chiropractic, and allied health (e.g., M.D., D.D.S., M.P.T., D.C., N.D. or equivalent degree).
- The phrase "other academic components" refers to the aggregate of all remaining schools, colleges, and free-standing institutes of the institution.
- **$6M per year limit (in 4 of last 7 yrs) is per entity where the PD/PI has an appointment**

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Examples:

- University of Georgia:
  - Schools of Pharmacy, Public Health, and Veterinary Medicine are all eligible;
  - Other academic components are ineligible.
- Case Western Reserve University:
  - Schools of Nursing and Dentistry are eligible;
  - School of Medicine and other academic components are ineligible.

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How do you confirm eligibility?

- Check the annually updated eligibility list on the AREA program Web site http://grants.nih.gov/grants/funding/area.htm
- If your school is not on the list at all, you're probably eligible. If you've had any NIH money, you're likely listed one way or the other.
- If you still aren't sure, check with AREA Program Coordinator, Dr. Mary Ann Guadagno. Contact info on the web site given above.

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IMMEDIATE CONCERNS FOR PRINCIPAL INVESTIGATORS:

- How much can you ask for?
- How long is the proposal?
- When is it due?
- What are my chances of getting funded?
- How am I going to find the time to put this together?

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How much can you ask for?

- $300,000 in direct costs for a one to three year period.
- Note that this amount does NOT include fiscal and administrative (F&A) costs
- This represents a significant increase from the previous limit of $150,000!

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When is it due?

- Three standard receipt dates: February 25, June 25, October 25 for projects expected to begin December, April, and July, respectively.
- Note that AIDS related projects have different dates: May 7, September 7, January 7
- Follow the schedule and have PIs contact program officers to confirm.

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How long can it be?

- 13 pages: 1 for Specific Aims and 12 for the Research Strategy
- This replaces the old 25 page format and its 4 standard sections (Specific Aims, Background/ Significance, Preliminary Studies, and Research Design)
- Sorry … not many samples yet!

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More questions about format:

Q: How am I supposed to cut the length in HALF and still convey the same information??????

A: PIs will probably have to reduce the amount of space devoted to detailing the methodology.

Q: If I reduce my discussion of the methodology, how are the reviewers going to know I'm qualified to do this?

A: Take advantage of the new feature of the Biographical Sketch called the Personal Statement. The instructions are to "Briefly describe why your experience and qualifications make you particularly well-suited for your role (e.g., PD/PI, mentor, participating faculty) in the project that is the subject of the application." Sample available here: http://grants.nih.gov/grants/funding/424/index.htm#format

Q: Can you get me a sample Research Plan written in the new format?

A: No, not yet. Those submitting in 2010 have to be the guinea pigs.

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What are the chances of getting an AREA grant funded?

- Chances of getting an R15 funded are slightly better than some of the other funding mechanisms.
- Success rates vary from institute to institute.
- NIH Research Portfolio Online Reporting Tools (RePORT) provide quick, easy success rate data: http://report.nih.gov/

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AREA SUCCESS RATES FY 2008

NIH Institute/Center	Number of Applications Reviewed	Number of Applications Awarded	Award Amount (per fiscal year)	Success Rate
NIDCR	8	2	$449,250	25.0%
NIDDK	43	8	$1,635,625	18.6%
NINDS	53	17	$3,568,677	32.1%
NIAID	75	23	$4,954,233	30.7%
NIGMS	167	53	$11,107,156	31.7%
NICHD	44	8	$1,550,717	18.2%
NEI	17	6	$1,279,877	35.3%
NIEHS	24	8	$1,552,679	33.3%
NIA	31	6	$995,329	19.4%
NIAMS	22	4	$739,438	18.2%
NIDCD	13	6	$1,291,144	46.2%
NIMH	29	7	$1,433,878	24.1%
NIDA	20	6	$1,290,433	30.0%
NIAAA	7	2	$410,102	28.6%
NINR	33	6	$1,261,672	18.2%
NHGRI	2	1	$193,500	50.0%
NIBIB	16	2	$447,000	12.5%
NCRR	1	0	$0	0.0%
NCCAM	9	2	$420,388	22.2%
NLM	1	0	$0	0.0%

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COMPARISON OF R15 AND R01 SUCCESS RATES FOR 2008

NIH Institute/Center	R01s Reviewed	R01s Awarded	Success Rate	R15s Reviewed	R15s Awarded	Success Rate
NCI	3,771	793	21.0%	N/A	N/A	N/A
NHLBI	3,291	764	23.2%	N/A	N/A	N/A
NIDCR	413	93	22.5%	8	2	25.0%
NIDDK	1,906	462	24.2%	43	8	18.6%
NINDS	2,062	447	21.7%	53	17	32.1%
NIAID	2,580	533	20.7%	75	23	30.7%
NIGMS	3,099	839	27.1%	167	53	31.7%
NICHD	1,289	224	17.4%	44	8	18.2%
NEI	699	223	31.9%	17	6	35.3%
NIEHS	476	83	17.4%	24	8	33.3%
NIA	977	213	21.8%	31	6	19.4%
NIAMS	747	173	23.2%	22	4	18.2%
NIDCD	451	139	30.8%	13	6	46.2%
NIMH	1,605	328	20.4%	29	7	24.1%
NIDA	980	244	24.9%	20	6	30.0%
NIAAA	429	110	25.6%	7	2	28.6%
NINR	142	31	21.8%	33	6	18.2%
NHGRI	129	44	34.1%	2	1	50.0%
NIBIB	487	100	20.5%	16	2	12.5%
NCRR	35	9	25.7%	1	0	0.0%
NCCAM	147	13	8.8%	9	2	22.2%
NCMHD	0	0	N/A	N/A	N/A	N/A
FIC	23	9	39.1%	N/A	N/A	N/A
NLM	65	15	23.1%	1	0	0.0%

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How am I going to find the time to put all this together?

- Heavy teaching loads make it hard to find time to write.
- Grants.gov and eRA Commons have a learning curve for new PIs.
- PIs new to the application process may be unfamiliar with internal policies, procedures, and requirements.

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How research administrators can support PIs:

- Put the PI on a timeline and offer individualized editing support.
- Provide templates and show them where to find resources online.
- Handle the technical parts of the submission for them, as much as possible.
- Recognize that PIs training probably doesn't include things like budgeting and bureaucracy, nor would you want it to.
- Be supportive, compassionate, and smooth internal processes as much as you can.
- Visit their labs and attend an occasional talk as time allows in order to develop a better understanding of what they do and what they need.

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PERCEPTION:

- "You still need name recognition to get funded. If the reviewers haven't heard of your university, you can forget it."

REALITY:

- NIH gives AREA applicants a few extra pages to explain who they are and make their case.

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AREA IMPACT STATEMENT!

- This is an extra few pages of narrative in which you describe the environment for research and undergraduate mentorship on your campus and in your department.
- Part of the Other Project Information component; comes right after the Facilities & Resources section.
- Does NOT count against the page limit for the Research Plan.

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FEATURES OF A GOOD AREA IMPACT STATEMENT:

- Think in terms of 3-5 pages.
- Think in terms of telling a compelling story.
- Draft collaboratively with PI. A good statement includes both the institutional context AND project specific, discipline specific details.
- Make every word count.

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What should we include in an AREA Resources statement?

Must include:

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

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What should we include in an AREA Resources statement?

Must include:

- A description of the special characteristics of the school/academic component that make it appropriate for an AREA grant, where the goals of the AREA program are to: (1) provide support for meritorious research; (2) strengthen the research environment of schools that have not been major recipients of NIH support; and (3) expose available undergraduate and/or graduate students in such environments to research

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What should we include in an AREA Resources statement?

Must include:

- A description of any off-campus facilities or equipment that the PI plans to use, if applicable, although it is expected that most of the research will take place at the applicant institution.

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What should we include in an AREA Resources statement?

Must include:

- Any relevant information about institutional support, such as special equipment or space, release time, etc.

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GENERAL TEMPLATE FOR IMPACT STATEMENTS

- Description of the university and the PI's department and college
- Graduates entering health-related fields (for NIH) or general science-related fields (for NSF); or further grad study for either.
- Research environment
- Impact of AREA grant on PI and university
- Institutional support
- Institutional Statement Summary (optional)

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DESCRIPTION OF THE UNIVERSITY AND THE PI'S DEPARTMENT AND COLLEGE

- 2-3 short paragraphs on university – demographics, degree programs, brief history
- 1-2 paragraphs on department – programs, number of declared majors, number of degrees awarded, faculty
- 1-2 paragraphs on college – other departments, enrollment
- 4-5 paragraphs total

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TRACK RECORD FOR INSTITUTION'S GRADUATES:

- 1 paragraph – number of graduates enrolled in graduate, medical, dentistry, pharmacy, nursing, or other health program, or in industry
- Expectations for future growth (if applicable)
- Work with your Institutional Research office and also with the Department.

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Sample Introduction, paragraph 1:

Kennesaw State University is the third largest unit of the University System of Georgia. The university was chartered in 1963, became a four-year college in 1978, and attaineduniversity status in 1996. Currently KSU employs 643 full time faculty members and serves 21,500 students in 41 bachelor's programs, 16 master's programs, and two new doctoral programs (in Education and Nursing). 60% of the student body is female and 40% is male. The international student population, representing 136 countries, is over 1700. Minority enrollment is 20% overall and 25% within the College of Science and Mathematics. The largest number of students is from suburban Cobb County, in which KSU is located. The university also draws many students from nearby rural areas in northwest Georgia and from Atlanta.

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Sample Introduction, paragraph 2:

The student body has more than doubled since 1990, when enrollment was 10,000, and the university has experienced tremendous growth in academic programs, library holdings, mission, capital improvements, and infrastructure. During this period of rapid growth, KSU has evolved from a teaching oriented institution into a comprehensive university with an expanded program of research and scholarship. Total undergraduate enrollment in the life sciences and chemical sciences is approximately 2000, and recent classes are showing increased interest in research and medical careers. Moreover, with significant minority enrollment, KSU's programs are positioned to help bridge the inclusion gap for students who have been historically underrepresented in the sciences by providing entrée to science careers for an increasingly diverse student population.

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Sample paragraph about students entering biomedical fields:

Students with interests in biomedically relevant fields can meet the entrance requirements of most graduate and professional schools with a biology or chemistry degree. The university is currently gathering more detailed information on its alumni, including the number of students who have gone on to receive advanced degrees in STEM fields. Since 1986, at least 51 KSU graduates have obtained an M.D., 14 a pharmacy degree, and 13 a D.D.S. Between 2001 and 2004, 23 KSU graduates enrolled in medical school and at least 7 in chemistry or biochemistry doctoral programs, although alumni information is incomplete. Since 2002, twelve students have completed cytogenetics training in KSU's program and entered the clinical cytogenetics field. Recent KSU undergraduates have been accepted for graduate study in life sciences at leading universities such as Vanderbilt and Duke. At least eighteen students were accepted to medical schools in 2008-2009, with the Medical College of Georgia the most common destination. KSU graduates a very large contingent of science teachers every year.

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RESEARCH ENVIRONMENT

- Description of college-level grants program for faculty-undergraduate research recognized by Georgia BOR
- Example of new university-wide internal grants program to encourage research by tenured faculty who have primarily engaged in teaching
- Departmental environment: student researchers, active student chapters, scholarships and grants for students, student presentations, available equipment, opportunities for inter-departmental/university collaboration

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Sample paragraph about research environment:

Biomedically-oriented work on campus is supported by NIH, by NSF, and by foundation and corporate grants. There are sixteen KSU faculty in the life sciences and chemical sciences programs currently active in research areas of direct relevance to the mission of NIH. Areas of active research include but are not limited to oxidative stress, free radical biology and vascular biology, vertebrate development and physiology, developmental and medical genetics, protein assembly and molecular machines, signaling and receptor biochemistry, pharmaceutical analysis, pathogen control and molecular basis of pathogenesis, and toxicology. Related work includes bioinorganic and computational chemistry and simulation and statistical work in mathematics and computer science. Investigators have strong collaborations with the Emory School of Medicine and with the CDC, both 25 miles away in Atlanta.

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IMPACT OF AREA GRANT ON PI AND UNIVERSITY

- Explanation of how this grant will affect the PI's research at the institution
- Explanation of how the grant will impact training of undergraduate scientists, including dedicated time in the summer to do research
- Description of the PI's experience in mentoring undergraduate researchers
- Description of how the grant will enable the PI to provide leadership to other faculty in combining teaching and research

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Sample paragraph about impact of AREA Grant on PI and institution:

Dr. McMurry is an entering assistant professor who obtained postdoctoral training in the flagellar type III secretion (T3S) field with Dr. Robert Macnab at Yale University. The Macnab Lab is a recognized leader in the study of bacterial flagella and the T3S machinery involved in flagellar assembly, work Dr. McMurry will continue to pursue at KSU. His research program has biomedical relevance; T3S is a primary mechanism of bacterial virulence and is integral to a number of disease processes. The similarities between the flagellar and virulence T3S machinery are such that understanding gained from one system is usually applicable to the other. Direct study of virulence secretion is better suited to research-focused institutions; it requires capital- and time-intensive efforts such as mammalian tissue culture and is subject to difficulties such as host-dependent gene expression. However, flagellar secretion is not subject to those limitations and can be carried out entirely in bacterial and *in vitro* systems. Thus, the proposed program is ideal for research at an undergraduate institution; questions of fundamental biomedical importance with broad impact can be investigated in a cost-effective, comprehensive and safe manner that suits the abilities and schedules of student researchers. AREA support would be instrumental in allowing Dr. McMurry to establish and maintain a productive research program at KSU.

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SAMPLE TEXT: WRAP-UP PARAGRAPH

"As KSU has grown into a comprehensive university, the College of Science and Mathematics has recognized the importance of research to an outstanding undergraduate science education and has sought to enhance faculty research and research opportunities for undergraduates by making significant investments to improve the research environment. The need for extramural support has grown commensurately. An AREA award would support the research efforts of the PI, substantially strengthen the research environment, enhance collaborations, expose more students to research, train them in the use of cutting-edge biomolecular technology, brighten their prospects for research careers, and positively impact science education across the university's service delivery area."

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TEMPLATE FOR A WRAP-UP PARAGRAPH

- As XYZ has grown into a comprehensive university, the ABC College has recognized the importance of research to an outstanding undergraduate science education and has sought to enhance faculty research and research opportunities for undergraduates by making significant investments to improve the research environment. The need for extramural support has grown commensurately. An AREA award would be a primary support for Dr. P&Q's research, strengthen the research environment, expose more undergraduates to research and enhance their prospects for health-related careers.

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Kennesaw State University

PERCEPTION:

- "Why are we bothering with this section? They never read this stuff. Just use boilerplate."

REALITY:

- NIH/AREA reviewers are given specific guidance to pay attention to these sections.
- Peer reviewers DO comment on institutional capability.
- This section provides a unique opportunity. Spend time making it relevant and readable.

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How do you know NIH reviewers pay attention to these extra few pages?

- Reviewers are given written instructions reminding them of the objectives for the AREA grant program.
- There is an effort to put at least one reviewer from an AREA-eligible school on panels that receive a larger number of AREA applications.
- Guidelines are available for PIs to review: http://www.csr.nih.gov/CDG/CD%20guidelines/areaR15.pdf

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Sample reviewer comments:

- "The principal investigator is well-suited to the proposed project, has adequate research experience to lead this effort, and is attempting to build a tradition of research activity at Kennesaw State University. She has publications in reputable journals, is currently productive, and has adequately described plans to involve students in her research. The principal investigator is supported in these efforts by on a well seasoned mentor with a top-notch record of research who is nearby. The environment is well-suited for the purposes of an AREA project and the institution has shown great willingness to provide an adequate infrastructure."

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Sample comments:

- "Equipment available in the investigator's laboratory and department appears adequate for the proposed work. Work with a state-of-the-art HPLC-mass spectroscopy system will be done in collaboration with Michael Hooker at Duke, and Ariel Blocker of Oxford will help with preparation of inside-out vesicles and with electron-microscopy. The use of undergraduate students has been carefully thought out."

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WHAT ELSE MAKES THE PROPOSAL MORE COMPETITIVE?

- The inclusion of the AREA Impact Statement does NOT preclude a discussion of these factors within the context of the project description.
- If you propose student involvement, make sure reviewers understand that the scope of what is proposed is realistic with undergraduates.
- ENCOURAGE PIs TO TALK WITH PROGRAM OFFICERS!
- Get the JUNK out of your institutional narrative.

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GET THE JUNK OUT OF YOUR INSTITUTIONAL NARRATIVE!

- *Before:* Kennesaw State is a proud public university in the University System of Georgia, located on a 384-acre, beautifully landscaped campus in the densely populated and rapidly developing northwest region of Greater Metropolitan Atlanta. Kennesaw State was originally established by the University System of Georgia in 1963 as Kennesaw Junior College serving 1,000 students. The college became a four-year institution in 1976 and was named Kennesaw College in 1977. In 1988, it was named Kennesaw State College and in 1996 became Kennesaw State University. KSU serves as a highly valued resource for this region's educational, economic, social, and cultural advancement.

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GET THE JUNK OUT OF YOUR INSTITUTIONAL NARRATIVE!

- *After:* Kennesaw State is a public comprehensive university located 25 miles northwest of Atlanta. Its mission includes teaching, research, and service. Chartered as a junior college in 1963, KSU became a university in 1996 and is now the third largest in the state, enrolling 22,500 students in 41 bachelor's programs, 16 master's programs, and three doctoral programs.

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WHAT IS THE ROLE OF THE STUDENT RESEARCHERS?

- Include information (where appropriate) about the student researchers – who will be recruited, what they will be doing and the training they will receive, how the PI will ensure their safety (if applicable), how the research is suitable for student researchers – this could be a separate section or the information could be woven into the fabric of the research plan
- Keep in mind, as will the reviewers, that this is a research proposal, not a training proposal.

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Tips for offering AREA proposal development workshops on your campus:

- Two-hour format: A one hour intro to NIH and one hour on AREA.
- Organize the information so that one session builds on the other, but either works as a standalone.
- Encourage faculty to sign up for one or both, whatever their schedule allows.
- Use GRC web casts whenever you can.

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IMPORTANT POINTS TO REMEMBER:

- NIH AREA grants integrated with the agencies' regular research programs.
- NIH AREA grants are not "set asides" for less competitive institutions; rather, proposals are judged on significance and scientific merit through standard peer review processes.
- NIH AREA grants are appropriate, realistic opportunities for PUIs.
- NIH AREA grants offer institutions that prioritize teaching and learning the opportunity to highlight strengths.

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FINAL THOUGHTS:

- PERSISTENCE IS THE KEY TO SUCCESS.
- A STRONG SUPPORT SYSTEM FOR PIs IS CRUCIAL.
- THE NIH/AREA PROGRAM HAS NEVER FUNDED AN UNWRITTEN PROPOSAL!!!

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