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Testimony Before U.S. Senate Committee on Indian Affairs

Good morning, Mr. Chairman and members of the Committee, and thank you for this opportunity to address the Committee concerning tribal colleges and universities (TCUs).

I am Bette Keltner, dean of Georgetown University School of Nursing & Health Studies (NHS). We offer bachelors and masters degrees of science in Health Systems, Human Science, International Health and Nursing. Our school also operates, in partnership with Georgetown University Law Center, the Linda and Timothy O'Neill Institute for National and Global Health Law.

I am a member of the Cherokee Nation and have decades of experience supporting American Indian and Alaska Natives. I served two terms as president of the National Alaska Native American Indian Nurses Association and am an active member of the Society for Advancement of Chicanos and Native Americans in Science.

My interest and involvement in science spans a variety of industries. I have also been on the production side of the economy as a corporate officer for Honda Mfg before coming to Georgetown University in 1999.

Role of Tribal Colleges and Universities

The important role of TCUs in education and their contributions to their communities has been well documented and discussed.

Today, I would like to focus my comments on: (1) the importance of science and technology at TCUs and (2) the need for further collaboration between TCUs and major research universities to advance these fields of study as a means of promoting the public's health and well-being.

According to 2005 Bureau of Labor Statistics projections for the year 2014, professional and related occupations will be the fastest growing segment of the Labor Market by 21.2 percent over the coming years.

I am sure we all understand that fields in science, technology, and health care are experiencing disproportionate growth.

It is clear that the economy and individual and community well-being are dependent upon the new world that we live in where science and technology open doors.

Investment in the sciences has worked in various cultures, including in countries like Ireland that currently has a low unemployment rate and high standard of living.

It is certainly tragic that the American Indian culture—which is so close to nature—has never adequately translated that love to life sciences, science, and technology.

In talking to several presidents of TCUs, it became clear they lack science faculty and preparation. This fact creates a barrier for Indian students who wish to participate in most things that science allows us to do.

There are some bright spots, however:

A review of recent issues of the *Tribal College Journal of American Indian Higher Education* highlights some examples where TCU programs in science and technology are serving the greater interests of American Indians and their communities.

- The Native Grass Project at Haskell Indian Nations University in Kansas focuses its research on switchgrass—a warm season, perennial grass found throughout the United States with biofuel potential. The program will help identify the attributes desirable for the revitalization and expansion of the grass for future use by Native people and for the restoration of Army installation lands.
- In New Mexico, the Navajo Technical College has partnered with Navajo Nation on the Internet to implement the Hogan Project. The project will ensure technology is an integral part of the Navajo community development in education, health care, public safety, and economics. The project will bring supercomputing capabilities to research and education projects at the college and allow integration with other research and computing facilities such as the University of New Mexico. E-Learning programs will bring advanced collaborative education models to remote communities.

This sampling highlights a fertile ground in the area of science and technology at TCUs. As American Indian communities seek to address their educational, economic, and health needs, the importance of science and technology and collaboration grows.

Yet, TCUs are challenged because students are not well-prepared. Their ability is limited to offer strong education in life science, science, and technology because of faculty who lack depth in these fields and a remote location.

I propose that we look to unite resources from major universities to address this problem.

University Collaboration with TCUs

Partnership between TCUs and major universities with strong research programs can have wide-reaching benefits.

Those benefits include research collaboration, student service opportunities, educational pipeline programs, and a unique perspective that would enhance cultural competence in a range of fields, including informatics, life sciences, public health, nursing, social work, anthropology, medicine, and linguistics.

Today, I want to talk about start-up opportunities at Georgetown University.

Two summers ago, Stacy Phelps, the science educator at Oglala Lakota College, visited my office at Georgetown University. One of his roles there is to get more students interested in pursuing science.

The college's capacity is limited. Faculty members at this TCU lack a depth in the sciences. The college has begun a partnership with South Dakota School of Mines & Technology to begin addressing this shortcoming.

That collaboration is a good thing. However, it will not provide the strong base in science that these students would encounter at a research intensive university.

So Stacy Phelps and I sat in my office with a well-known problem, a desirable goal, and a great deal of enthusiasm.

With seed money, we could have launched a substantive program that would leverage the strengths of OLC and South Dakota School of Mines & Technology, as well as the major scientific and research capacities of Georgetown University.

But none existed.

As we know, science learning is a long continuum, from early education through college and beyond. Students cannot drop in on page 85 of a science textbook and be expected to understand the content. They have to learn it from page one. Or else they are lost.

One project we launched at the School of Nursing & Health Studies is “Pathways to Success.” We have begun this effort with start-up funding from the Goldman Sachs Foundation, QUALCOMM, and FedEx.

Pathways is an initiative designed to enhance the interest and academic preparation of underserved high school students. A goal is for students to attend college and pursue careers in biomedical science, life science, health care, and technology.

Between 2003 and 2006, 16 high school students from the Oglala Lakota tribe of the Pine Ridge Reservation in South Dakota participated.

Such a program whets the appetite of these students for science and technology. With seed money, we could capitalize on these initial investments and develop a stronger partnership with TCUs to offer students even greater exposure to a top-tier research institution.

At research intensive universities, students can be exposed to state-of-the-art science, such as the Imaging Science and Information Systems Center at Georgetown University Medical Center.

Over the last several years, the Center—with the help of Senator Conrad—has been implementing an Internet-based diabetes management program focused specifically on

American Indian populations. It also holds potential for expansion through partnerships with Tribal Colleges.

In the area of education, the School of Nursing & Health Studies participates in the Association of American Indian Physicians' National Native American Youth Initiative.

This is an academic enrichment and reinforcement program designed to prepare American Indian and Alaska Native high school students for admission to college and professional school and to encourage them to pursue a career in the areas of health science and biomedical research.

These students are hosted at Georgetown for a half-day where they hear a faculty lecture and view the Georgetown University Simulator (GUS)—a full-body, robotic mannequin that can realistically replicate a human patient in a clinical setting. In addition, our Admissions and Outreach staff at NHS conducts a 2-hour seminar with the students that focuses on the college admissions process.

Bettering, Building The Relationship

For various reasons—including health, education, and workforce—it is clear that a solid grounding in science and technology is a missed opportunity for American Indians. I have discussed the potential that TCUs themselves hold.

But clearly this is just a beginning. In terms of a well-trained workforce, sustainable jobs, and addressing tribal needs, American Indian Nations require more Indians and

Indian youth, in particular, to pursue education in the sciences and technology. TCUs hold a key to achieving that goal, particularly through collaboration with research intensive universities.

These collaborations require dedication at the ground level, as well as external funding and a smart sustainable framework that allow programs to flourish.

Congress could catalyze such collaboration by brokering partnerships between TCUs and research intensive universities—through federal funding of pilot projects and national centers of excellence. Adding competitive advantages for collaboration between TCUs and universities to the proposal process for existing grant programs would also encourage increased collaboration to build scientific and technological bridges.

I thank you again for giving me the time to address this issue of consequence, as well as for your work on behalf of American Indian and Alaska Native communities. I am happy to respond to any questions that Members of the Committee might have.

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