



PENNSYLVANIA STIMULUS OVERSIGHT COMMISSION

Statement by Dr. Alan W. Seadler, Associate Academic Vice President for Research and Edward V. Fritsky Chair in Biotechnology Leadership

Commission members and Chairman, I am Dr. Alan Seadler the Vice President for Research and the Edward V. Fritsky Chair in Biotechnology Leadership at Duquesne University of the Holy Spirit. On behalf of Dr. Charles Dougherty, President of Duquesne University, I would like to thank all of the members of the Pennsylvania Stimulus Oversight Commission for the opportunity to address the importance of the Stimulus Funding to our institution.

I serve Duquesne as the chief research officer and as such I am responsible for promoting research and scholarship across our institution and supporting our faculty and administration in our task of accessing extramural funding to support our teacher-scholar model of education. I also serve as compliance officer for our research activities including human protection and animal care.

I oversee the technology transfer efforts by Duquesne within our integrated model of research and translational support.

Duquesne University of the Holy Spirit is an urban research university located within Pittsburgh, Pennsylvania. In 2009-2010 Duquesne enrolled 10,363 undergraduate and graduate students studying in 100 undergraduate, 66 graduate, and 22 doctoral programs within 10 schools spanning the sciences, health sciences, liberal arts, business and law. The University has made significant investment in scientific and computational infrastructure as well as infrastructure supporting education.

Duquesne was founded in 1878 by the Spiritan Congregation to “bring higher education to the children of struggling immigrant workers, and was one of the first universities to admit women and minorities.” Our commitment to providing quality higher education extends to our current strategic plan which recognizes the importance of academic excellence, stewardship of the environment, and service to the community.

Duquesne University holds to the premise that active research carried out by “teacher-scholar” faculty is vital to the higher education of our next

generation of leaders. It is essential that our faculty are also experts who are advancing the overall knowledge of their chosen field. In this way, students are not only gaining content during their training but are also exposed to ongoing creativity and discovery.

This research requires significant funding for the instrumentation, facilities, and materials integral to the work. Funding is also required to support the graduate and undergraduate students who are being trained as part of this research.

Duquesne University has been fortunate to receive \$3,318,229 in competitive funds provided by the American Recovery and Reinvestment Act (ARRA).

These funds were used to support research in the sciences including: biology, chemistry, and physics. Importantly for Duquesne the ARRA funds also supported a number of initiatives in the Health Sciences including:

Pharmaceutical Sciences, Occupational and Speech Therapy, and Nursing.

Without the infusion of ARRA funding many of these worthwhile research programs might not have been able to start at this time.

We understand that it is not enough to simply advance the basic scientific and medical knowledge through our research, but that this research must be integrated into the training of students who will become scientists and clinicians of the future. All of our research has an educational value for our undergraduate and graduate students.

We are committed as well to translate our knowledge whenever possible into technology which will have a broader benefit to the American public as a whole or which might be the basis for new companies and American jobs. During the current academic year we anticipate two additional companies will be formed, one by a student which will further advance a lead sensing technology. These companies, with the support of the Pittsburgh Central Keystone Innovation Zone and our Small Business Development Center, have the potential for additional jobs in southwestern Pennsylvania and within underserved areas of Pittsburgh.

The ARRA stimulus funding has permitted the continuation and expansion of programs which might have only had meager funding without the stimulus. This includes funding to support student trainees and to support the

development of technology which may have a dramatic positive impact on society.

I would like to provide a few examples of how the ARRA stimulus funding has been used at Duquesne University and the work which this funding supports:

Dr. Aleem Gangjee, a Distinguished Professor in the Mylan School of Pharmacy, is developing novel chemotherapeutic compounds for the treatment of cancer. These compounds target a receptor on the tumor cells giving the compounds the ability to provide very specific targeted therapies for certain cancers such as ovarian, cervical, lung, breast, and brain tumors. It is hoped that these compounds will become a next generation of chemotherapeutics with very targeted response and limited side effects. Dr. Gangjee received his competitive stimulus award from the National Institutes of Health (NIH).

Dr. Chris Surratt and Dr. David Lapinsky, within the School of Pharmacy, each received competitive awards from NIH to support their research on dopamine transporters in the brain. Dopamine transporters (DAT) are thought to be one of the mechanisms by which the brain responds to a variety of

chemical stimulation. It is believed that understanding the DAT system will lead to new insight into brain disorders and into substance addiction from drug of abuse such as cocaine (Dr. Surratt's work). Dr. Lapinsky is also working on potential new compounds which could help mediate or treat addiction.

Dr. Monica Sorescu, a faculty member within the Department of Physics, has received funding from the National Science Foundation to support her work in nanotechnology studying the synthesis and properties of advanced magnetic materials which can be used to produce new sensors to measure toxic gases.

Dr. John Pollock, a faculty member in the Department of Biological Sciences in Bayer School of Natural and Environmental Sciences, is using ARRA stimulus funding from the National Institutes of Health to create presentation and training materials which can explain to very young patients the nature of their diseases such as childhood diabetes in a way that these patients and their parents can understand and that will reduce their apprehension.

Dr. Rita Mihailescu, a chemistry faculty member, is studying the biochemical basis for Fragile X mental retardation. Her work has focused on an understanding of how the proteins are produced in this serious disease.

Dr. Kathleen Mayle Towns, a faculty member in the School of Nursing, is a subawardee of National Institutes of Health ARRA funding through the Allegheny County Department of Human Services. This funding will support student summer employment and internships in the health careers , notably nursing.

This is but a small sample of the critical research which is being conducted at Duquesne University as a result of the ARRA stimulus funding. While the funding has been of great value to our efforts, I would like to take this opportunity to point out that these monies are a one time boon to scientific and medical research. We would like to stress the importance of scientific and medical research to the American economy and to keeping the United States and the Commonwealth of Pennsylvania at the forefront of the world's economies. Science is a long and arduous process which only after great effort can lead to understanding and knowledge. Translation of this knowledge will take even more effort. This work will require ongoing external support in order to bring it to fruition.

On behalf of Duquesne and all of the research universities in the Commonwealth of Pennsylvania I would like to thank you for this opportunity to showcase research funded by the ARRA and to urge you to convey the need for ongoing and increasing funding of scientific and medical research as fundamental for the competitiveness of our country.