Kay Bailey Hutchison: Giving Texas a scientific advantage

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Texas is uniquely blessed with a thriving network of research institutions and an inventive spirit that propels us forward in scientific advancements and technology breakthroughs. We attract world-class talent, and we are able to realize the full potential of their work because of our state's leading institutions' commitment to work collaboratively. These strengths have enabled Texas to establish an innovation infrastructure that we must continue to strengthen and expand in order to maintain our leading edge.

Ten remarkable individuals in Texas are Nobel Laureates, and their contributions are changing the way we live. Dr. Michael Brown and Dr. Joe Goldstein of UT Southwestern Medical Center won the Nobel for their work on cholesterol metabolism 25 years ago. Today, they are making an equally important contribution by developing future leaders. In 2004, Brown and I co-founded the Academy of Medicine, Engineering and Science of Texas (TAMEST), in part to ensure that the tools for achievement are passed down to our state's burgeoning scientists. After all, we cannot rest on our Nobel Laureates alone.

On Thursday at TAMEST's annual conference, the Academy's O'Donnell Awards were presented to honor the next generation of pioneering innovators in Texas. Dr. J.C. Chiao, an electrical engineering professor at the University of Texas at Arlington and adjunct associate professor of internal medicine at UT Southwestern, received the engineering award for developing sensors to test treatments for illnesses that can lead to cancer. Chiao merged his expertise in electrical engineering and internal medicine resulting in this innovative device.

Dr. Kim Orth, associate professor in molecular biology at UT Southwestern, received the science award for discovering ways invading bacteria debilitate cells' ability to fight disease. This understanding can improve treatment of infectious and immune-related diseases.

I applaud their achievements and look forward to watching their promising careers unfold.

One reason for the acceleration of achievement in Texas is that our research institutions collaborate, rather than compete. Prior to the founding of TAMEST, a silo approach to research was prevalent, and institutions were largely unaware of the work being conducted around the state. There was also an element of competition. But now they work cooperatively to maximize the impact of their efforts, hastening the rate of innovations.

For example, UT Southwestern, UT-Dallas and UTA are combining the efforts of their top-ranked researchers to develop cutting-edge MRI scanning to help treat brain diseases like traumatic brain injury and Alzheimer's.
UTA, in conjunction with the Consortium for Nanomaterials for Aerospace Commerce Technology, is developing nanotechnology applications to recharge PDAs. The technology is also being applied to power unmanned aerial vehicles, or drones, which are increasingly being used by the military in Afghanistan, as well as along the Texas border to detect illicit activity.

The multiplier effect of collaborative partnerships has helped establish Texas as an innovation leader nationally.

The importance of this work is not lost on Congress. We recognize the long-term value and economic sense of investing in basic research. As savvy farmers know, you can't eat your seed corn. Likewise, America must continue investing in research to foster innovation that fuels the economy.

In December, the America Competes Act, legislation to reauthorize the key science agencies responsible for supporting basic research, passed in Congress handily – even in our constrained budget environment. I am proud the legislation – which falls under the purview of the Commerce Committee, on which I am the ranking Republican – was fiscally responsible and eliminates duplicative federal programs, allowing us to focus investment on high-value research. It is my hope that this legislation will provide our research institutions the long-term resources to build on our state's strong momentum.

With the combination of Texas' strengths and the tools provided by Congress, I am confident our state will remain the best place in America to live, to work, to think and to create.

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