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SEPTEMBER 12, 2007**

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**Biomechatronics Pioneer Honored with \$250,000 Heinz Award
for Technology, the Economy and Employment**

**Dr. Hugh Herr recognized for breakthrough innovations
in prosthetics and orthotics**

PITTSBURGH, September 12, 2007 – A double amputee whose trailblazing work in the emerging field of biomechatronics has led to the development of new prosthetic innovations that merge body and machine has been selected to receive the 13th annual Heinz Award for Technology, the Economy and Employment, among the largest individual achievement prizes in the world.

Dr. Hugh Herr, 43, a professor at the Massachusetts Institute of Technology's Media Lab whose advances in prosthetics and orthotics – technology that marries robotics and human biomechanics – have given greater mobility and new hope to those with physical disabilities, is among six distinguished Americans selected to receive one of the \$250,000 awards, presented in five categories by the Heinz Family Foundation.

“Everything about Dr. Herr is an expression of the triumph of the human spirit over adversity,” said Teresa Heinz, chairman of the Heinz Family Foundation. “His breakthrough advances in rehabilitation technologies are immeasurably improving the quality of life for thousands of people with physical challenges, but for him, every breakthrough is just an invitation to push harder and do more. Accomplished yet modest, determined yet good natured, he approaches his work with great skill and great wonder. Both his life and his inventions demonstrate what an unbeatable combination that is.”

With more than 36,000 new amputees in the United States every year – including hundreds of American soldiers who have lost limbs in the War in Iraq and Afghanistan since 2001 – Dr. Herr is helping improve mobility and enhance the quality of life for many physically challenged people around the world. The holder (or co-holder) of numerous patents, including the Computer-Controlled Artificial Knee (commercially available as the Rheo Knee), the Active Ankle-Foot Orthosis, and the world’s first Powered Ankle-Foot Prosthesis, he is advancing an emerging field of science that applies the principles of muscle mechanics, neural control and human biomechanics to guide the design of biomimetic robots, human rehabilitation devices and other technologies.

Most recently, Dr. Herr and his Biomechatronics research group at the MIT Media Lab have developed a robotic foot-ankle prosthesis capable of propelling the wearer forward and varying its stiffness over irregular terrain, successfully mimicking the action of a biological ankle, and, for the first time, providing amputees with a truly humanlike gait. This new ankle is light, flexible and – most importantly – generates energy for walking beyond that which can be released from a spring alone. “It mimics the elegance of nature,” explains Dr. Herr, “where muscle-like robotic assist releases three times the power of conventional prostheses to propel the body upward and forward in walking.”

At age 17, Dr. Herr lost both legs below the knee in a mountain climbing accident, but returned to the classroom after a few years to earn an undergraduate degree in physics, a master’s degree in mechanical engineering from MIT and a Ph.D. in biophysics from Harvard. Today, his work at the MIT Media Lab focuses on human amplification and rehabilitation systems – technologies that interact with human limbs, mimicking biological performance and amplifying function. While there was a time when leg prostheses hampered a wearer’s mobility, Dr. Herr’s breakthrough innovations are enabling leg amputees to walk at higher speeds with greater stability and lower metabolic energy. He predicts that in five to 10 years, leg amputees will be able to run faster and move with a lower metabolic rate than people with biological limbs.

Given the high number of U.S. soldiers returning home with crippling injuries, the Department of Veterans Affairs (VA) is funding a \$7.2 million research project being conducted by the Center for Restorative and Regenerative Medicine, a collaboration among MIT, Brown University and the Providence, Rhode Island VA Medical Center. The effort focuses on developing new technologies for amputees, specifically “biohybrid limbs” comprised of regenerated tissue, lengthened bone, titanium bone implants, implantable neural sensors and external robotic limbs.

The subject of a Discovery Channel movie in 2002, Dr. Herr is very involved in sporting activities, including No Barriers USA, which promotes the advancement of new technologies and techniques to improve the quality of life of physically challenged people.

“The nature of my work has been incredibly gratifying, not only by virtue of the impact it has on those of us with physical challenges, but also for its potential impact on the larger population as a whole,” Dr. Herr said. “This field is still in its infancy, and I have great hope that it can be applied to a broad range of utility – to make healthy bodies better and stronger, to create new forms of mobility and to expand our capacity to perform beyond human limits. My thanks go out to the Heinz Family Foundation for recognizing me – and by extension my many colleagues over the years – with this magnificent honor.”

Since 1993, the Heinz Family Foundation of Pittsburgh has recognized individuals whose dedication, skill and generosity of spirit represent the best of the human qualities that the late Sen. Heinz, for whom the award is named, held so dear.

Presented in five categories, the other Heinz Award recipients are:

- **Arts and Humanities: Dave Eggers**, San Francisco, author and founder of the 826 Valencia writing laboratories as well as a publishing house for emerging writers

- **Environment (co-recipients): Bernard Amadei**, Ph.D., Boulder, Colo., engineer, professor and founder of Engineers without Borders - USA; and **Susan Seacrest**, Lincoln, Neb., environmental advocate and founder of the Groundwater Foundation
- **Human Condition: David L. Heymann**, M.D., Geneva, Switzerland, physician, an assistant director general of the World Health Organization and international public health advocate
- **Public Policy: Donald M. Berwick**, M.D., Cambridge, Mass., physician, professor and health care reformer

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About the Heinz Foundation

The Heinz Family Foundation, one of the Heinz Family Philanthropies, began as a charitable trust established by the late Sen. Heinz in 1984. His widow, Teresa Heinz, created the Heinz Awards in 1993 as the primary activity of the foundation. In addition to the Heinz Awards, the foundation directs a grant-making program that is active in a wide range of issues, principally those concerning women's health and environment, health care cost and coverage, as well as pensions and retirement security.

Nominations for the Heinz Awards are submitted by an invited Council of Nominators, all experts in their fields, who serve anonymously. Award recipients are selected by the board of directors for the Heinz Awards upon recommendation by a blue-ribbon panel of jurors in each category.

Past recipients of the Heinz Awards include marine biologist Jane Lubchenco, inventor and founder of the student robotics competition FIRST Dean Kamen, environmental advocate Peggy Shepard, medical anthropologist Paul Farmer, artist and community activist Rick Lowe and Paul Anastas, a leader in the "green chemistry" movement.

In addition to the \$250,000 award for their unrestricted use, recipients are presented with a medallion inscribed with the image of Sen. Heinz on one side and a rendering of a

globe passing between two hands on the other. The medallion symbolizes the partnership, continuity and values carried on to the next generation. The hands also suggest passing on the stewardship of the earth to future generations.

The Heinz Awards will be presented at a private ceremony on October 22 in Pittsburgh.

Additional information is available online at www.heinzawards.net.